

ÖRTÜK SORULAR ÜZERİNE VERİLEN EĞİTİMİN ETKİSİ VE BU ETKİNİN
FARKLI BİLİŞSEL TIPLERE SEZDİRİMİ

EFFECT OF TREATMENT ON IMPLICIT QUESTIONS
AND ITS IMPLICATIONS ON DIFFERENT
COGNITIVE STYLES

EBRU TUBA YÜRÜR
(Yüksek Lisans Tezi)

Eskişehir 2001

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Anadolu Üniversitesi Sosyal Bilimler Enstitüsü

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Okuma-anlama yetisinde, öğrencilerin aynı zamanda bilişsel yapılanma yetileriyle de ilgili olduğu ortaya çıkarılan örtük soruları* (implicit questions) cevaplamak, eleştirel düşünme, çıkarım yapma ve analiz etme yetilerini gerektirdiğinden öğrenciler örtük soruları cevaplamakta zorluk çekmektedir. Bu yüzden, bu çalışma, okuma-anlama yetisinde, çıkarım yapma ve analiz etme yetileri üzerine verilen eğitimin, öğrencilerin örtük soruları cevaplamadaki performanslarında bir farklılık yaratıp yaratmadığını ve bilişsel tiplerin (alan bağımlılık ve alan bağımsızlık) okuyucuların örtük sorulardaki performanslarını etkileyip etkilemediğini araştırmaktadır.

Bu çalışma Anadolu Üniversitesi Hazırlık Okulunda gerçekleşmiştir. Veriler 88 öğrenciden elde edilmiştir. Öğrencilerin alan bağımlılık ve alan bağımsızlık düzeyleri Saklı Şekiller Grup Testindeki puanlarına dayanarak belirlenmiştir. Ayrıca, okuma-anlama yetisinde aynı yeterlilik düzeyine sahip olup olmadıklarını belirlemek için öğrencilere TOEFL sınavının okuma-anlama bölümü de verilmiştir. Öğrencilerin örtük sorulardaki performanslarını belirlemek için aynı zamanda Son-test olarak kullanılan Ön-test verilmiştir. Ön-testi izleyen, 5 hafta (10 saat) boyunca, deney grubundaki öğrencilere çıkarım yapma (inference), yeniden ifadelendirme (restatement) ve yorum (interpretation) sorularının üzerinde çalışıldığı örtük soruları cevaplamaya yönelik bir eğitim verilmiştir. Diğer yandan, kontrol grubundaki öğrenciler bu çeşit sorular üzerine herhangi bir eğitim almamıştır.

*A. Kocaman, "Dilbilim Terimleri Sözlüğü". **Dilbilim Araştırmaları**. (Ankara:Hitit Yayınevi, 1990)

Bu çalışmada bağımsız örneklem t-testi, tek yönlü varyans analizi (ANOVA), eş örneklemlili t-testi ve varyans analizi (ANOVA) istatistiksel yöntemleri kullanılmıştır. TOEFL okuma-anlama sınavının sonuçları deney ve kontrol gruplarındaki öğrencilerin okuma-anlama yeterlilik düzeylerinin aynı olduğunu göstermiştir.

Bu çalışmanın öğrencilerin Ön-test ve Son-testteki performanslarını karşılaştıran sonuçlarına göre, örtük soruları cevaplamaya yönelik eğitim alan deney grubundaki öğrencilerin performanslarında kontrol grubundaki öğrencilere kıyasla bir ilerleme olduğu görülmüştür. Deney ve kontrol gruplarındaki alan bağımlı ve alan bağımsız öğrenciler Ön-test ve Son-testteki performansları açısından karşılaştırıldığında, Ön-testte istatistiksel olarak anlamlı bir fark bulunmamasına rağmen, hem deney hem de kontrol grubundaki alan bağımsız öğrencilerin alan bağımlı öğrencilerden daha iyi olduğu gözlenmiştir. Bununla beraber, Son-testte deney grubunda bu sonuç değişmiştir. Deney grubunda, Son-testte alan bağımlı öğrencilerin performansının alan bağımsız öğrencilerin performansından anlamlı bir şekilde farklılaştığı görülürken, kontrol grubunda alan bağımsız öğrencilerin üstünlüğünün devam ettiği gözlenmiştir.

Sonuç olarak, bu çalışmanın bulgularına dayanarak denilebilir ki, örtük sorular üzerine verilen eğitim öğrencilerin bu soruları cevaplamadaki performanslarında bir farklılık yaratmıştır. Ayrıca, alan bağımlı öğrencilerin bu tür soruları cevaplamaya yönelik olarak verilen eğitimden alan bağımsız öğrencilere kıyasla daha çok faydalandıkları söylenebilir.

ABSTRACT

Students generally have difficulty answering implicit questions in reading comprehension ability since answering implicit questions requires the ability of critical thinking, inferencing, and analyzing which has been found to be related to cognitive constructing abilities of learners. Therefore, this study investigates whether training on inferencing and analyzing abilities makes difference on students' performance on answering implicit questions, and whether cognitive styles (field dependence and independence) affect readers' performance on implicit questions in reading comprehension ability.

This study was conducted at Anadolu University Preparatory School. The data was collected from 88 subjects. The subjects' degree of field dependence and field independence was determined depending on their scores on the GEFT. Also, they were given a practice TOEFL reading exam to determine whether they have the same proficiency level in reading comprehension. They were given a Pre-test, which was also used as a Post-test, to determine their performance on answering implicit questions. After the Pre-test, the subjects in the experimental group were given a treatment on answering implicit questions in which they practised inference, restatement, and interpretation questions in a five-week period (10 classroom hours). On the other hand, the subjects in the control group received no treatment on this type of questions. The Post-test was given to both groups to determine the improvement of subjects in the experimental group after the given treatment.

Independent samples t-test, one-way analysis of variance (ANOVA), paired samples t-test, and analysis of variance (ANOVA) were the statistical methods used in this study. The results of the practice TOEFL reading exam indicated that the subjects in the experimental and control groups had the same proficiency level in reading comprehension.

The results of the comparison of the Pre-test and the Post-test showed that there was an improvement in the performance of the subjects in the experimental group who received the treatment on answering implicit questions compared to the subjects in the control group. When field dependent and field independent learners in the experimental

and control groups were compared in terms of their performance on the Pre-test and the Post-test, although the difference was found to be non-significant statistically, FI learners both in the experimental and control groups were found to be better than FD learners in the Pre-test. However, this result changed in the experimental group in the Post-test. In the experimental group, FD learners' performance significantly differed from FI learners' performance in the Post-test, whereas the superiority of FI learners continued in the control group.

In conclusion, considering the results of the study, it may be said that training makes difference on students' performance on answering implicit questions. Also, it may be said that FD learners benefited more from the given treatment on answering implicit questions compared to FI learners.

JÜRİ VE ENSTİTÜ ONAYI

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CHAPTER 1

INTRODUCTION

1. 1. Background of the Problem

As teachers we all have observed that some students sit in the classroom resisting to participate in group work or pair work, preferring to work alone while others are so willing to do group or pair work. Some students focus more on grammar rejecting communicative activities, while others prefer free flowing speaking activities. As teachers, we are supposed to involve them in the activity that is being done in the class ignoring our observation that all students are not always satisfied with all types of activities.

Teachers agree that teaching is so difficult; therefore, as teachers we need to know more about all the factors affecting learning. We know that people are very different from each other, and individuals approach a problem, or learn items from different perspectives. There are variations among individuals.

In recent years, these variations between individuals have begun to interest not only L1 researchers but also L2 researchers. L2 researchers have begun to investigate the issue of "learning styles" in order to discover the different characteristics of learners learning a language.

Keefe (1979, as cited in O'Neil, 1990) points out that individuals' learning styles give us clues about the learners' perception, interaction, and responses to the environment. In other words, people's learning styles are determined by their variations in cognitive, affective and physical internalization with the learning environment.

Dunn (1990) says that learning styles focus on student's strengths rather than weaknesses. Since students achieve better when they are taught through their preferences, their preferences become their strength (Dunn, 1984). Also, she suggests that there is always another way of teaching or learning something. This another way is the way students prefer to learn. Dunn (1990:18) suggests that "if students cannot learn

the way teachers teach them, teachers should teach them the way they learn". Therefore, there is a need for teachers to accommodate their instructional approaches and materials to the students' learning styles, which means they are to give up using only one way of instructional approach and only one type of material. According to Dunn & Dunn (1978, as cited in Dunn, 1984), teachers can redesign the instructional environment in a way it could serve properly for almost every student. However, since it is not possible all the time for learners to be taught in their preferred way of learning, students are to learn to diversify their style preferences, especially in academic contexts in which they are surrounded with a variety of teaching styles and differing task demands of language learning..

The area of difficulty is teaching reading. However, teachers often complain that students have reading comprehension problems in English not just because of lacking the necessary knowledge of vocabulary but generally because of lacking the knowledge of how to approach reading itself. Usually neither the teacher nor the students have any clear idea of what actually goes wrong, so they are unable to decide on proper remedies.

There have been various approaches to reading and teaching of reading. In bottom up model, reading was seen as taking place by identification of letters, words and sentences (Eskey, 1986, as cited in Lynch and Hudson, 1991). In the mid-to late 1960s teaching reading was viewed as a kind of reinforcement for speaking target language. Under the influence of Audiolingualism, teaching reading was realized for the purpose of examining grammar and vocabulary, or practicing pronunciation (Silberstein, 1987, as cited in Grabe, 1991). However, depending on the changes in ESL/EFL institutional needs and the changes in the views of reading, theories and approaches to reading and teaching of reading began to alter. By the mid-to late 1970s, many researchers began to argue for a theory of reading based on Goodman's view (Silberstein, 1987, as cited in Grabe, 1991). According to Goodman, the role of readers is to be active in which "they sample the text, make hypothesis about what is coming next, test their hypotheses by sampling the text again, confirm or disconfirm them, make new hypothesis" (Goodman, 1967, as cited in Paran, 1996:25).

Later, in 1980s an interactive model of reading was proposed as a first language and an ESL/EFL reading theory. According to this view, the bottom-up and top-down processes complete each other in the process of reading. In other words, both processes are necessary for effective reading (Dubin & Bycina, 1991).

As a result of the gradual change in approaches to teaching language, humanistic aspects of learning have been realized and the influence of individual differences in learning a language has gained importance. Thus, a new concept "learner centredness", which aims to explore students' individual needs, have them get aware of their goals, styles and strategies, and involve them more in their learning process, has appeared. Nunan suggests that "the gap between teaching and learning will be narrowed when learners are given space to make choices and encouraged to identify their own preferred learning styles and to experiment with alternative styles" (Nunan, 1995:154).

The different degree of achievement of learners has had many researchers taken into consideration the differences in individuals' styles and the effect of their learning styles on language performance. On the other hand, with the views of Goodman (Dubin & Bycina, 1991), it has been accepted that reading is not mainly a bottom-up process taking place by only matching sounds or letters; rather, it is a process which requires learners to use their cognitive constructing abilities including forming and testing hypothesis, analyzing, inferencing and activating background knowledge. Therefore, reading competence may be fostered and facilitated if students are made aware of what reading really is and what mental operations they should activate in order to become successful readers.

However, it has been found that learners do differ in terms of their cognitive constructing abilities defined by Goodman, which are said to be essential for an effective reading. In addition, Scarcella & Oxford (1992) point out that learners could be at different levels of cognitive development. As a result, their background knowledge and the way they activate that knowledge may differ. Therefore, it may be said that the cognitive development of individuals and the cognitive constructing abilities that individuals have may affect their reading process, in which they are supposed to realize the necessary requirements of the reading process defined by Goodman.

To sum up, these new views in the area of language teaching and learning have brought new ways of teaching, considering each learner as an individual rather than a student in a narrow sense. Although we do not know enough how reading takes place in their mind as a process, we are able to guess their degree of comprehension by examining their responses. Their responses do provide us clues about their improvement in reading and their degree of comprehension, and guide us about what to teach and how to teach them. Therefore, we want our students to learn how to read in English effectively, and cope with their reading problems by themselves without any guidance from outside. Despite the efforts made by teachers, there seems to be some problems occurring in the process of teaching reading comprehension.

1.1.1. Problems in Reading Comprehension

The assignment to teach reading is challenging since it requires the teacher to get students to understand the process of reading and acquire necessary reading skills in order to make them efficient readers.

Research on effective reading in EFL and ESL has emphasized the significance of identifying problems occurring in reading comprehension such as memorization of meaning after reading a text, and remembering main ideas given in the text (Amer & Khouzam, 1993). They suggest two sources of reading problems. The first one emphasizes the knowledge of lexicon or vocabulary and necessary skills for reading. According to Amer & Khouzam (ibid), poor readers lack specific skills including recognition of words, encoding meaning of sentences and making inferences. The second one emphasizes the importance of motivation; that is to say, poor readers do not force themselves to understand as they read. Amer & Khouzam (ibid) indicate that the only way that could provide effective reading habits would include improving skills.

However, learners think that they need to know the meaning of every single word to understand the text they are reading. Therefore, they pay attention to the meaning of the words unnecessarily, and when they face with unknown words as they read they get frustrated and lose their motivation to read. Hence, the motivation problem suggested by Amer & Khouzam (ibid) appears. As a result of paying unnecessary attention to the meaning of words rather than trying to activate necessary cognitive processes, they fail

to have “strategic competence,” pointed out by Scarcella & Oxford (1992). According to their views, strategic competence requires learners to use all available clues in the context, the background knowledge they already have, analyze what has been said and predict what will happen next, form hypothesis and test their hypothesis. However, these abilities required for strategic competence seem to be related to cognitive constructing abilities of learners. Therefore, the different cognitive styles of individuals may affect these abilities and the learners’ degree of reading comprehension.

Our students have reading comprehension problems because most of them do not read much even in their first language. As a result of having poor reading habits, they have difficulty in thinking intellectually, synthesizing and analyzing knowledge, and using background knowledge. It was pointed out by Soule’-Susbielles (1987) that reading in a foreign language does not differ in nature from reading in the mother tongue. Depending on this view, it could be said that our students’ problems might originate from the difficulties they already experience in their own language.

These problems have shown us that we need to change our teaching in order to facilitate better reading. But the question “what helps our learners to overcome some of their reading problems” remains unanswered, yet.

Omaggio (1986, as cited in Scarcella & Oxford, 1992) describes four types of understanding that are essential in reading comprehension:

1. understanding the plain sense, or factual, exact surface meanings in the text,
2. understanding implications; which involves making inferences and being sensitive to emotional tone and figurative language,
3. understanding the relationship of ideas in the reading passage, including intersentential relationships and linkages between paragraphs,
4. being able to relate the reading material to one’s own knowledge and experience (p. 111).

The four types of understanding described by Omaggio as essential requirements appear to be related to cognitive constructing abilities of learners. However, the problems occur when learners lack these necessary cognitive constructing abilities. Therefore, these four requirements should be included in teaching reading.

It has been pointed out that good readers use their world knowledge and background knowledge while reading and read by predicting information, confirming the information. They make necessary inferences, they contribute more than the letters on the text (Goodman, 1967, 1985; Smith, 1979, 1982, as cited in Grabe, 1991).

Schmeck & Grave (1979, as cited in Miller, Alway, McKinley, 1987) reported that superior students use a good balance between general information and specifics. These students pay close attention to main ideas, supporting facts, and details and actively construct meaningful relationships in representing the information. They also identify the importance of elaboration by linking new information with personal examples, translating new information into images, and linking new information into schemata that have meaning for the individual.

In brief, all these abilities defined by Schmeck & Grave, Goodman, and Smith require the ability of critical thinking (intellectual thinking) and analyzing, which is found to be related to cognitive constructing abilities of learners. Therefore, reading is characterized as an active process of comprehending in which learners reflect their cognitive constructing abilities. In reading comprehension, students have difficulty answering implicit questions, which also requires the ability of analyzing, critical thinking, intellectual thinking, and inferencing. Related literature indicates that individual's cognitive styles may affect such abilities (Goodenough & Karp, 1961, as cited in Gallagher, 1964 ; Witkin et al., 1977 ; Stansfield & Hansen, 1983). Therefore, learners' degree of reading comprehension and their performance on answering implicit questions may be related to their cognitive style characteristics. Furthermore, in order to be more effective in teaching and testing reading, the effect of learners' cognitive styles on reading comprehension needs to be investigated.

1. 2. Aim and Scope of the Study

The first aim of the study is to determine whether the specific training, in terms of time spent on and a variety of activities practiced, makes difference on students' performance on answering implicit questions. The second aim is to determine whether cognitive styles (field dependence, field independence) affect readers' performance on answering implicit questions.

As a skill, reading was chosen in this study because it was thought to be probably the most important skill for foreign language learners in academic contexts (Carrell, 1989; Lynch & Hudson, 1991 as cited in Grabe, 1991). Learners attending an intensive English program at Preparatory School of universities need to be equipped with necessary knowledge about English language so that they would be able to read the related literature in their area. Therefore, they do need to acquire necessary reading skills in order to cope with the difficulties of the academic materials, which they would be assigned to read in their majors.

Implicit questions were chosen in this study because students generally have difficulty answering implicit questions, which is said to be cognitively more demanding. Since answering implicit questions requires the ability of critical thinking, inferencing, and analyzing, it has been found to be related to cognitive constructing abilities of learners (Witkin, Moore, Goodenough and Cox, 1977).

Cognitive styles of field dependence-independence were the other factor considered in this study because regarding literature on cognitive style construct, field dependence-independence has been found to affect hypothesis testing, inferencing, and analyzing abilities (Goodenough, 1976; Witkin, Moore, Goodenough and Cox, 1977 as cited in Stansfield & Hansen, 1983). Since reading comprehension requires language learners to infer, predict, analyze the information given in the text in order to handle the requirements of the task they are given, it was thought that it could be related to the cognitive constructing abilities of learners.

The evidence that research has already produced suggests that knowledge about students' cognitive styles has some benefits for both teachers and students themselves (Witkin, Dyk, Faterson, Goodenough & Karp, 1962, 1974; Witkin, Lewis, Hetzman, Machover, Meissner & Wapner, 1954, 1972; Witkin, 1976, as cited in Witkin et al., 1977). From the teachers' side, knowledge about the concept of cognitive styles would give language teachers an idea about how to reach their modality in teaching since they would be able to know more about their students. In addition, knowing their students' styles, teachers could guess the difficulties students might have with different materials. As a result, they would suggest some strategies for students as proper remedies.

From the students' side, knowledge about their own preferred way of learning would create an awareness in their language learning process which would also enhance their motivation. Furthermore, this awareness might lead them to search for alternative strategy use. Thus, students would be ready for learning strategies that would be suggested by the teacher.

The present study might give insights into both the teaching and testing of reading comprehension. Knowing their students' styles, and the performance of their students with different cognitive styles on answering implicit questions, teachers would provide materials that would serve the students' styles, that would help them to improve their performance on answering implicit questions. When necessary, they would encourage students to use some strategies appropriate to the demands of the task they are given. In addition, teachers would include in their exams not only one type of question, but also other alternative ways of questioning in order to give a chance to the students with different cognitive styles.

1. 3. Variables

The variables in this study are:

Dependent Variable: Performance on implicit questions in the Pre -and Post-tests.

Independent Variables: a) Cognitive styles of field independence and field dependence; b) treatment on answering implicit questions.

1. 4. Reseach Questions

The following research questions were asked in the study:

1. Does training make difference on students' performance on answering implicit questions in reading comprehension?
2. Do cognitive styles (field dependence and field independence) affect readers' performance on answering implicit questions?
3. Does a person with a certain cognitive style (field dependent or field independent) benefit more from the treatment on answering implicit questions?

1. 5. Definition of Terms

Cognitive Style : The concept of cognitive style refers to individual differences in how we perceive, think, solve problems, learn, and relate to others (Witkin, Moore, Goodenough, Cox, 1977:15).

Field independence (FI) : Field independence refers to the cognitive style that enables a person to have “the ability to perceive a particular, relevant item or factor in a field of distracting items”. This ability is said to be related to the analytical factor (Brown, 1994a:106).

Field dependence (FD) : Field dependence refers to the cognitive style which enables a person to perceive the whole context without perceiving the parts embedded within the field. Field dependent cognitive style is said to be referring to a global learning style (Brown, 1994a ; Williams & Burden, 1997).

Implicit question : Implicit question refers to the question type which includes inferencing, interpretation, logical and restatement questions. This type of question requires learners to concern with what is not clearly or directly said in the passage, but which is meant to be driven from the passage (Carver, 1978).

CHAPTER 2

REVIEW OF LITERATURE

2. 1. Description of Learning Style and Cognitive Style

Language learning styles are the general tendencies and approaches learners prefer learning a new language. It has been said that learners employ the same styles not only in learning a new language, but also learning many other subjects (Scarcella & Oxford, 1992). According to Brown (1994b:192), styles, “whether related to personality or to cognition characterize the consistent and rather enduring traits, tendencies, or preferences” that differentiate learners. Skehan (1991, as cited in Brown 1994a : 105) describes learning styles as “a general predisposition, voluntary or not, toward processing information in a particular way”. Keefe (as cited in O’Neil , 1990 : 5) defines learning styles as “characteristic cognitive, affective and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact, and respond to the learning environment”. A number of different dimensions of learning style have been identified. Ausubel (1968, as cited in Brown, 1994a) identified at least eighteen different styles.

Educational theorists and researchers have also investigated the concept of cognitive style. The concept of cognitive style refers to “individual differences in how we perceive, think, solve problems, learn, and relate to other situations”. In addition, cognitive styles have “pervasive dimensions”. Reflecting their pervasiveness, cognitive styles give clues about the “personality” of learners (Witkin, Moore, Goodenough, Cox, 1977:15). According to their claim, the concept of cognitive style is not only related with cognition, but also it is related with personality. Another characteristic of cognitive styles is that they are “stable”. However, according to Witkin et al. (1977), this does not mean that it is impossible to change them, some may be changed. They also point out that cognitive styles are “bipolar” which is said to be a distinguishing feature of cognitive styles compared to intelligence or other ability dimensions. The

bipolarity as a characteristics of cognitive styles enables individuals to adapt themselves positively depending on the requirements of particular tasks.

Reid (1987: 88) defines the concept of cognitive style as "how the mind actually functions, how it processes information or is affected by each individual's perceptions". Hill (1972, as cited in Brown, 1994) defines some twenty-nine different factors that constitute the cognitive style map of a learner: these include sensory, communicative, cultural, affective, cognitive, and intellectual factor. Messick and Associates (1976, as cited in Reid, 1987) have listed more than twenty dimensions of cognitive style including sensory (perceptual) modality preferences.

Regarding literature on cognitive styles construct, the field dependence - independence dimension has been the most extensively investigated and has had the significant implications to educational area (Witkin, Dyk, Faterson, Goodenough & Karp, 1962, 1974; Witkin, Lewis, Hertzman, Machover, Meissner & Wapner, 1954, 1972; Witkin, 1976, as cited in Witkin et al., 1977).

2. 2. The Cognitive Style of Field Dependence - Independence

"The psychological construct field dependence - independence have been described as being contrasting tendencies in the process of perceiving, organizing, analyzing or recalling information and experience according to their use of external or internal frames of reference" (Witkin and Goodenough, 1981, as cited in Hansen, 1984:312).

The field dependence - independence continuum is described by Messick as follows:

"FI refers to a consistent mode of approaching the environment in analytical, as opposed to global terms. It denotes a tendency to articulate figures as discrete from their backgrounds and a facility in differentiating objects from embedding contexts, as opposed to a countertendency to experience events globally in an undifferentiated fashion" (1976, as cited in Abraham, 1985 : 689).

If people are field dependent, they perceive the whole context, they perceive items in relation to the context, while field independent people perceive items as unrelated to the surrounding context without seeing their relation to it (Williams and Burden, 1997). This means that field independent people process information in an analytical way, while field dependent people process it in a global, holistic way.

Brown (1994a) points out positive and negative characteristics of both field dependent and field independent styles. A field independent style enables a person to distinguish particular items from a whole, to analyze and concentrate on relevant items. On the other hand, too much field independence may cause a person to focus only on separate parts without perceiving their relation to the whole context. However, he indicates that the cognitive style of field dependence has positive effects since it helps a person to perceive the whole context, that is to say, the larger view.

Getzels and Jackson (1962, as cited in Gallagher, 1964) describes field independent people as high creative, and using intellectualization. Also, they are more self-consistent than field dependent people, not influenced by the views of other people compared to field dependent ones.

In the early work on field dependence - independence, Rod-and-Frame Test, Body-Adjustment Test, and Embedded-Figures Test were the devices created for identifying to what extent perception of the item is determined by the surrounding framework (Witkin, Moore, Goodenough, Cox, 1977). Using these devices researchers have tried to identify the cognitive styles of individuals, and conducted studies to determine the contrasting tendencies and differences between the two cognitive styles.

The research literature related to field dependence - independence shows that these two cognitive styles differ in terms of cognitive restructuring abilities. Witkin, Moore, Goodenough and Cox, (1977, as cited in Stansfield & Hansen, 1983) explain that people with a field independent style are good at analyzing the separate elements of a field when it is "organized". Moreover, they are able to cope with an unorganized field imposing structure on it. Field independent people are likely to use strategies as analyzing, structuring, hypothesis testing, and inferencing when they are to find solutions to problems. They perceive the particular details as separate items, and they can change that field when necessary to meet the requirements of a task. Furthermore, they are good at activating their background knowledge in information processing. In contrast, field dependent people are less likely to use strategies as analyzing, structuring, hypothesis testing, and inferencing in information processing. They do not have a tendency to change the field even it is necessary, they use it as they find it. They

rarely use surrounding information given in the context, and have more difficulty analyzing that information (Readance et al., 1980, as cited in Stansfield & Hansen, 1983). In other words, field dependent people are not good at using all information sources lacking the ability of inferencing.

According to Witkin et al., (1977) field dependent people are likely to have greater difficulty with the unorganized material compared to field independent people who are able to impose a structure on it and employ some strategies that are needed to facilitate learning. On the other hand, when the material to be learned is presented in an already "organized" form so that structuring is not particularly needed, field dependent and field independent people are not likely to differ in their learning. However, the studies of Witkin et al., (1977) demonstrated that when restructuring the material is needed, field dependent people have difficulty since they cannot keep an item separate from the surrounding context.

Field dependent - independent people not only differ in their restructuring abilities. Many studies show that they also differ in their performance on the material used in learning. In terms of material used in learning, a number of studies (Ruble and Nakamura, 1972; Crutchfield et al., 1958; Fitzgibbons et al., 1965, as cited in Witkin et al., 1977) indicate that field dependent people tend to be better at learning and remembering social material than people who are relatively field independent, and that this superiority is based on their selective attention to "social cues".

On the side of attentiveness to social cues, evidence from many studies indicates that field dependent people selectively are ready for social components of the environment. It has been demonstrated that relatively field dependent people, more than field independent ones, have a tendency to look more at the faces of others, as a source of information about other people's feeling and opinion (Konstadt & Forman, 1965; Nevill, 1972; Ruble & Nakamura, 1972, as cited in Witkin et al., 1977). It has also been suggested that field dependent people attend more to verbal messages with social content (Eagle, Fitzgibbons & Goldberger, 1966; Eagle, Goldberger, & Breitman, 1969; Fitzgibbons & Goldberger, 1971; Fitzgibbons, Goldberger, & Eagle, 1965, as cited in Witkin et al., 1977).

In addition to being sensitive to social cues, and interested in other people's opinion, relatively field dependent people like to be with other people. In contrast to field dependent people, field independent people tend to have a more impersonal orientation. In the studies, field independent people were described as cold and distant with others, unaware of their social value, and individualistic (Pemberton, 1952, Crutchfield et al., 1958, as cited in *ibid*).

The concept of cognitive style has also been investigated in terms of age and it has been found that "there is a gradual increase in field independence through childhood, but from the mid-teens through adulthood an individual's field independence - dependence does not easily change" (Witkin and Goodenough, 1981, as cited in Hansen, 1984:312-313).

In addition, several studies have shown that (Witkin & Berry, 1975, as cited in Witkin et al., 1977:7) "in Western societies there are small but persistent sex differences in field dependence - independence, beginning adolescence". Women, on the average, were found to have a tendency to be more field dependent than men. Findings of cross-cultural studies indicate that these differences may depend on the influence of culture in which the individual grown up. It has been found that "authoritarian societies, which are usually highly socialized and have strict norms, produce more field dependent people. On the other hand, democratic, industrialized societies which have more flexible norms tend to produce more field independent people" (Witkin and Goodenough, 1981; Berry, 1976, as cited in Hansen, 1984:313).

A number of studies have also examined the relation of educational-vocational interests and attitudes to field dependence - independence. In some studies field independent people have been found to show interest in "the teaching of mathematics-science, industrial-arts and vocational-agricultural subjects" in which they would employ their analytical / structuring competence (Witkin et al., 1977:40). In other studies, field independent people have also been found to show interest in "practical domains, such as production manager, carpenter, forest service, farmer, mechanic" (Gehlmann, 1951; Levy, 1969; Pierson, 1965, as cited in *ibid*:41), and in a number of studies field independent is associated with artistic interest (Clar, 1971; Crutchfield et al., 1958, as cited in Witkin et al., 1977).

Field dependent people have been found to express interest in the "welfare-helping-humanitarian domain, including social worker, minister, rehabilitation counselor, probation officer". Another is "the teaching of social sciences, elementary-school teaching and business administration" (ibid:41). At the same time, it has been found that individuals' cognitive style may have an effect on their educational-vocational choices.

Numerous studies have demonstrated a relation between cognitive style and performance in specialized areas. In these studies field independent students were found to perform better in mathematics, science, engineering, and architecture domains than field dependent students (Dubois & Cohen, 1970; Greenfield, 1971; Hunt & Randhawa, 1973; Margulis, 1972; Rosett, Robbins & Watson, 1968; Schmidt, 1973; Stein, 1968; Williams, 1970, as cited in Witkin et al., 1977: 45).

Besides the differences in achievement in specialized areas, researchers have found that there is a relationship between cognitive styles and the social roles individuals have. Patrick (1973, as cited in ibid: 52) found that women working in "male-dominated professions" (lawyers, doctors, architects and scientists) were more field independent. Greenwald (1968, as cited in ibid: 52) found that "intellectual role" is favored by women who are relatively field independent, while a traditional "woman's role" is favored by relatively field dependent ones.

Later, the differences and the different tendencies of the two cognitive styles were investigated in terms of teachers' classroom behaviour as a function of differences in cognitive styles. Field dependent and field independent teachers have been found to conduct their classes differently and demonstrate different patterns of teaching behaviour in the classroom. According to Witkin et al., (ibid), field dependent teachers prefer teaching situations in which interactions with students are possible; more field independent teachers, on the other hand, prefer teaching situations that are "impersonal" and based more on cognitive aspects of teaching. Wu (1968, as cited in ibid:28) found that field dependent teachers prefer "discussion" as a teaching technique, whereas field independent teachers prefer "lecture or discovery approaches". Moore (1973, as cited in ibid) suggests that field independent teachers have a tendency to use questions more frequently than field dependent teachers. Field independent teachers

tend to use questions for the purpose of introducing topics and guiding students' answers, whereas field dependent teachers use questions mainly to check on students' learning. Emmerich (1971, as cited in Witkin et al., 1977) found that field dependent teachers are more student-centered in their approach to teaching. Also, he states that field independent teachers find it effective to inform students when a response is incorrect, and consider negative evaluation as an effective technique in teaching.

In terms of learner-teacher interaction and the effect of cognitive style of field dependence - independence, studies also provide evidence that field dependent - independent learners also differ in their preferred way of reinforcement in learning. While field dependent students favor reinforcements and goals that are externally defined, field independent students prefer to define both their goals and reinforcements themselves. In addition, field independent students, rather than field dependent ones, favor learning situations in which their intrinsic motivation guides them (Fitz, 1971; Paclisanu, 1970; Steinfeld, 1973, as cited in *ibid*). However, when they are given external rewards for their learning this difference is eliminated (Ferrell, 1971; Paclisanu, 1970, Steinfeld, 1973, as cited in *ibid*). On the other hand, it has been pointed out that the differences between the teaching approaches of field dependent and independent teachers do not affect the achievement of students.

In all these studies mentioned in the area of cognitive styles, it was suggested that the different tendencies of the two cognitive styles are reflected starting quite early in life, being shaped by both the society and the culture in which each individual is grown up. They go on having their roles during the complex process of an individual's educational life. As teachers know more about how such students with different cognitive styles learn and the different tendencies they have, teachers will be able to plan more appropriate teaching approaches helpful to their mastery of necessary language skills.

2. 3. The Effect of Field Dependence - Independence Cognitive Style on Language Learning

Different learner characteristics led many researchers to investigate the concept of cognitive style since it has been thought as an important factor in second language

learning. Many studies indicate that there is a relationship between the learners' cognitive style and the achievement in second language learning.

In these studies, field independence, in particular, has been found to be significantly related to achievement in language learning. In the studies carried out by Fröchlich & Bialystok (1978); Tucker, Hamayan, and Genesee (1976); Naiman, Fröchlich, Stern and Todesco (1978); Hansen & Stansfield (1981); Stansfield & Hansen (1983); Hansen (1984); Chapelle & Roberts (1984); d'Anglejan & Renaud (1985), field independent learners have been found to be significantly better in multiple-choice achievement tests, cloze tests, and second language proficiency tests than field dependent learners.

Naiman, Fröchlich and Stern (1975, as cited in Behçetoğulları, 1992), in their study with English speaking subjects learning French in Canada, found that field independence was a significant predictor of achievement in second language proficiency as measured by an imitation test. In another study, Tucker, Hamayan, and Genesee (1976, as cited in Abraham, 1985) found that field independence as a predictor of success on a general French achievement test. In their study of seventh grade learners, it was found that field independent students had higher scores on the Test de Rendement en Français, Niveau 5, a standardized, multiple-choice achievement test of spelling, listening comprehension, vocabulary and grammar.

Similarly, Fröchlich & Bialystok (1978, as cited in Abraham, 1985) found that field independence was significantly related to foreign language aptitude, as measured by the Modern Language Aptitude Test. In a study with learners of French, Naiman, Fröchlich, Stern and Todesco (1978, as cited in Abraham, 1985) found that field independence was related to success for twelfth graders on the listening section of a French achievement test and an imitation test.

Consistent with these results, it was found that field independence was significantly related with scores on tests of linguistics, communicative and integrative competence in a study of Hansen & Stansfield (1981, as cited in Behçetoğulları, 1992). The results indicated that relatively field independent learners achieved at a higher level on second language proficiency test.

In a study by d'Anglejan and Renaud (1985, as cited in Abraham, 1985:690), field independence was found to be one of a learner characteristics significantly related to achievement in French by adult immigrants, as measured by the Test de Rendement en Francais and teacher evaluations. Another study by Chapelle & Roberts (1984, as cited in Abraham, 1985) supports the previous findings indicating that field independence is a significant predictor of success on a multiple-choice grammar test given to students learning English as a second language in an intensive program.

A recent study conducted in an EFL situation by Alptekin & Atakan (1990, as cited in Yilmaz, 1998) also supports the previous findings about field independent learners' advantage in second language tests. Alptekin & Atakan found that there is a significant relationship between field independence and L2 achievement. The findings of the study indicated that field independence is associated with better performance on EFL tests and subtests including discrete point, cloze, grammar, reading and listening tests.

Another study by Stansfield & Hansen (1983), with college-level students in Spanish, also showed that there is a significant correlation between field independence and foreign language proficiency achievement. Foreign language proficiency of 293 college students, who were attending a Spanish course at the University of Colorado, was evaluated in terms of their scores on tests of linguistic, communicative and integrative competence they had during a semester. In their study, students' linguistic competence was measured by Written Exam Grade Average and by the Final Exam, their communicative competence was measured by Oral Grade Average and Oral Skill Evaluation, and their integrative competence was measured by their Final Course Grade and by Cloze Test score. The results demonstrated that field independent cognitive style was correlated positively with better performance on all measures of second language proficiency. However, a greater degree of relation between field independent cognitive style and high performance on Cloze Test was found. This indicated that field independent learners' cognitive restructuring abilities enable them to be better than field dependent learners at cloze reconstruction task.

However, the findings of a study conducted by Readance, Baldwin, Bean, and Dishner (1980, as cited in Hansen, 1984) are not consistent with the findings of Stansfield & Hansen's (1983). Their study was investigating the relationship between

field dependent - independent cognitive style and its effect on cloze test performance. The results of their study indicated that there was no effect of field dependence - independence on cloze test performance.

Another study about the relationship between field independence and cloze test performance was conducted by Hansen (1984). In this study of 286 subjects from six Pasific island cultures, it was found that students from different cultures differ in their degree of field dependence - independence. The findings concerning the effect of field dependence - independence on cloze-test performance supported the Stansfield & Hansen's (1983) hypothesis indicating the relation between field independent cognitive style and the performance on cloze test. In addition, the results showed that there was a positive correlation between field independent cognitive style and higher level of achievement on language tests. However, it has been indicated that while there was a significant relationship between cognitive style and cloze test performance in the lower achieving group, there was no significant difference in higher achieving group. Group differences found in the field dependent - independent learners' cloze test performances indicated that the relation between cognitive styles and cloze test performance may not be true for all cultural groups and achievement levels.

The different tendencies of field dependent - independent learners, and their different degree of achievement on second language tests had some researchers taken into consideration the influence of instructional approaches on field dependent - independent learners.

A study by Abraham (1985) was conducted to provide answers to this question by comparing two different methods of teaching, deductive and inductive teaching, and whether inductive teaching is beneficial to field dependent learners, deductive teaching is beneficial to field independent learners. In the study conducted with 61 ESL students in the high intermediate levels of the intensive English and Orientation Program at Iowa State University, one lesson was based on deductive approach in which the rules were given step by step, and the other lesson was based on inductive approach which consisted of variety of examples. The teaching of both lessons was done by means of Computer Assisted Instruction (CAI). The subjects were given Pre-and Post-tests, and the GEFT. The pre-and post-test scores were compared to find out whether there was a

difference in effectiveness between the two lessons, and whether there was a relationship between field dependence - independence and the type of the lesson. The findings indicated that field independent students perform better with the deductive lesson, and field dependent students perform better with the inductive lessons.

Behçetoğulları (1992) investigated the relationship between deductive and inductive teaching and the cognitive style of field dependence - independence, and their achievement on cloze test and multiple-choice test. Her findings, contrary to Abraham's (1985), did not indicate any interaction between field dependence - independence and the type of the lesson. However, her findings concerning the relation between cognitive styles of field dependence - independence and the performance on multiple choice test was consistent with the findings of Tucker, Hamayan and Genesee's (1976), Hansen & Stansfield's (1981), and Stansfield & Hansen's (1983) indicating that field independent learners had an advantage on discrete-point tests (In this case, multiple-choice test.) Her findings concerning the effect of field dependence-field independence on cloze test performance indicated that although field independent learners had higher scores on the cloze test compared to field dependent learners, the difference was not found significant. That is to say, it was found that field independence has an advantage in multiple-choice test, but not in the cloze test.

In a recent study, Yılmaz (1998) investigated the effects of cognitive styles of field dependence and independence on the performance of certain activities and question forms in listening comprehension ability. The results of the study indicated that field independent learners were better in their performances on the question forms of matching pictures, multiple-choice and chart completion. It was also found that when listening proficiency level was taken into consideration, field independence did not affect their performance on these activity forms. This indicated that the different performance of field dependent and field independent learners may be due to their listening proficiency level. The findings concerning the effect of field dependence indicated that field dependence did not affect the performance on certain activity forms. However, it was found that while the listening proficiency level of field dependent learners was higher than field independent learners', field dependent learners performed better than field independent ones on the question forms of comprehension, gap filling

and sequencing. Yılmaz suggested that listening proficiency level also had an effect on the performance on certain activities and question forms.

To summarize this body of research, field independence has been shown to be positively associated with achievement on several standardized tests, and with success on multiple-choice and cloze tests. There are also differences in the instructional approaches favored by the students depending on these two cognitive styles. Therefore, these mentioned differences between field dependent and field independent learners' tendencies and their degree of achievement might also be seen in their performance on answering implicit questions since answering this type of questions has been said to require cognitive abilities in which learners are to draw inferences, analyze information and think intellectually.

2. 4. Studies on Inferencing

Despite the limited amount of previous research examining the issue of inferencing, some studies have concentrated on the development of inferencing ability. This kind of ability requires the ability of higher order thinking in which an individual is required to use all sources of information in combination with his analyzing and synthesizing abilities. In his study, Carton (1966, as cited in Rubin, 1987) pointed out that learners differ in their tendency to make inferences. Also, there are differences among individuals in the degree of making valid and logical inferences. In addition, Carton (ibid) suggested a possible relation between individual's degree of "tolerance of risk" and ability in making valid inferences.

Carton (1971, as cited in Rubin, 1987) divides inferencing into three kinds of cues:

1. Intra-lingual cues in which the cues are supplied by the target language - used when a student already has some knowledge of the target language.
2. Inter-lingual cues which are brought to bear on loans between languages, cognates and regularities of phonological transformations from one language to another.
3. Extra-lingual cues - in which the learner uses what he /she knows about the real world to predict what is said in a foreign communication (p:20).

Carton views language learning as a process of problem-solving in which individuals need to activate their background knowledge that may help them to overcome possible difficulties in inferencing. Bialystok & Howard (1979, as cited in Stansfield & Hansen, 1983) conducted a study to investigate the factors that affect learners' performance on cloze tasks. In their study, inferencing ability was found as an important factor in solving cloze tasks. They defined inferencing as the ability to use all available information sources to solve a problem in second language learning. In their study, they provided cues and instructions on inferencing ability in solving cloze tests. The results indicated that both inferencing ability and cloze test performance were facilitated after the given instruction on inferencing.

Researchers have found that students learned to make inferences through being exposed to a training on these question types and strategies for answering them at all levels of difficulty. In a study in 1977, Bialystok & Fröchlich (as cited in Rubin, 1987) found that learners' reading comprehension was enhanced when they were provided training on inferencing. They conducted a reading experiment including training as part of the experiment. In the training they provided these conditions: a picture summarizing the general topic of the passage; explanations of the words in the passage; training in inferencing (using knowledge they have about affixes appear in the passage). They suggested that giving students different kinds of contextual information and instruction in inferencing techniques provides an answer for problems in second language reading comprehension.

To conclude, regarding literature on improvement of reading, several studies were conducted in order to improve reading achievement (Casper & Kephart, 1955; McDonald, 1957; Willey & Thomson, 1956; Ranson, 1955; O'Bear, 1955; Kingston & George, 1955; Farlano & Wrightstone, 1956, as cited in McCullough, 1958). In all of these studies it was found out that after special reading instruction for a certain period reading achievement was improved. As seen in the studies of Bialystok & Howard (1979, as cited in Stansfield & Hansen, 1983), Bialystok & Fröchlich (1977, as cited in Rubin, 1987), learners' performance on certain tasks has improved when they are trained about how to overcome the requirements of the task appropriately.

On the other hand, regarding the literature on cognitive styles, field dependence-independence has been found to affect hypothesis testing, inferencing, and restructuring behavior on various problem solving tasks (Goodenough, 1976, Witkin, Moore, Goodenough and Cox, 1977, as cited in Stansfield & Hansen, 1983). Since the reading comprehension requires language learners to infer, predict, analyze the information given in the text in order to answer the related questions through an hypothesis-testing strategy, it could be related to the cognitive restructuring abilities fostered by a field independent style. As a result, they may answer implicit questions more easily or accurately. Field dependent learners, on the other hand, may be disadvantageous when answering this type of questions, since they are not as likely to employ the strategies helpful to the solution of implicit questions. Therefore, whether training makes difference in students' performance on answering implicit questions, and whether a person with a certain cognitive style (field dependent or field independent) benefits more from the treatment should be investigated in this study. Also, the relationship between different cognitive styles and their performance on implicit questions should be investigated in order to determine whether field dependence - independence affect their performance on this kind of question forms.

CHAPTER 3

METHODOLOGY

3. 1. Subjects

Initially, 122 students attending Preparatory School at Anadolu University were chosen as the subjects of this study. The subjects were from different majors such as Faculty of Letters, Communication Sciences, Civil Aviation, Engineering, Tourism, Science, Fine Arts, and Education . By the time the study started, they all had already completed a period of 9 weeks, 24 hours a week of English instruction including Core Course, Grammar, Listening, Speaking, Writing, and Reading courses. They had 4 hours reading course in a week.

The selection of subjects consisted of several steps. First, depending on the scores on the Michigan Placement Examination, which is used at Preparatory School at Anadolu University to place the students to the appropriate language levels at the beginning of the term, 122 students, who were at intermediate level, were chosen. The scores of the subjects on the Michigan Placement Examination are given in Appendix 1.

Intermediate level was chosen for this study because it was thought that lower levels would not be able to cope with the demands of implicit questions that require ability in making inferences, drawing conclusions, restatement, and interpretation. Related literature on L2 reading proficiency supports this decision pointing out that there is a "threshold level of language proficiency" or "linguistic ceiling" (Cummins, 1979; Clarke, 1978, 1980; as cited in Lee, Schallert, 1997) that is connected with language competence, and enables learners to read effectively in a foreign language. It is said that readers would not be able to read effectively until they develop some proficiency in the target language.

On the other hand, upper intermediate level was not chosen for this study because it was thought that high level students would be able to handle implicit questions easily since they would be equipped with enough knowledge about language. Therefore, it

would be difficult to see the relationship between cognitive styles and the performance on implicit questions. Hansen's findings (1984) support this decision indicating that it would not be easy to see the relationship between cognitive styles and test performance with high levels.

As a second step, the subjects were given the reading part of the practice TOEFL exam to determine whether they were at the same reading proficiency level. Thirdly, The Group Embedded Figures Test (GEFT) was administered to the students in order to determine their cognitive styles.

The students who were only given the tests used in this study (reading part of the practice TOEFL exam, the GEFT, the Pre-and Post-Tests) but not given any treatment on answering implicit questions constituted the control group of the study. The number of subjects in the control group was 60. However, when administering the GEFT, 5 students did not take the test, and thus were excluded from the study. On the basis of subjects' performance on the GEFT, 36 FI and 19 FD learners were identified. On the other hand, when administering the practice TOEFL reading exam, of the 36 FI learners, 1 student did not take the reading exam, and thus were excluded from the study. In addition, when administering the Pre-test, of the 36 FI learners, 4 students did not take the Pre-test and thus were excluded from the study. Similarly, of the 19 FD learners, 1 student did not take the reading exam, and 2 students did not take the Post-test, and thus were excluded from the study. Therefore, the data reported in this study were based on 47 subjects in the control group, including 31 FI and 16 FD learners.

On the other hand, students who were given a special treatment on answering implicit questions as well as the tests used in the study (reading part of the practice TOEFL exam, the GEFT, the Pre-and Post-tests) constituted the experimental group of the study. The number of subjects in the experimental group was 62. However, when administering the GEFT, 4 students did not take the test, and thus were excluded from the study. On the basis of subjects' performance on the GEFT, 48 FI and 10 FD learners were identified. On the other hand, when administering the practice TOEFL reading exam, of the 48 FI learners, 10 students did not take the reading exam, thus were excluded from the study. In the same way, when administering the Pre-and Post-

tests, of the 48 FI learners, 7 students did not take either the Pre-test or the Post-test, and thus were excluded from the study. Hence, the data reported in this study were based on 41 subjects in the experimental group, including 31 FI and 10 FD learners.

3. 2. Materials

The materials used in this study included The Michigan Placement Examination, the reading part of the practice TOEFL exam, the Group Embedded Figures Test (GEFT), a Pre-and a Post-test, and some teaching materials designed for training subjects on implicit questions.

3. 2. 1. Tests

3. 2. 1. 1. The Michigan Placement Examination

The subjects' language levels were determined according to their scores on The Michigan Placement Examination. This test has been used in a number of studies for its known validity and reliability (Carson, Carrell, Silberstein, Kroll and Kuehn, 1990, as cited in Lee & Schallert, 1997).

The highest score possible in The Michigan Placement Examination is 100. There are four parts of the exam: listening comprehension, grammar, vocabulary, and reading comprehension. These four parts include 100 questions: 20 listening, 30 grammar, 30 vocabulary, and 20 reading. All the questions in the test are in multiple choice format. The test begins with the listening comprehension part. The students are given 55 minutes to complete the exam after the completion of the listening part.

In the listening comprehension part, students listen to the examiner either asking a question or making a statement. Then, they are asked to choose an answer that is a reasonable response to the question they hear, or are asked to choose a phrase or sentence that corresponds to the statement they hear.

Example:

They listen to the following statement:

“John and Mary went to the store”

a. Only John went

- b. Only Mary went
- c. They both went

In each grammar problem there is short conversation between two people. The conversation is not complete. Students are to choose the answer that correctly completes the conversation.

Example:

"It's very hot here."

"Yes, but _____ the winter it gets very cold."

- a. already
- b. as long as
- c. while
- d. during

In each vocabulary problem there is a sentence with a word missing. From the answer choices following the sentence, students are to choose the one word that best fits into the sentence and makes it meaningful.

Example:

"Our house needs a few _____ before we can try to sell it."

- a. developments
- b. movements
- c. improvements
- d. conditions

In each reading comprehension problem students read a sentence and then are asked a question about it. They are to answer the question using the information in the sentence.

Example:

"What he says is clear and is obviously well-prepared, and this, among other things, has earned him the high regard of his colleagues."

"How do his colleagues feel about him?"

- a. They don't understand him.
- b. They ignore him.
- c. They are jealous of him.

d. They respect him.

In the Michigan Placement Examination used at Preparatory School at Anadolu University, the students who score between 0 and 15 are considered to be at Beginner; 16 and 30 at Elementary; 31 and 45 at Low Intermediate; 46 and 59 at Intermediate; 61 and 75 at Upper Intermediate; 76 and 100 at Advanced levels.

3. 2. 1. 2. The Practice TOEFL Reading Exam

The reading part of practice TOEFL exam was used to determine students' reading proficiency level. It was chosen because it is accepted as a standard test of reading comprehension. According to the information given in Educational Testing Service (1999), the reading comprehension section measures the ability to understand short passages taken from academic texts used in North American colleges and universities.

In the reading part of practice TOEFL exam, students read several passages. Each passage is followed by several questions about it. All the questions in this part, as well as the other parts of the test are in a multiple choice format.

One type of question in this part involves identifying the main idea of a passage.

Example:

“What is the main point of this text ?”

- A. Advertisers should have professional training.
- B. Claims are the most informative parts of advertisements.
- C. Some people take advertising too seriously.
- D. The influence of advertisements should not be underestimated.

Another type of question involves identifying a specific detail in a passage.

Example:

“Which of the following is not one of the food problems mentioned in the passage?”

- A. providing everybody with enough calories
- B. preventing food production procedures from harming the environment
- C. making food attractive to everybody
- D. storing and distributing food

The third type of question involves making an inference from the passage. Some questions about specific details also require inferencing ability.

Example:

“It is inferred from the passage that ”

- A. In 1961 there was enough food for all the people in the world.
- B. the increase in food production since 1961 has doubled.
- C. developing countries have not been able to increase their food production
- D. population growth has been large enough to use up the increase in food production.

3. 2. 1. 3. The Group Embedded Figures Test (GEFT)

The subjects' degree of field dependence-independence was determined by the Group Embedded Figures Test (GEFT). The GEFT was developed by Oltman, Raskin and Witkin in 1971. In this study, the GEFT was chosen because it has been found to be very useful and reliable for measuring the degree of field dependence-independence (Melancon & Thomson, 1989, as cited in Behçetoğulları, 1992).

The Turkish version of the GEFT, developed by Okman-Fişek (1979) was used in this study because it was thought that Turkish version would enable the subjects to understand the instructions easily. Furthermore, the reliability of the Turkish version was also measured and found reliable by Alptekin and Atakan (1990, as cited in *ibid*).

The GEFT (see Appendix 2) consists of a practice section (part 1) and two other sections (part 2 and part 3) each consisting of nine items. The GEFT requires the subject to locate a particular item, that is a simple geometric shape within a complex figure (Witkin, Oltman, Raskin, and Karp, 1971, as cited in Hansen, 1984 ; Stansfield & Hansen, 1983). “The subject must locate or separate the relevant information from the contextual field and restructure it to design the correct shape. In theory, this task discriminates the extent to which the person perceives analytically and is able to identify the relevant information within the organized field” (Stansfield & Hansen, 1983:33-34). The number of correct simple figures the subjects are able to find out determine their degree of field dependence-independence. The subjects with a greater number of correct simple figures are considered to be field-independent

(Alptekin & Atakan, 1990, as cited in Behçetoğulları, 1992). In order to calculate the subjects' scores on the GEFT, part 1 is ignored since it is a practice section, and the number of correct answers in part 2 and 3 are added together (Thomson & Melancon,1987, as cited in ibid). Scores on the GEFT range from 0 (highly field dependent) to 18 (highly field independent). In this study, the score of 11 or above was regarded as FI , and a score below 11 was regarded as FD. The cut off point 11 was chosen on the basis of an earlier study by Abraham (1981, as cited in Abraham, 1985).

3. 2. 1. 4. The Pre-and Post-tests

The Pre- and Post-tests used in this study consisted of a reading passage, and comprehension questions about the text. The title of the passage was *A New Way To Look At the World* which was chosen from a reading course book called *Between The Lines*. The level of the passage was intermediate. There were 20 comprehension questions following the passage. Of the 20 comprehension questions, 10 questions were requiring subjects to use explicit knowledge which could be directly found in the passage. Questions 2, 6, 7, 8, 11, 13, 14, 16, 17, and 20 were explicit questions. 10 questions on the other hand, were implicit requiring subjects to draw conclusions and recognize the restated expressions from the given information in the passage. Questions 1, 3, 4, 5, 9, 10, 12, 15, 18, and 19 were implicit questions. The tests were prepared by the researcher with the help of another expert who has twenty-year experience in teaching because the tests were to measure the performance of subjects on implicit questions that they were trained on during the treatment sessions, and there was no readily available test for this purpose. The subjects were asked to give open-ended answers to the questions because with the help of another expert who has been teaching for twenty years, it was thought that in true/false or multiple choice questions the students could guess the answer using the other choices. In contrast, in open-ended comprehension questions they are to produce their answers with their own words using the information in the text. Therefore, they would not be able to guess the answer using the other choices as in multiple choice questions or true/false questions.

In the tests, each question was given 5 points, so the total score to be obtained was 50 for implicit questions. Both the Pre-and Post-tests were administered at the

beginning of a 50-minute-class hour, and the subjects were given unspecified time to complete the tests (See Appendix 3).

3. 2. 2. Teaching Materials

In the course of 5 weeks, the subjects were provided reading materials that would enable them to practice implicit question types for 10 hours. The materials were chosen from various reading course books. However, for the aim of this study, the comprehension questions of the passages were sometimes adopted, sometimes prepared by the researcher with the help of another expert who has twenty-five-year experience in teaching, and has been teaching reading for fifteen years. The comprehension questions following the texts included implicit questions which required the subjects to interpret, infer, and draw conclusions on the basis of the information given in different parts of the text and the knowledge they have about the world and their previous experience.

In the course of 5 weeks, the subjects practised three types of implicit questions given with different reading materials. These three types of implicit questions were including inference, restatement, and interpretation questions. The materials chosen for training students on implicit questions were first on the sentence level; and then, they were given materials on the paragraph level. Finally, they were given materials on the passage level. *Building Skills for Proficiency* (Öztürk, 1994), *Ten Steps to Building College Reading Skills* (Langan, 1998), *Improving Reading Comprehension Skills* (Langan, Bader, Anton, 1992), *Ten Steps To Improving College Reading Skills* (Langan, 1997) were the sources of the materials. Samples for inference, restatement, and interpretation questions are given in Appendix 4.

3. 3. Data Collection Procedure

All data were collected during a 9- week-period in Fall 2000-2001 semester. The subjects were given treatment on answering implicit questions for a period of 5 weeks.

Depending on the scores on the Michigan Placement Examination, which the subjects had taken before they started intensive English program at Preparatory School, 122 students who were placed as intermediate level were chosen among the other

students. In addition, they were given the reading part of the practice TOEFL exam to determine whether they have the same proficiency level in reading comprehension.

The Turkish version of the GEFT was given to the subjects a week after the reading part of the practice TOEFL exam to determine their degree of field dependence and independence. Since all the subjects were native Turkish speakers, it was assumed that Turkish version would help them to understand the instructions easily. Although the subjects were not asked whether they would like to take the tests, they were informed about both the purpose of the reading part of the practice TOEFL exam, and the GEFT. They were also told that the test scores would not affect their grades.

Then, the subjects were given the Pre-test in which they were required to read a passage, and then answer 20 comprehension questions including 10 explicit, 10 implicit comprehension questions. The Pre-test was prepared by the researcher with the help of another expert who has been teaching for twenty years because there was no standard test readily available for the purpose of this study

After the Pre-test, while the subjects in the control group were not given any treatment on answering implicit questions, the subjects in the experimental group were trained on implicit questions including inference, restatement, and interpretation questions. During the treatment, the lessons started with short warm-up sessions. Then the type of the implicit question either inference, restatement, or interpretation was defined. And then, the samples of that type of question were provided with the reading material starting from the sentence level. Next, they were given materials on the paragraph and passage level, and practised these types of implicit questions. While practising these questions, discussions were done about the different ways they followed to find the answer to implicit questions providing evidences from the sentences, paragraphs, or passages they were given. A sample lesson is given in Appendix 5.

At the end of 5-week-period that the subjects in the experimental group were trained on implicit questions for 2 hours a week, while the subjects in the control group continued their usual reading lessons, both the experimental and the control groups were given the Post-test, which contained the same reading passage and the same comprehension questions in the Pre-test. The same text and the same questions were

used in the Post-test because it was aimed to determine their improvement in the same text and the same questions. The Post-test was given to determine their improvement in answering implicit questions. Both the Pre-and Post-tests were administered at the beginning of a 50-minute-class hour, and the subjects were given unspecified time to complete the tests.

3. 4. Data Analysis

The subjects' language level was determined as intermediate based on their scores on The Michigan Placement Examination which is used at Preparatory School at Anadolu University.

In the reading part of the practice TOEFL exam, there were 30 questions. The number of correct answers was taken into consideration while evaluating the performance of subjects so the total score to be obtained was 30 for the practice TOEFL reading exam. In calculating the scores for the reading part of the practice TOEFL exam, students' number of correct responses were added up. The mean scores were calculated by dividing these total scores by the number of subjects in the experimental and control groups. In order to demonstrate the most frequent score obtained by the experimental and the control groups the mode of the scores was calculated. And the t-test was run to compare the mean scores of the experimental and control groups to determine whether the subjects in each group have the same proficiency level in reading comprehension.

In addition, the analysis of variance (ANOVA) was used to investigate whether FI and FD learners in the experimental and control groups differed in terms of their mean scores in the reading exam.

In the GEFT, the subjects were classified as FI and FD based on their scores. There were 18 questions in the GEFT, and the score was the number of correct answers. Scores on the GEFT range from 0 (highly field dependent) to 18 (highly field independent). A score of 11 or above was regarded as field independent on the basis of an earlier study by Abraham (1981, as cited in Abraham, 1985). Depending on their performance on the GEFT, in the control group, 16 subjects with the scores between 1-10 were classified as FD; in the experimental group, 10 subjects with the scores

between 1-10 were classified as FD; and in the control group, 31 subjects with the scores between 11-18 were classified as FI; similarly, in the experimental group, 31 subjects were classified as FI after the students who did not take some of the given tests were excluded from the study.

In the Pre-and Post-tests, there were 20 comprehension questions following a reading passage. The questions consisted of 10 explicit, and 10 implicit questions. Each question was given 5 points, so the subjects had their scores out of 50 for implicit questions. Grammar mistakes made by the students were not taken into consideration while marking the papers. Besides the researcher, to establish interrater reliability an instructor with twelve-year experience in teaching, who has been teaching at Preparatory School for seven years was asked to mark the papers. The interrater reliability of both the Pre-and Post-tests was found as 98.4%.

The samples of answers that were accepted as correct and incorrect for implicit questions are given in the following:

Question 1. "Why did the people in ancient times think that mountains were supernatural places?"

Correct Answer: "Because they were beyond their ability to cross or climb."

Incorrect Answer: "Because they saw more than one smoking mountain and they think it's an unbelievable event."

The text says: "Furthermore, the parts of the nature that were beyond their ability to cross or climb were considered supernatural."

Question 3. "What is a smoking mountain?"

Correct Answer: "A volcano"

Incorrect Answer: "These explanations seemed reasonable because few people ever saw more than one smoking mountain in their lives."

The text says: "A volcano was the home of the god of fire. These explanations seemed reasonable because few people ever saw more than one smoking mountain in their lives."

Question 4. "Can clues lead the answer to a problem?"

Correct Answer: "Yes, they can."

Incorrect Answer: "No, they can't."

The text says: "Slowly people realized that those wrinkles were important clues - pieces of information that could be used to learn more about the Earth."

Question 5. "Why does the Earth look wrinkled?"

Correct Answer: "Because of the disasters that had happened on Earth and the change on the surface of the Earth."

Incorrect Answer: "Because mountains might seem great, beautiful and powerful to a person in a valley. From a high place a person sees the general features of the Earth's surface."

The text says: "The wrinkles were evidence of disasters that had happened on Earth and evidence of a process of change that was still happening."

Question 9. "Why does the Earth's surface crack?"

Correct Answer: "Because the Earth's surface is still moving and causes breaks in the surface."

Incorrect Answer: "Because of earthquakes."

The text says: "People could learn to understand more about the world by studying these cracks... Two things have become clear: that the deep cracks are faults, breaks in the surface, and that the Earth's surface is still moving."

Question 10. "Where are the deepest valleys on the Earth?"

Correct Answer: "Near the mountains."

Incorrect Answer: "The deepest valleys on the Earth are under the Pacific Ocean."

The text says: "Part of the crust or surface very slowly push up mountains and make deep valleys in nearby places."

Question 12. "Is India a new part of Asia?"

Correct Answer: "Yes, it is."

Incorrect Answer: "No, it isn't."

The text says: "The movement of the American continents has pushed the mountains up and the trenches down. A similar situation exists in Asia. The piece of land that is now India was once close to Australia."

Question 15. "Do mountains and valleys form as a result of the same kind of plate movement?"

Correct Answer: "Yes, they do."

Incorrect Answer: "No, they don't."

The text says: "Parts of the crust or surface very slowly push up mountains and make deep valleys in nearby places... When the land mass hit the rest of Asia, the Himalayas -the world's highest mountains were formed. The same movement probably made the series of trenches around the coast, including the deepest underwater trench..."

Question 18. "How can an idea be turned into a fact?"

Correct Answer: "When it is proved."

Incorrect Answer: "By using this theory of moving plates, scientists can find answers to many questions."

The text says: "According to the theory, the land masses ride on these plates. It is a theory because no one has proved that the ideas are facts."

Question 19. "From where did all the continents break off?"

Correct Answer: "All the continents broke off from one large land mass."

Incorrect Answer: "The Atlantic Ocean."

The text says: "They have shown, for example, that all the continents were probably once a single mass of land. The Atlantic Ocean fills the valley that formed because the continental plates moved away from each other."

In calculating the Pre- and Post-test scores, students' number of correct responses for implicit questions were added up. The mean scores were calculated by dividing these total scores by the number of subjects in the experimental and control groups. To determine whether there was a statistically significant difference between the experimental and the control groups in terms of their performance on the Pre-test, students' Pre-test scores were compared by means of independent samples t-test.

In addition, one -way analysis of variance (ANOVA) was used to investigate whether the four groups, including FI and FD learners in the experimental and control groups, differed in terms of their mean scores in the Pre-test.

To determine whether there was a statistically significant improvement in the performance of subjects in the experimental group on answering implicit questions, students' Pre-tests and Post-tests were compared by means of paired samples t-test. Then, to find out whether there was a difference between the experimental and control groups in terms of their performance on the Post-test, the Post-test scores of experimental and control groups were compared by means of independent samples t-test. The results were considered significant when the probability level was .05 or below.

In addition, in order to investigate whether the four groups, including FI and FD learners in the experimental and control groups, differed in terms of their performance on the Post-test, the mean scores of the four groups were compared by means of analysis of variance (ANOVA).

CHAPTER 4

RESULTS AND DISCUSSION

The first aim of this study was to determine whether training makes difference on students' performance on answering implicit questions. The second aim was to determine whether cognitive styles (field dependence and independence) affect reader's performance on answering implicit questions. Therefore, the subjects in the experimental group were trained on implicit questions for a certain period of time, whereas the subjects in the control group received no treatment. The students' improvement was measured by means of the Pre- and Post-test. The results were examined to find out whether this improvement is related to cognitive styles of field dependence and field independence.

4. 1. The Results of Practice TOEFL Reading Exam

4. 1. 1. Comparison of Experimental and Control Groups in Terms of the Results of the Practice TOEFL Reading Exam

The subjects of this study were chosen depending on their scores in the Michigan Placement Examination at the beginning of the study. They were also given a reading test to determine whether they have the same proficiency level in reading comprehension, for it was thought that being at the intermediate level does not mean having the same proficiency level in reading comprehension. The reading test was a section of a TOEFL test.

The percentage of the scores obtained by the experimental and control groups in the reading exam are presented in Table 4.1.

Table 4.1
The Percentage of TOEFL Scores of Experimental and Control Groups

Control Group		Experimental Group	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
19	10	15	8
17	9	15	10
11	8	15	12
11	11	12	13
6	13	12	16
4	7	7	9
4	12	7	15
4	14	5	6
4	15	5	14
4	16	2	7
2	3	2	11
2	5	2	17
2	6		
2	18		
2	20		
2	21		

TOEFL was chosen because it is accepted as a standard test of reading comprehension (Educational Testing Service, 1999).

In the reading exam, the highest score in the control group was 21, out of 30. Only 1 student had the highest score. The lowest score was 3. Only 1 student had the lowest score. In the control group, 19% of the subjects scored 10, 17% of them scored 9, 11% of them scored 8 and 11, 6% of them scored 13, 4% of them scored 7, 4% of them scored 12, 4% of them scored 14, 4% of them scored 15, 4% of them scored 16, 2% of them scored 5, 2% of them scored 6, 2% of them scored 18, 2% of them scored 20.

On the other hand, the highest score in the experimental group in the reading exam was 17. Only 1 student had the highest score. The lowest score was 6. 2 students had the lowest score. In the experimental group, 15% of the subjects scored 8, 15% of them scored 10, 15% of them scored 12, 12% of them scored 13, 12% of them scored

16, 7% of them scored 9, 7% of them scored 15, 5% of them scored 14, 2% of them scored 7, 2% of them scored 11 (see Appendix 6).

Table 4. 2 presents the mean score and the mode of subjects in the experimental and control groups in the reading exam.

Table 4. 2
Comparison of Experimental and Control Groups
in Terms of Results of The Practice TOEFL Reading Exam

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>mode</u>
Experimental	41	11.5	8
Control	47	10.8	10

As shown in Table 4.2, the mean score of subjects in the experimental group was 11.5, and the mean score of subjects in the control group was 10.8. Since there were 30 questions in the reading exam, this means that learners in the experimental group had answered 38% of the questions successfully; similarly, learners in the control group had answered 36% of the questions successfully. In addition, the mode of the subjects in the control group was 10. This indicates that the most frequent number of correct answer in the control group was 10. On the other hand, it was found that there were more than one mode in the experimental group, and the smallest value was shown as 8. This indicates that the most frequent number of correct answers of the experimental and control groups were close to each other.

Furthermore, the t-test results, as Table 4.3 presents, indicated that there was no significant difference between the experimental and control groups in terms of their reading proficiency level ($t = .856$, $df = 86$, $p = .394$). This suggests that the subjects in the experimental and control groups were similar in their performance on the practice TOEFL reading exam.

Table 4. 3
Comparison of Experimental and Control Groups
in Terms of Results of The Practice TOEFL Reading Exam

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>t</u>	<u>p</u>
Experimental	41	11.5		
			.856	.394
Control	47	10.8		

p>.05

4. 1. 2. Comparison of FI and FD Learners in the Experimental and Control Groups in Terms of the Results of the Practice TOEFL Reading Exam

Table 4.4 presents the percentage of the scores obtained by FI and FD learners in the experimental and control groups in the reading exam.

Table 4. 4
The Percentage of the Scores of FI and FD Learners in the Experimental and Control Groups
in the Practice TOEFL Reading Exam

<u>Experimental Group</u>				<u>Control Group</u>			
<u>FI (n=31)</u>		<u>FD (n=10)</u>		<u>FI (n= 31)</u>		<u>FD (n= 16)</u>	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
19	12	30	10	13	8	38	10
16	16	20	8	13	9	25	9
13	8	10	11	13	11	6	5
13	13	10	13	10	10	6	7
10	9	10	14	10	15	6	8
10	10	10	15	6	13	6	11
6	6	10	17	6	14	6	12
6	15			6	16	6	13
3	7			3	3		
3	14			3	6		
				3	7		
				3	12		
				3	18		
				3	20		
				3	2		

When FI and FD learners in the experimental and control groups were compared in terms of their performance on the practice TOEFL reading exam, the highest score obtained by FI learners in the experimental group was 16. 5 FI learners had the highest score in the experimental group. That is to say, 16% of FI learners had the highest score in the experimental group. The lowest score was 6. 2 FI learners had the lowest score. In other words, 6% of FI learners had the lowest score in the experimental group. 19% of FI learners scored 12, 13% of them scored 8, 13% of them scored 13, 10% of them scored 9, 10% of them scored 10, 6% of them scored 15, 3% of them scored 7, 3% of them scored 14.

On the other hand, the highest score obtained by FD learners in the experimental group was 17. Only 1 FD learner had the highest score in the experimental group. The lowest score was 8. 2 FD learners had the lowest score. That is, 20% of FD learners had the lowest score in the experimental group. 30% of FD learners scored 10, 10% of them scored 11, 10% of them scored 13, 10% of them scored 14, 10% of them scored 15 (see Appendix 7).

In the control group, the highest score obtained by FI learners was 21. Only 1 FI learner had the highest score. The lowest score was 3. Only 1 FI learner had the lowest score in the control group. 13% of FI learners in the control group scored 8, 13% of them scored 9, 13% of them scored 11, 10% of them scored 10, 10% of them scored 15, 6% of them scored 13, 6% of them scored 14, 6% of them scored 16, 3% of them scored 6, 3% of them scored 7, 3% of them scored 12, 3% of them scored 18, 3% of them scored 20 in the reading exam.

However, the highest score obtained by FD learners in the control group was 13. Only 1 FD learner had the highest score. The lowest score was 5. Only 1 FD learner had the lowest score in the control group. 38% of FD learners scored 10, 25% of them scored 9, 6% of them scored 7, 6% of them scored 8, 6% of them scored 11, 6% of them scored 12 in the reading exam (see Appendix 8).

Table 4.5 presents the results of analysis of variance (ANOVA) comparing the performance of FI and FD learners in the experimental and control groups in the reading exam.

Table 4. 5
The Results of the Analysis of Variance (ANOVA)
in the Practice TOEFL Reading Exam

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>F</u>	<u>p</u>
Experimental FI	31	11.4		
Experimental FD	10	11.6	.733	.394
Control FI	31	11.6		
Control FD	16	9.5		

p >.05

As Table 4.5 shows, the mean score of FI learners in the experimental group was 11.4, and the mean score of FD learners in the experimental group was 11.6 in the reading exam. The mean difference was 0.2. Similarly, the mean score of FI learners in the control group was 11.6, and the mean score of FD learners in the control group was 9.5. The mean difference was 2.1. The results of analysis of variance (ANOVA) comparing the performance of FI and FD learners in the experimental and control groups on the reading exam demonstrated that there was no significant difference among the four groups ($F=.733$, $df=87$, $p=.394$). As it suggests, the four groups, including experimental, control groups, FI and FD learners, had the same proficiency level in reading comprehension. In other words, the subjects in the experimental and control groups with FI and FD cognitive style were similar in their performance on the reading exam.

4. 2. The Results of Pre-and Post-Tests

4. 2. 1. Comparison of The Pre-test Results of Experimental and Control Groups

Table 4.6 presents the percentage of the scores obtained by the experimental and control groups in the Pre-test.

Table 4. 6
The Percentage of The Scores of Experimental and Control Groups
in The Pre-Test

Experimental Group		Control Group	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
24	25	23	20
22	30	21	30
17	20	17	15
10	15	15	25
7	10	6	35
7	35	4	12.5
2	5	4	26.7
2	0	2	17.5
2	13.7	2	22.5
2	22.5	2	27.5
2	26.2	2	40

When the subjects in the experimental and control groups were compared in terms of their performance on the Pre-test, the highest score obtained in the experimental group was 35, out of 50. 7% of the subjects in the experimental group scored the highest score. It means 3 subjects had the highest score. The lowest score in the experimental group was 0. This student answered all the questions incorrectly. Only 1 student had the lowest score. 24% of the subjects in the experimental group scored 25, 22% of them scored 30, 17% of them scored 20, 10% of them scored 15, 7% of them scored 10, 2% of them scored 5, 2% of them scored 13.7, 2% of them scored 22.5, and 2% of them scored 26.2.

On the other hand, the highest score obtained in the control group in the Pre-test was 40. Only 1 student had the highest score. The lowest score in the control group was 12.5. 2 students had the lowest score. 23% of the subjects in the control group scored 20, 21% of them scored 30, 17% of them scored 15, 15% of them scored 25, 6% of them scored 35, 4% of them scored 26.7, 2% of them scored 17.5, 2% of them scored 22.5, 2% of them scored 27.5.

Table 4. 8
The Percentage of The Scores of Experimental and Control Groups
in The Post-test

Experimental Group		Control Group	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
27	30	17	20
24	25	15	25
17	20	15	30
12	35	11	35
7	40	9	17.5
2	31.7	9	27.5
2	36.7	6	40
2	37.5	4	10
2	42.2	4	15
2	45	2	16.7
		2	22.5
		2	26.7
		2	32.5
		2	37.5

In the Post-test, the highest score obtained by the subjects in the experimental group was 45, out of 50. Only 1 student had the highest score. The lowest score in the experimental group was 20. 7 students had the lowest score. In other words, 17% of the subjects had the lowest score in the experimental group. However, one of these students who scored the lowest score was the same student who had the lowest score, 0, in the Pre-test. 27% of the subjects in the experimental group scored 30, 24% of them scored 25, 12% of them scored 35, 7% of them scored 40, 2% of them scored 31.7, 2% of them scored 36.7, 2% of them scored 37.5, 2% of them scored 42.2.

On the other hand, the highest score obtained in the control group was 40 in the Post-test. 3 students had the highest score. That is to say, 6% of the subjects in the control group had the highest score. The lowest score in the control group was 10. 2 students had the lowest score. However, one of these students who scored the lowest score was the same student who had the lowest score, 12.5, in the Pre-test. 17% of the subjects in the control group scored 20, 15% of them scored 25, 15% of them scored

30, 11% of them scored 35, 9% of them scored 17.5, 9% of them scored 27.5, 4% of them scored 15, 2% of them scored 16.7, 2% of them scored 22.5, 2% of them scored 26.7, 2% of them scored 32.5, 2% of them scored 37.5.

Table 4.9 presents the mean score of subjects in the experimental and control groups in the Post-test.

Table 4.9
Comparison of The Post-test Results of Experimental and Control Groups

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>t</u>	<u>p</u>
Experimental	41	29.4		
			2.44	.01
Control	47	25.6		

$p < .05$

As shown in table 4.9, while the mean score of experimental group was 29.4, it was 25.6 in the control group. The mean difference was 3.8. T-test results comparing the performance of experimental and control groups on implicit questions in the Post-test revealed that there was a significant difference between the mean score of experimental group and the control group ($t = 2.44$, $df = 86$, $p = .01$). This suggests that the subjects in the experimental group who received a treatment on answering implicit questions performed better than the subjects in the control group on implicit questions in the Post-test.

4. 3. Comparison of The Pre-test and The Post-test Results of Control Group

Table 4.10 presents the percentage of the scores obtained by the subjects in the control group in the Pre-test and the Post-test.

Table 4. 10
The Percentage of The Scores of Control Group
in The Pre-test and The Post-test

Pre-test		Post-test	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
23	20	17	20
21	30	15	25
17	15	15	30
15	25	11	35
6	35	9	17.5
4	12.5	9	27.5
4	26.7	6	40
2	17.5	4	10
2	22.5	4	15
2	27.5	2	16.7
2	40	2	22.5
		2	26.7
		2	32.5
		2	37.5

In the Pre-test, the highest score obtained by the subjects in the control group was 40, out of 50. Only 1 student had the highest score. The lowest score in the control group was 12.5. 2 students had the lowest score. That is to say, 4% of the subjects had the lowest score. 23% of the subjects in the control group scored 20, 21% of them scored 30, 17% of them scored 15, 15% of them scored 25, 6% of them scored 35, 4% of them scored 26.7, 2% of them scored 17.5, 2% of them scored 22.5, and 2% of them scored 27.5.

Similarly, the highest score obtained in the control group in the Post-test was 40. 3 students had the highest score. This means 6% of the subjects in the control group had the highest score. The lowest score was 10. 2 students had the lowest score. 17% of the subjects in the control group scored 20, 15% of them scored 25, 15% of them scored 30, 11% of them scored 35, 9% of them scored 17.5, 9% of them scored 27.5, 4% of them scored 15, 2% of them scored 16.7, 2% of them scored 22.5, 2% of them scored 26.7, 2% of them scored 32.5, 2% of them scored 37.5 (see Appendix 9).

Table 4. 11
Comparison of The Pre-test and The Post-test Reults of Control Group

<u>Test</u>	<u>n</u>	<u>mean score</u>	<u>t</u>	<u>p</u>
Pre-test	47	23.5		
			2.24	.03
Post-test	47	25.6		

p < .05

As Table 4.11 shows, there was a significant difference between the mean score of subjects in the control group in the Pre-test and their mean score in the Post-test. While their mean score in the Pre-test was 23.5, it increased to 25.6 in the Post-test ($t=2.24$, $df=46$, $p=.03$). As it suggests, the subjects in the control group have also improved during the course of the syllabus given to the preparatory classes.

4. 4. Comparison of The Pre-test and The Post-test Results of Experimental Group

Table 4.12 presents the percentage of the scores obtained by the subjects in the experimental group in the Pre-test and the Post-test.

Table 4. 12
The Percentage of The Scores of Experimental Group in The Pre-test and The Post-test

Pre-test		Post-test	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
24	25	27	30
22	30	24	25
17	20	17	20
10	15	12	35
7	10	7	40
7	35	2	31.7
2	0	2	36.7
2	5	2	37.5
2	13.7	2	42.2
2	22.5	2	45
2	26.2		

In the Pre-test, the highest score obtained by the subjects in the experimental group was 35, out of 50. 3 subjects had the highest score. That is, 7% of the subjects in the experimental group had the highest score. The lowest score was 0. Only 1 student had the lowest score. 24% of the subjects in the experimental group scored 25, 22% of them scored 30, 17% of them scored 20, 10% of them scored 15, 7% of them scored 10, 2% of them scored 5, 2% of them scored 13.7, 2% of them scored 22.5, and 2% of them scored 26.2.

On the other hand, the highest score obtained in the experimental group in the Post-test was 45. Only 1 student had the highest score. The lowest score was 20. 7 students had the lowest score. In other words, 17% of the subjects had the lowest score in the experimental group. 27% of the subjects in the experimental group scored 30, 24% of them scored 25, 12% of them scored 35, 7% of them scored 40, 2% of them scored 31.7, 2% of them scored 36.7, 2% of them scored 37.5, and 2% of them scored 42.2 (see Appendix 10).

Table 4.13
Comparison of The Pre-test and The Post-test Results of Experimental Group

<u>Test</u>	<u>n</u>	<u>mean score</u>	<u>t</u>	<u>p</u>
Pre-test	41	22.4		
			4.54	.0001
Post-test	41	29.4		

$p < .05$

As Table 4.13 shows, while the mean score of experimental group in the Pre-test was 22.4, it increased to 29.4 in the Post-test. The mean difference was 7. There was a significant difference between the mean score of subjects in the experimental group in the Pre-test and their mean score in the Post-test ($t = 4.54$, $df = 40$, $p = .0001$). This suggests that there was an improvement in the performance of subjects in the experimental group on implicit questions between the Pre-test and the Post-test.

4. 5. Analysis of Data In Terms of Different Cognitive Styles in The Experimental and Control Groups

In order to investigate whether there was a statistically significant difference between the mean scores of FI and FD learners in the experimental and control groups in terms of their performance on the Pre-test, one-way analysis of variance (ANOVA) was performed.

4. 5. 1. Comparison of FI and FD Learners in The Experimental and Control Groups in Terms of Their Performance on The Pre-test

Table 4.14 presents the percentage of the scores obtained by FI and FD learners in the experimental and control groups in the Pre-test.

Table 4. 14
The Percentage of The Scores of FI and FD Learners
in the Experimental and Control Groups
in The Pre-test

Experimental Group				Control Group			
<u>FI (n=31)</u>		<u>FD (n=10)</u>		<u>FI (n=31)</u>		<u>FD (n=16)</u>	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
26	30	40	25	23	30	38	20
19	25	20	20	19	15	19	25
16	20	10	10	16	20	19	30
10	15	10	13.7	13	25	13	15
10	35	10	15	10	35	6	12.5
6	10	10	30	6	26.7	6	17.5
3	0			3	12.5		
3	5			3	22.5		
3	22.5			3	27.5		
3	26.2			3	40		

When FI and FD learners in the experimental and control groups were compared in terms of their performance on the Pre-test, the highest score obtained by FI learners in the experimental group was 35, out of 50. 3 FI learners had the highest score in the

experimental group. That is, 10% of FI learners had the highest score in the experimental group. The lowest score was 0. Only 1 FI learner had the lowest score. 26% of FI learners in the experimental group scored 30, 19% of them scored 25, 16% of them scored 20, 10% of them scored 15, 6% of them scored 10, 3% of them scored 5, 3% of them scored 22.5, 3% of them scored 26.2 in the Pre-test.

On the other hand, the highest score obtained by FD learners in the experimental group was 30. Only 1 FD learner had the highest score in the experimental group. The lowest score was 10. Only 1 FD learner had the lowest score. 40% of FD learners in the experimental group scored 25, 20% of them scored 20, 10% of them scored 13.7, 10% of them scored 15 in the Pre-test.

In the control group, the highest score obtained by FI learners was 40. Only 1 FI learner had the highest score. The lowest score was 12.5. Only 1 FI learner had the lowest score. 23% of FI learners in the control group scored 30, 19% of them scored 15, 16% of them scored 20, 13% of them scored 25, 10% of them scored 35, 6% of them scored 26.7, 3% of them scored 22.5, 3% of them scored 27.5 in the Pre-test.

However, the highest score obtained by FD learners in the control group was 30. 3 FD learners had the highest score. In other words, 19% of FD learners had the highest score in the control group. The lowest score was 12.5. Only 1 FD learner had the lowest score. 38% of FD learners in the control group scored 20, 19% of them scored 25, 13% of them scored 15, 6% of them scored 17.5 in the Pre-test (see Appendix 11).

Table 4.15
The Results of The Analysis of Variance (ANOVA)
in The Pre-test

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>F</u>	<u>p</u>
Experimental FI	31	23		
Experimental FD	10	20.8	0.417	.520
Control FI	31	24.5		
Control FD	16	21.5		

$p > .05$

As shown in Table 4.15, the mean score of FI learners in the experimental group was 23, and the mean score of FD learners in the experimental group was 20.8 in the Pre-test. The mean difference was 2.2. Similar to experimental group, the mean score of FI learners in the control group was 24.5, and the mean score of FD learners in the control group was 21.5. The mean difference was 3.

The results of analysis of variance (ANOVA) investigating whether the four groups differed in terms of their mean scores in the Pre-test demonstrated that there was no statistically significant difference among the mean scores of the FI and FD learners within groups and between groups in the Pre-test ($F= 0.417$, $df= 87$, $p=.520$). This suggests that before the treatment on answering implicit questions, FI and FD learners in both the experimental and control groups were similar in their performance on answering implicit questions. However, according to the results of the Pre-test, although there was no statistically significant difference between FI and FD learners, FI learners both in the experimental and control groups performed better than FD learners in the Pre-test.

4. 5. 2. Comparison of FI and FD Learners in The Experimental and Control Groups in Terms of Their Performance on The Post-test

Table 4.16 presents the percentage of the scores obtained by FI and FD learners in the experimental and control groups in the Post-test.

Table 4. 16
The Percentage of The Scores of FI and FD Learners
in The Experimental and Control Groups
in The Post-test

Experimental Group				Control Group			
<u>FI (n=31)</u>		<u>FD (n=10)</u>		<u>FI (n=31)</u>		<u>FD (n=16)</u>	
<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>	<u>%</u>	<u>Score</u>
26	25	40	30	19	30	25	20
23	20	20	25	13	20	19	25
23	30	10	35	13	25	19	35
13	35	10	36.7	13	27.5	13	17.5
10	40	10	42.2	10	40	6	10
3	31.7	10	45	6	15	6	16.7
3	37.5			6	17.5	6	22.5
				6	35	6	30
				3	10		
				3	26.7		
				3	32.5		
				3	37.5		

When FI and FD learners in the experimental and control groups were compared in terms of their performance on the Post-test, the highest score obtained by FI learners in the experimental group was 40, out of 50. 3 FI learners had the highest score in the experimental group. That is, 10% of FI learners had the highest score. The lowest score was 20. 7 FI learners had the lowest score. In other words, 23% of FI learners had the lowest score. 26% of FI learners in the experimental group scored 25, 23% of them scored 30, 13% of them scored 35, 3% of them scored 31.7, and 3% of them scored 37.5 in the Post-test.

On the other hand, the highest score obtained by FD learners in the experimental group was 45. Only 1 FD learner had the highest score in the experimental group. The lowest score was 25. 2 FD learners had the lowest score. That is, 20% of FD learners

had the lowest score. 40% of FD learners in the experimental group scored 30, 10% of them scored 35, 10% of them scored 36.7, 10% of them scored 42.2 in the Post-test.

In the control group, the highest score obtained by FI learners was 40. 3 FI learners had the highest score. In other words, 10% of FI learners had the highest score. The lowest score was 10. Only 1 FI learner had the lowest score. 19% of FI learners in the control group scored 30, 13% of them scored 20, 13% of them scored 25, 13% of them scored 27.5, 6% of them scored 15, 6% of them scored 17.5, 6% of them scored 35, 3% of them scored 26.7, 3% of them scored 32.5, 3% of them scored 37.5 in the Post-test.

However, the highest score obtained by FD learners in the control group was 35. 3 FD learners had the highest score. That is to say, 19% of FD learners had the highest score in the control group. The lowest score was 10. Only 1 FD learner had the lowest score. 25% of FD learners in the control group scored 20, 19% of them scored 25, 13% of them scored 17.5, 6% of them scored 16.7, 6% of them scored 22.5, 6% of them scored 30 in the Post-test (see Appendix 12).

Table 4.17
The Results of The Analysis of Variance (ANOVA)
in The Post-test

<u>Group</u>	<u>n</u>	<u>mean score</u>	<u>F</u>	<u>p</u>
Experimental FI	31	28.3		
Experimental FD	10	32.8	3.91	.01
Control FI	31	26.8		
Control FD	16	23.3		

p < .05

As shown in Table 4.17, the mean score of FI learners in the experimental group was 28.3, and the mean score of FD learners in the experimental group was 32.8 in the Post-test. The mean difference was 4.5. On the other hand, the mean score of FI

learners in the control group was 26.8, and the mean score of FD learners in the control group was 23.3. The mean difference was 3.5.

According to the results of analysis of variance (ANOVA), it was found that there was a significant difference between the mean scores of tested groups ($F=3.91$, $df=87$, $p=.01$). In terms of cognitive styles, first, the difference between the two styles between groups was examined. FI learners in the experimental group showed slightly better performance than FI learners in the control group. However, there was not a statistically significant difference between FI learners of the experimental group and FI learners of the control group ($t= -.390$, $df=18$, $p=.701$). On the other hand, FD learners presented a different picture in which FD learners in the experimental group showed better performance than FD learners in the control group. This difference was also statistically significant as well ($t=4.39$, $df=18$, $p< .001$).

Then, the performance of FI and FD learners within groups were compared. Although there was no statistically significant difference between FI and FD learners in the Pre-test, FI learners were better than FD learners both in the experimental and control groups in terms of their performance on the Pre-test (see Table 4.15). In the control group, a similar result was found in the Post-test. Although both FI and FD learners showed an improvement between the Pre-test and the Post-test, the results still indicated the better performance of FI learners compared to FD learners but this difference was not statistically significant ($t= -1.85$, $df=18$, $p=.08$). On the other hand, in the experimental group, the FI learners' advantage over FD learners disappeared after they received the treatment on answering implicit questions. In the experimental group, when FD learners were compared with FI learners in terms of their performance on the Post-test, it was found that FD learners performed better than FI learners on the Post-test and this improvement was statistically significant ($t=2.68$, $df=18$, $p=.01$). As it suggests, the treatment given on answering implicit questions was more effective on FD learners' performance rather than FI learners'. In other words, FD learners benefited more from the given treatment compared to FI learners.

4. 6. Discussion

The results of this study indicated that when the scores of the practice TOEFL reading exam were taken into account, no significant difference was found between the two cognitive styles in the experimental and control groups in terms of their proficiency in reading comprehension. This indicated that FI and FD learners, both in the experimental and control groups, were similar in terms of their performance on the practice TOEFL reading exam.

This result is not consistent with the findings of previous studies in which field independence has been found to be significantly related to achievement in second language learning. Naiman, Froelich, and Stern (1975, as cited in Behçetoğulları, 1992) reported that FI cognitive style was a significant predictor of second language proficiency. Similarly, Stansfield & Hansen (1983) found that FI cognitive style was associated with a better performance on second language proficiency tests. In the same manner, d'Anglejan and Renaud (1985, as cited in Abraham, 1985) found that FI was significantly related to achievement in French by adult immigrants. Finally, Chapelle & Roberts (1984, as cited in *ibid*) supported the previous findings indicating FI as a significant predictor of success on language tests.

On the other hand, the findings of Readance, Baldwin, Bean, and Dishner (1980, as cited in Hansen, 1984) confirm the findings of this study. The results of their study indicated that there was no influence of FI and FD on cloze test solutions which were said to be correlated with other measures of L2 proficiency and the scores on the TOEFL (Aitken, 1977; Darnell, 1968, 1970, as cited in Stansfield & Hansen, 1983). Similarly, for this study, it may be said that being a FI or FD learner did not affect their scores in the practice TOEFL reading exam. The similar performance of FI and FD learners in the practice TOEFL reading exam can be explained by taking into account the strategies they might have developed to process information. As Rubin states, all learners do apply strategies, however, some of these strategies seemed to be consistently utilized by good language learners (Rubin, 1975, 1981; Rubin & Thomson, 1982, as cited in Nunan, 1995). Similarly, it has been pointed out that not only successful learners, but also unsuccessful learners use strategies; however, appropriate strategy use is needed (Van & Abraham, 1990). For this study, it may be

said that since the findings of previous studies point out the advantage of FI style on language proficiency tests, FI learners, both in the experimental and control groups, were expected to be more successful than FD learners in the Practice TOEFL reading exam (Naiman, Frolich, Stern, 1975, as cited in Behçetoğulları, 1992; Stansfield & Hansen, 1983; d'Anglejan & Renaud, 1985, as cited in Abraham, 1985; Chapelle & Roberts, 1984, as cited in *ibid*). However, it may be said that FD learners might have developed appropriate strategies to handle the difficulties of the test they were given.

In this study, one cognitive style did not have an advantage over the other before the subjects in the experimental group received a treatment on answering implicit questions. This result contradicts with the view that FD learners have more difficulty analyzing information, and are not good at using all information sources lacking the ability of inferencing. Because of FI learners' stated greater ability in analyzing, hypothesis testing, using the context, and inferencing the learners in the experimental and control groups with FI cognitive style were expected to perform better than FD learners on implicit questions, which also require the abilities of analyzing, hypothesis testing and inferencing, even before the treatment (Readance et al., 1980, as cited in Stansfield & Hansen, 1983; Witkin, Moore, Goodenough, and Cox, 1977). The similar performance of the two cognitive styles may be related to the nature of the Pre-test they were given. According to Witkin et al. (1977), FD people have greater difficulty with the "unorganized" material since they are not able to impose a structure on it, and do not have a tendency to employ necessary strategies as FI learners. On the other hand, when the material to be learned is presented in an already "organized" form, such structuring is not needed, FI and FD learners are not likely to differ in their learning. For this study, since the given test was already in an organized form in which structuring is not needed, and requiring learners to find the answers in a particular sequence following the information given in the passage, it may be said that FD learners did not need some strategies to analyze or structure the given test. Therefore, it may be said that FD learners' performance did not differ from FI learners' performance on implicit questions in the Pre-test.

Another finding of this study was concerning the effect of treatment on answering implicit questions. The comparison of the Post-test results of the experimental and

control groups indicated that the subjects in the experimental group who received a treatment on answering implicit questions performed better than the subjects in the control group on implicit questions in the Post-test.

This result is consistent with the findings of the study of Bialystok and Fröhlich (1977, as cited in Rubin, 1987) in which they found that learners' reading comprehension was enhanced when they were provided training on inferencing. They suggested that giving students different kinds of contextual information and instruction in inferencing is beneficial for solving the problems occur in reading comprehension. For this study, it may be said that learners in the experimental group who received a treatment on answering implicit questions, at which they have difficulty, benefited from the given treatment.

Another interesting finding of the study was related with the improvement shown by each cognitive style in the Post-test. Before the treatment on answering implicit questions, although the difference was not statistically significant, FI learners were better than FD learners both in the experimental and control groups in terms of their performance on answering implicit questions. A similar result was found in the control group in the Post-test, still indicating the better performance of FI learners. As it suggests, FI learners' superiority in the control group carried on in the Post-test as well. On the other hand, in the experimental group, the superiority of FI learners to FD learners disappeared after they received the treatment on answering implicit questions. The results concerning the difference between FI and FD learners in the experimental group in terms of their performance on the Post-test indicated that FD learners performed better than FI learners on the Post-test. This suggests the positive effect of treatment on learners with FD cognitive style who showed a greater improvement compared to learners with FI cognitive style. However, FI learners were expected to have better performance on implicit questions in which their analyzing, inferencing and hypothesis testing abilities would help them. For this study, it may be said that although there was an improvement in the performance of both FI and FD learners after the given treatment, FD learners got more benefit from the treatment compared to FI learners. This may be related to FD learners' preferences to planned and organized learning situations. It has been pointed out that FD people need a plan in their learning,

and profit more when they are taught in an organized, "planned" way. But FI people profit less from such a teaching approach (Witkin et al., 1977). In this study, since during the treatment sessions the type of the implicit question either inference, restatement, or interpretation was first presented and practised at the sentence level, then at the paragraph level, and finally, at the passage level, they were taught how to answer these types of implicit questions in a kind of organized and planned way. Therefore, for this study, it may be said that since it was a planned training that allowed them to be aware of what to do and how to do with clear steps, it helped FD learners to benefit more from the given treatment.

Another reason of FD learners' getting more benefit from the given treatment may be related with FD people's preference to strategies such as guessing, predicting and using paraphrases (Witkin et al., 1977; Scarcella & Oxford, 1992). As a result of this study, it may be said that once they were taught how to guess, predict and paraphrase they were able to improve their performance on answering implicit questions that can be overcome by the help of guessing, predicting, and paraphrasing strategies, and that they found opportunities to practise them during the treatment sessions.

As Witkin et al. (1977) suggest it is possible to train FD learners on analyzing information, inferencing, forming and testing hypothesis. As a result, it may be said that although FD learners lack some necessary abilities for answering implicit questions because of their cognitive constructing tendencies, they might be trained for acquiring these abilities.

In conclusion, this study suggests that learners are greatly helped when they are trained on answering implicit questions that they have difficulty handling. Also, it suggests that it is possible to train FD learners on answering implicit questions which is said to be a cognitively demanding task.

CHAPTER 5

SUMMARY AND CONCLUSION

5. 1. Summary

This study attempted to determine whether training makes difference on students' performance on answering implicit questions in reading comprehension. It also attempted to determine whether there is a relationship between cognitive style of field dependence and independence and readers' performance on answering implicit questions.

In order to reach these goals, the following three research questions were asked:

1. Does training make difference on students' performance on answering implicit questions in reading comprehension ?
2. Do cognitive styles (field dependence and field independence) affect readers' performance on answering implicit questions ?
3. Does a person with a certain cognitive style (field dependent or field independent) benefit more from the treatment on answering implicit questions?

Initially, 122 students attending Preparatory School at Anadolu University participated in the study. However, since some of these students did not take the given tests during the study, they were excluded from the study. Therefore, the data gathered from 88 subjects, including 47 subjects in the control group, and 41 subjects in the experimental group. The subjects were from different majors such as Faculty of Letters, Communication Sciences, Civil Aviation, Engineering, Tourism, Science, Fine Arts, and Education. By the time the study started, they all had already completed a period of 9 weeks, 24 hours a week, of English instruction. They had a four- hour reading course in a week.

The subjects were chosen among the students at intermediate level. Their language levels were determined according to their scores on the Michigan Placement Examination. In addition, a practice TOEFL reading exam was given to the subjects to

confirm whether they have the same proficiency level in reading comprehension. The Turkish version of the Group Embedded Figures Test (GEFT) was used to determine the cognitive styles of the students.

The control group students took only the practice TOEFL reading exam, the GEFT, and the Pre-and Post-tests, but they were not given any treatment on answering implicit questions, and the other group, who received a special treatment on answering implicit questions as well as the tests used in the study, constituted the experimental group of the study.

Both groups were given a Pre-test before the treatment on answering implicit questions started in the experimental group. The same test was also used as a Post-test in both groups at the end of the treatment to determine whether there was an improvement in the performance of subjects in the experimental group.

All data were collected during a 9- week-period in Fall 2000-2001 semester. For a period of 5 weeks, 2 hours a week, the subjects in the experimental group received training on answering implicit questions in reading courses. The subjects were informed about the purposes of the reading part of the practice TOEFL exam, and the GEFT. Before the GEFT was administered, they were also informed about the concepts of learning style and cognitive style, and that the knowledge about their cognitive style would help them to become more aware of their own preferred way of learning. They were also told that their Pre-and Post-test scores would not affect their course grades. Both the Pre-and Post-tests were administered at the beginning of a 50-minute-class hour, and they were given unspecified time to complete the tests.

In the practice TOEFL reading exam, the number of correct answers was taken into consideration while evaluating the performance of subjects. Since there were 30 questions, the total score to be obtained was 30 for the reading exam. In calculating the scores for the reading exam, students' number of correct responses were added up. The mean scores were calculated by dividing these total scores by the number of subjects in the experimental and control groups. In order to demonstrate the most frequent score obtained by the experimental and control groups the mode of the scores was calculated. And the t - test was run to compare the mean scores of the experimental and control groups to determine whether the subjects in each group have the same

proficiency level in reading comprehension. The results were considered significant when the probability level was .05 or below. In addition, the analysis of variance (ANOVA) was used to investigate whether FI and FD learners in the experimental and control groups differed in terms of their mean scores in the reading exam. The results indicated that there was no significant difference between the experimental and control groups in terms of their proficiency level in reading comprehension. It was suggested that the subjects in the experimental and control groups were similar in their performance on the reading exam. The results concerning the difference between the two cognitive styles indicated that there was no significant difference between the two cognitive styles in the experimental and control groups in terms of their proficiency level in reading comprehension. Therefore, it was suggested that FI and FD learners, both in the experimental and control groups, were similar in terms of their performance on the reading exam.

The test, which was used as Pre-and Post-test in the study, consisted of a reading passage, and 20 comprehension questions including 10 explicit, 10 implicit questions. The title of the passage was *A New Way To Look At The World* which was chosen from a reading course book called *Between The Lines*. Each question was given 5 points, so the total score to be obtained was 50 for implicit questions. Beside the researcher, to establish interrater reliability, an instructor with twelve-year experience in teaching, who has been teaching at Preparatory School for seven years was asked to mark the papers. The interrater reliability of both the Pre-and Post-tests was found as 98.4%. In calculating the Pre-and Post-test scores, students' number of correct responses for implicit questions were added up. The mean scores were calculated by dividing these total scores by the number of subjects in the experimental and control groups. To determine whether there was a statistically significant difference between the experimental and control groups in terms of their performance on the Pre-test, students' Pre-test scores were compared by means of independent samples t-test. The results indicated that the subjects in the experimental group and the subjects in the control group were similar in their performance on implicit questions in the Pre-test.

Besides, one-way analysis of variance (ANOVA) was used to investigate whether the four groups, including FI and FD learners in the experimental and control groups,

differed in terms of their mean scores in the Pre-test. The results of analysis of variance (ANOVA) demonstrated that there was no statistically significant difference among the mean scores of the FI and FD learners within groups and between groups. Therefore, it was concluded that one cognitive style did not have an advantage over the other before the subjects in the experimental group received the treatment on answering implicit questions. However, according to the results of the Pre-test, although there was no statistically significant difference between FI and FD learners, FI learners, both in the experimental and control groups, seemed to perform better than FD learners before the subjects in the experimental group received the treatment.

In order to determine whether there was a statistically significant improvement in the performance of subjects in the experimental group on answering implicit questions, students' Pre-tests and Post-tests were compared by means of paired samples t-test. The results indicated that there was an improvement in the performance of subjects in the experimental group on answering implicit questions between the Pre-test and the Post-test. Then, to find out whether there was a difference between the experimental and control groups in terms of their performance on the Post-test, the Post-test scores of experimental and control groups were compared by means of independent samples t-test. The results were considered significant when the probability level was .05 or below. The analysis revealed that there was a significant difference between the mean score of experimental group and the control group. Hence, it was suggested that the subjects in the experimental group who received the treatment on answering implicit questions performed better than the subjects in the control group on implicit questions in the Post-test. Therefore, it was concluded that training makes difference on students' performance on answering implicit questions.

In addition, in order to investigate whether the four groups, including FI and FD learners in the experimental and control groups, differed in terms of their performance on the Post-test, the mean scores of the four groups were compared by means of analysis of variance (ANOVA). The results indicated that in the control group, FI learners were better than FD learners on answering implicit questions as in the Pre-test. On the other hand, in the experimental group, FD learners were found to perform better than FI learners on answering implicit questions, contrary to their performance on the

Pre-test. Therefore, it was suggested that while the superiority of FI learners carried on in the control group, their superiority disappeared in the experimental group after they received the treatment on answering implicit questions. In addition, it was concluded that FD learners benefited more from the given treatment since they showed a greater improvement compared to FI learners.

5. 2. Conclusion

Based on the findings of this study, it can be concluded that learners get benefit when they are trained on a particular type of question despite the different cognitive styles they have. This implies that learners may need a special instruction on developing reading skills; that is, on reading between the lines in which most students have difficulty. There may be a need to make detailed assessments to diagnose the challenging areas of language in order to expand the teaching methods and materials which would facilitate learning.

Based on another findings of this study, it can be concluded that one cognitive style did not have an advantage over the other before the subjects in the experimental group received the treatment on answering implicit questions. However, it should be mentioned that although there was no statistically significant difference between FI and FD learners, the findings of the study seem to support the general findings of previous studies indicating the better performance of FI learners both in the experimental and control groups before they received the treatment.

On the other hand, this result changed when the subjects in the experimental group were exposed to the training on answering implicit questions. Therefore, it can be concluded that the stated disadvantage of FD cognitive style in the related literature might be handled with the help of a special instruction on answering implicit questions. This implies that it is possible to cope with the difficulties that may appear as a result of the different peculiarities of different cognitive styles. All teachers need to do is first, to have knowledge about the concept of cognitive styles; then, to have knowledge about the different peculiarities and tendencies of these cognitive styles. In this way, teachers would be able to know the possible difficulties learners may have during language learning, and suggest some strategies that would enable them to handle these

difficulties, especially in reading comprehension which is said to be associated with cognitive competence of learners. Thus, teachers could adapt their ways of teaching, prepare teaching materials and activities that would serve both cognitive styles. Many studies demonstrated that when students were allowed to learn in their preferred modality, there was an increase in their achievement (Smith & Renzulli, 1984). Similarly, Dunn (1990) says since there is an academic achievement in the case of matching learning styles, teachers should first identify the learning styles of learners, and then accommodate their teaching approaches depending on the individual differences in the classroom.

Since every learner has his own way of learning, and different teaching approaches are favored by students with different cognitive styles, the question types used in tests or exams may not match with the cognitive styles of students. This mismatch may result in failure in exams. Therefore, teachers should also take into consideration the different tendencies of cognitive styles providing alternative ways of questioning in testing situations in order to give a chance to the students with different cognitive styles. In addition, teachers should encourage students to use some appropriate strategies in case of a mismatch between students' cognitive styles and the type of the question in testing situations. Therefore, students should be provided opportunities to practice some strategies depending on the differing demands of the task or question form which does not serve their cognitive style.

5. 3. Suggestions for Further Research

This study was conducted in reading comprehension skill. The relationship between the cognitive styles and the performance on other skills like writing, speaking, listening or grammar could be investigated.

In this study, the students were trained on implicit questions and their performance on this type of question was examined since they have difficulty in answering them, in another study, a suitable treatment for different cognitive styles could be provided on other skills in reading comprehension to enable students with a particular style to overcome the difficulties they meet in learning a foreign language, and their improvement after the treatment could be examined within the cognitive styles.

In addition, in this study, the students were trained on inference, restatement, and interpretation questions. Another research could be conducted on other question types as well.

Since the study revealed that FD learners in the experimental group were better than FI learners after they received the treatment on answering implicit questions, the reason could be investigated in relation to the strategies they employ. Therefore, FI and FD learners' strategies could be discovered to find out why and how FD learners benefited more from the treatment. That is to say, the types of strategies FI and FD learners already have before the treatment, and then, the sorts of strategies they have developed after the treatment could be investigated further in another study.

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APPENDIX 1
Michigan Placement Scores of Subjects

<u>Experimental Group</u>		<u>Control Group</u>	
<u>Subjects</u>	<u>Scores</u>	<u>Subjects</u>	<u>Scores</u>
1	57	1	46
2	76	2	51
3	49	3	49
4	48	4	48
5	50	5	51
6	52	6	48
7	48	7	48
8	57	8	48
9	58	9	46
10	57	10	50
11	53	11	49
12	56	12	49
13	46	13	52
14	46	14	51
15	46	15	49
16	47	16	48
17	49	17	49
18	58	18	52
19	54	19	52
20	52	20	52
21	50	21	46
22	47	22	52
23	50	23	49
24	46	24	50
25	50	25	48

<u>Experimental Group</u>		<u>Control Group</u>	
<u>Subjects</u>	<u>Scores</u>	<u>Subjects</u>	<u>Scores</u>
26	52	26	50
27	47	27	49
28	47	28	52
29	49	29	46
30	51	30	51
31	48	31	48
32	56	32	49
33	54	33	51
34	54	34	49
35	53	35	47
36	56	36	52
37	55	37	51
38	63	38	48
39	56	39	51
40	55	40	47
41	53	41	48
		42	46
		43	48
		44	46
		45	49
		46	49
		47	50

APPENDIX 2

Group Embedded Figures Test

Developed by: Philip K. Oltman, Evelyn Raskin
and A. Witkin

Translated by: Guler Okman

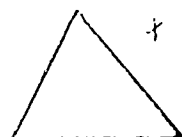
Name:.....

Female/Male

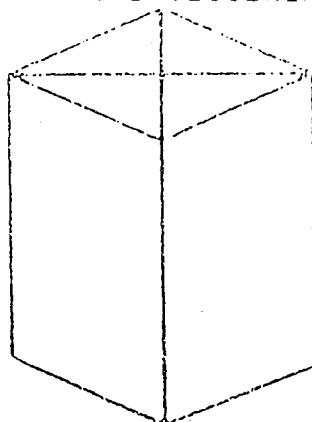
Date:.....

Date of Birth:.....

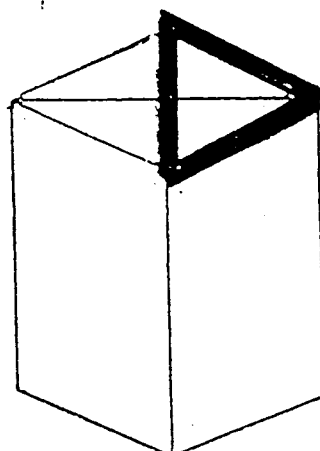
Explanation: This test measures your ability to identify a simple figure embedded in a complex one. Look at the simple figure x given below.



This figure is embedded in the following complex figure.

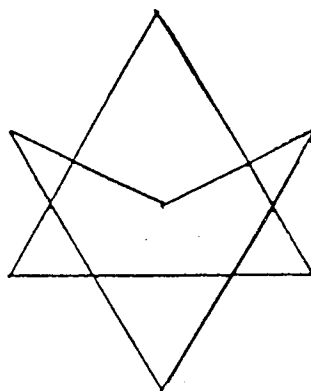
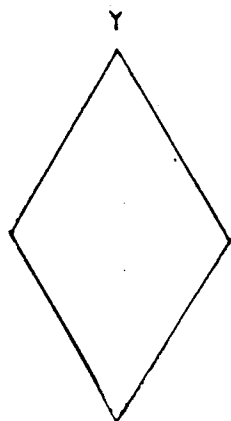


Identify the simple figure (x) embedded in the complex figure and darken it with a pencil as illustrated in the following figure. The simple figure is embedded in the complex figure in the same size, proportion and direction. The following figure illustrates the correct answer in which the simple figure is highlighted.

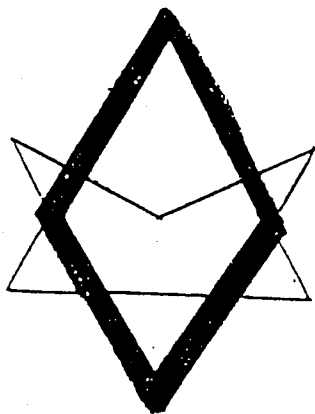


Note: The triangle on the right is the correct figure. The one on the left is wrong because it is in the opposite direction.

Now try the following example. Identify the simple figure Y in the complex design and darken it with a pen/pencil.



Look at the following figure for the correct answer.



SAKLI ŐEKİLLER
GRUP TESTİ

Geliřtirenler: Philip K.Oltman, Evelyn Raskin ve
A.Witkin

Türkçeye uygulayan : Güler Okman

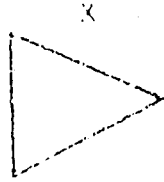
İsim :

Kız/Erkek:

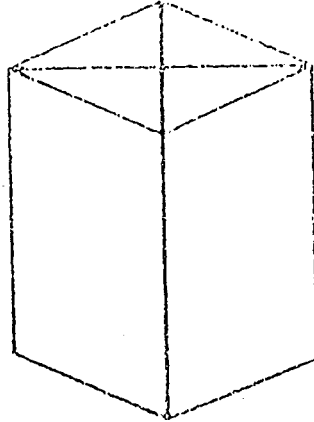
Tarih:

Doęum tarihi:

Açıklamalar: Bu test sizin karmařık bir Őekil içinde saklanmış bir basit Őekli bulma yeteneęinizi ölçer. Ařaęıda bir X ile iřaretledięimiz bir basit Őekil var:



X adlı bu basit Őekil ařaęıdaki karmařık Őekil içinde saklıdır:

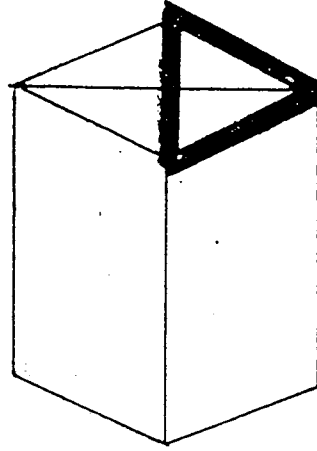


Basit Őekli karmařık Őeklin içinde bulup kalemle Őeklin üzerinden çiziniz.

Basit Őekil karmařık Őeklin içinde AYNI BOYDA, AYNI BOYUT-
LARDA VE AYNI YÖNE DÖNÜK olarak bulunmaktadır.

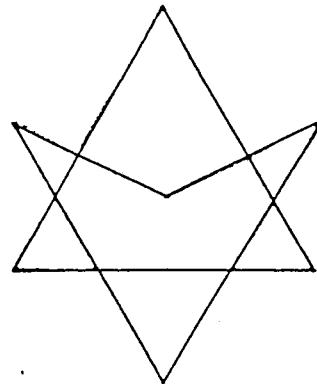
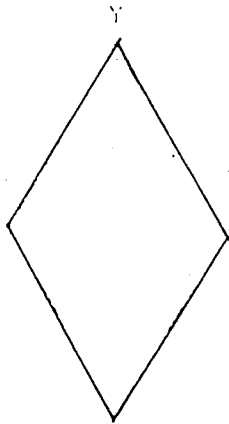
Bunu bitirince sayfayı çevirip doęru çözümleri görünüz.

Aşağıdaki çözüm doğrudur ve basit şeklin çizgileri karmaşık şeklin çizgileri üzerinde belirtilmiştir.

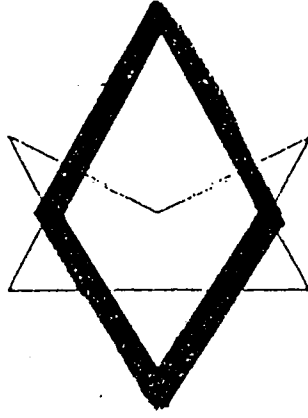


Şu noktaya dikkat edin: Sağ üstteki üçgen doğru şekildedir, Sol üstteki üçgen benzer de olsa değişik yöne dönük olduğu için yanlıştır.

Şimdi bir diğer örneği deneyin. Aşağıdaki karmaşık şekilde "Y" işaretli şekli bulup üzerinden kalemle geçin:



Doğru çözüm için bir sonraki sayfaya bakın.



Bundan sonraki sayfalarda yukarıdaki gibi problemler bulacaksınız. Her sayfada bir karmaşık şekil ve onun içinde saklı olan basit şekli belirten bir harf olacak. Bulmanız gereken basit şekli bu kitapçığın ARKA SAYFASINDA görebilirsiniz. Bulduğunuz basit şekli kalemle karmaşık şeklin üzerine çiziniz.

Şu noktalara dikkat ediniz:

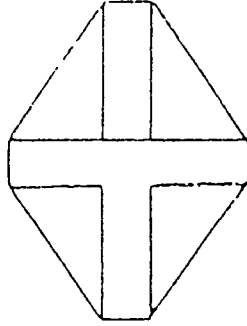
1. Basit şekillere istediğiniz kadar bakabilirsiniz.
2. YAPTIĞINIZ HER YANLIŞI SİLİNİZ,
3. Problemleri sırayla yapınız. Çok zor durumda kalmadıkça kesinlikle hiçbir problemi atlamayınız.
4. Her problem için karmaşık şeklin üzerine YANLIZ BİR BASİT ŞEKİL çiziniz. Birden fazla basit şekil görebilirsiniz ama bunlardan sadece birinin üzerini çiziniz.
5. Basit şekil her sefer karmaşık şeklin içinde arka kapaktaki görünüşüyle aynı boyda, aynı boyutlarda ve aynı yöne dönük olarak bulunmaktadır.

İşaret verilene dek sayfayı çevirmeyiniz.

BİRİNCİ BÖLÜM

PART I

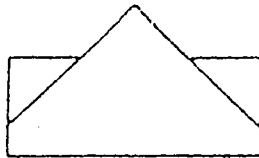
1



Basit Şekil " B" yi Bulun

Identify the simple figure "B".

2



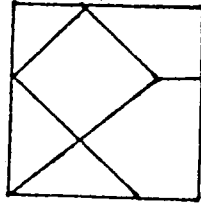
Basit Şekil "G" yi bulun

Identify the simple figure "G".

Sayfayı çevirin

Turn the page.

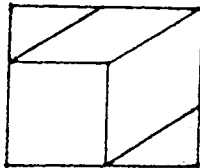
3



Basit Şekil "D" yi Bulun

Identify the simple figure "D".

4



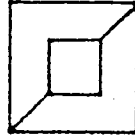
Basit Şekil "E" yi Bulun

Identify the simple figure "E".

Sayfayı çevirin

Turn the page.

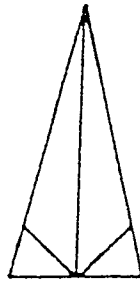
5



Basit Şekil "C" yi Bulun

Identify the simple figure "C".

6

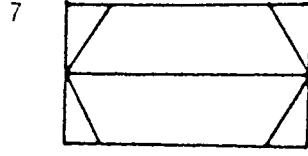


Basit Şekil "F" yi Bulun

Identify the simple figure "F".

Sayfayı Çevirin

Turn the page.

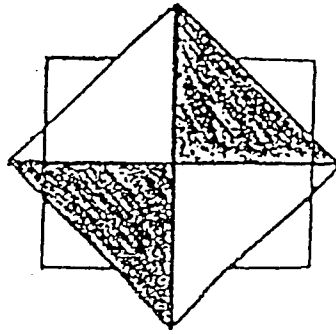


Basit Şekil "A" yı Bulun

Identify the simple figure "A".

LÜTFEN DURUN
Sayfayı çevirmek için işaret
bekleyin.

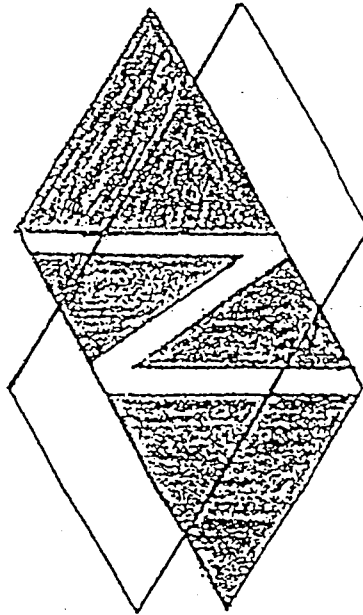
1



Basit Şekil "G" yi Bulun

Identify the simple figure "G".

2



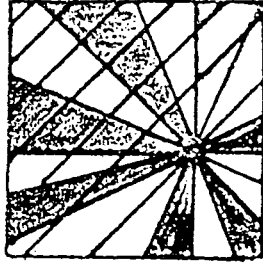
Basit Şekil "A" yı Bulun

Identify the simple figure "A".

sayfayı çevirin

Turn the page.

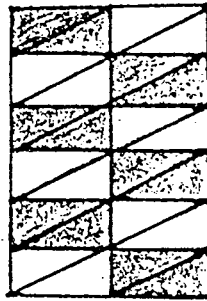
3



Basit Şekil "G" yi Bulun

Identify the simple figure "G".

4

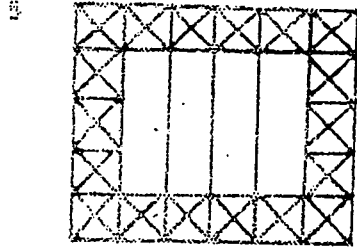


Basit Şekil "E" yi Bulun

Identify the simple figure "E".

sayfayı çevirin

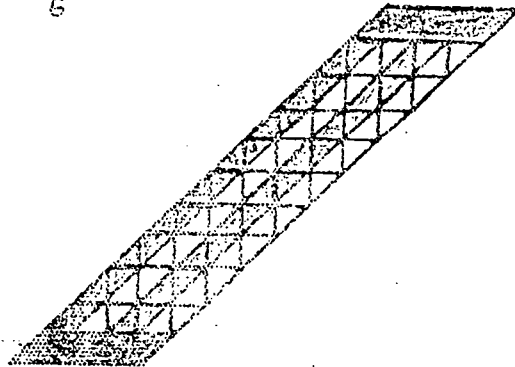
Turn the page.



Basit Şekil "B" yi Bulun

Identify the simple figure "B".

6



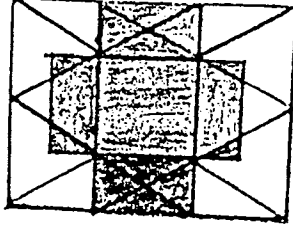
Basit Şekil "C" yi Bulun

Identify the simple figure "C".

sayfayı çevirin

Turn the page.

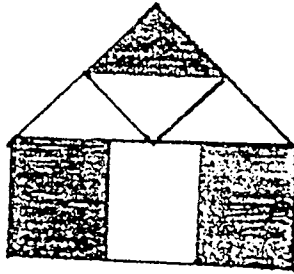
7



Basit Şekil "E" yi Bulun

Identify the simple figure "E".

8



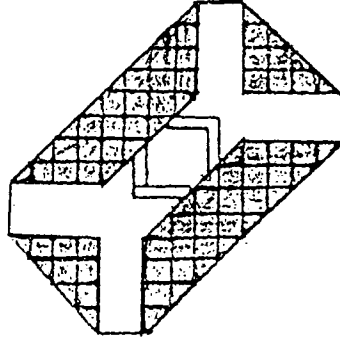
Basit Şekil "D" yi Bulun

Identify the simple figure "D".

sayfayı çevirin

Turn the page.

9

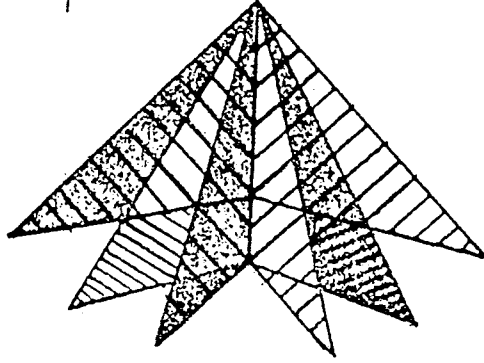


Basit Şekil "H" yi Bulun
Identify the simple figure "H".

LÜTFEN DURUN
sayfayı çevirmek için işaret
bekleyin

UÇUNCU BOLUM

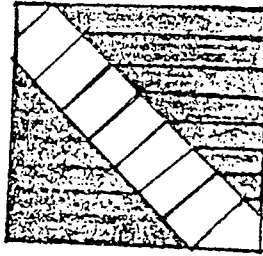
1



Basit Şekil "F" yi Bulun

Identify the simple figure "F".

2



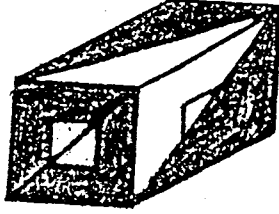
Basit Şekil "G" yi Bulun

Identify the simple figure "G".

sayfayı çevirin

Turn the page.

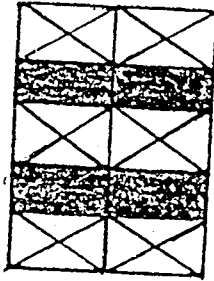
3



Basit Şekil "C" yi Bulun

Identify the simple figure "C".

4



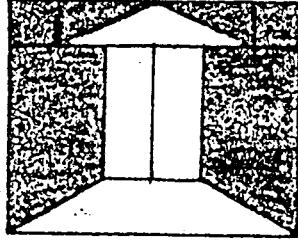
Basit Şekil "E" yi Bulun

Identify the simple "E".

sayfayı çevirin

Turn the page.

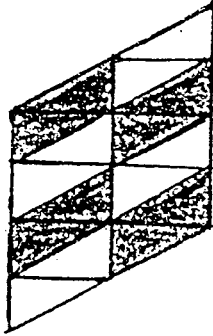
5



Basit Şekil "B" yi Bulun

Identify the simple figure "B".

6

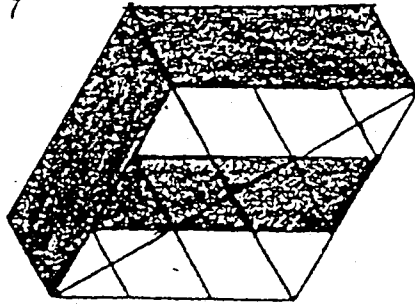


Basit Şekil "E" yi Bulun

Identify the simple figure "E".

sayfayı çevirin

Turn the page.



Basit Şekil "A" yı Bulun

Identify the simple figure "A".



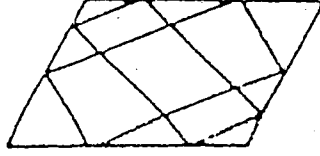
Basit Şekil "C" yi Bulun

Identify the simple figure "C".

sayfayı çevirin

Turn the page.

9



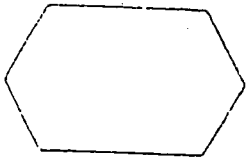
Basit Şekil "A" yı Bulun
Identify the simple figure "A".

LÜTFEN DURUN

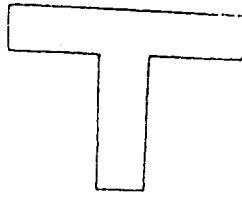
BASİT ŞEKİLLER

LIST OF THE SIMPLE FIGURES

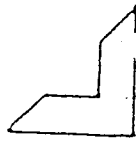
A



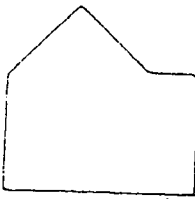
B



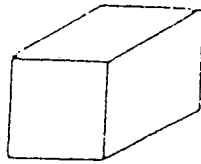
C



D



E



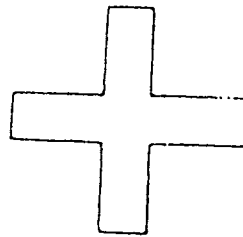
F



G



H



APPENDIX 3

The Pre-Test and The Post-Test

Read the passage below and answer the following comprehension questions according to the passage.

A NEW WAY TO LOOK AT THE WORLD

What did the world look like to the people of the past? What did they see when they looked around them? They were all familiar with the hills and valleys. Geographical features like mountains and rivers were important to them as dividing lines between groups of people and between countries. People quite naturally considered their own parts of the world as the whole world. Furthermore, the parts of nature that were beyond their ability to cross or climb were considered supernatural. In their ancient myths, the mountains were the homes of their gods and goddesses. A volcano was the home of the god of fire. These explanations seemed reasonable because few people ever saw more than one smoking mountain in their lives.

Something important to the knowledge of the world happened. When people were at last able to look down on the surface of the Earth, they saw the world in a different way. Their point of view changed. Mountains might seem great, beautiful, and powerful to a person in a valley. However, from a high place, a person sees the general features of the Earth's surface. The mountains are seen as part of a worldwide pattern, not so special that gods would choose to live on them. A mountain is a part of a range with many high points or peaks. There is nothing special about one mountain. Furthermore, people on Earth do not notice that the Earth is deeply lined - wrinkled and cracked. What a shock this new world view from above must have been !

Slowly people realized that those wrinkles were important clues -pieces of information that could be used to learn more about the Earth. The wrinkles were evidence of disasters that had happened on Earth and evidence of a process of change that was still happening. People could learn to understand more about the world by studying these cracks. What they found were explanations of some of the natural

features of the world. A volcano is now understood to be an opening - an escape valve - for heat from inside the Earth. Two things have become clear : that the deep cracks are faults, breaks in the surface, and that the Earth's surface is still moving. Parts of the crust or surface very slowly push up mountains and make deep valleys in nearby places.

This is exactly what scientists have found to be true. Up and down the western coast of the Americas, there is a range of high mountains that has many parts. The Andes, the Sierras, and the Rockies are some of their names. Off the coast, hidden under the waters of the Pacific Ocean, there are deep trenches, sharp cracks in the Earth's crust. The movement of the American continents has pushed the mountains up and the trenches down. A similar situation exists in Asia. The piece of land that is now India was once close to Australia. When the land mass hit the rest of Asia, the Himalayas - the world's highest mountains were formed. The same movement probably made the series of trenches around the coast, including the deepest underwater trench - the Mariana Trench. Both areas are likely to have earthquakes because there are stresses between the moving sections that are rigid or hard plates floating on hot, liquid rock. Scientists have used this information to form a theory of the Earth's structure. It is called plate tectonics. According to the theory, the land masses ride on these plates. It is a theory because no one has proved that the ideas are facts.

By using this theory of moving plates, scientists can find answers to many questions. They have shown, for example, that all the continents were probably once a single mass of land. The Atlantic Ocean fills the valley that formed because the continental plates moved away from each other. The theory of plate tectonics can also be used to predict how the surface of the world will change in the future. In the mean time, people fear earthquakes and volcanoes. The effects of these disasters are direct. At the same time, earth scientists are learning how to forecast disasters and protect people by the study that began with a higher viewpoint.

Comprehension Questions

1. Why did the people in ancient times think that mountains were supernatural places?
(Implicit)
2. What did the people in ancient myths think about the mountains? (Explicit)
3. What is a smoking mountain? (Implicit)

4. Can clues lead the answer to a problem? (Implicit)
5. Why does the Earth look wrinkled? (Implicit)
6. How did people find explanations of some of the natural features of the world?
(Explicit)
7. How does the heat from inside the Earth escape? (Explicit)
8. What are the deep cracks? (Explicit)
9. Why does the Earth's surface crack? (Implicit)
10. Where are the deepest valleys on the Earth? (Implicit)
11. What are the names of the range of high mountains in the western coast of America?
(Explicit)
12. Is India a new part of Asia? (Implicit)
13. What happened when India hit Asia? (Explicit)
14. What is the name of the deepest underwater trench in the world? (Explicit)
15. Do mountains and valleys form as a result of the same kind of plate movement?
(Implicit)
16. Why is it possible to have an earthquake in the Himalayas and the Mariana Trench?
(Explicit)
17. What is the theory of plate tectonics? (Explicit)
18. How can an idea be turned into a fact? (Implicit)
19. From where did all the continents break off? (Implicit)
20. What is the importance of the theory of plate tectonics? (Explicit)

APPENDIX 4**Samples for Inference, Restatement, and Interpretation Questions**

1. Inference Questions at the Sentence Level

SAMPLE 1:

Read the sentence and put a check by the inference most logically based on the information provided.

A student always sits in the back of the classroom.

- a. The student dislikes the course.
- b. The student is unprepared for class.
- c. The student feels uncomfortable in the front of the room
- d. The student is farsighted.

SAMPLE 2 :

Read the sentence and put a check by the inference most logically based on the information provided.

A car has bumper stickers that read, "I Brake for Animals," "Save the Whales", and "Have You Thanked a Green Plant Today?"

- a. A driver of the car supports environmental issues.
- b. A driver of the car is an environmental scientist.
- c. A driver of the car has pets.
- d. The owner of the car is a college student.

2. Inference Questions at the Paragraph Level

SAMPLE 1:

Read the paragraph and check the two inferences that are most firmly based on the given information.

Whatever their class, murderers most often use handguns to kill. Perhaps seeing a gun while being violently angry makes people more likely to commit murder. Of course, firearms by themselves cannot cause a murder. It is true that “guns don’t kill, people do.” Still, if guns were less available, people might instead use less dangerous weapons, such as fists or knives. Thus, many heated arguments might result in assaults rather than murders. But given the enormous number of guns in private hands, it is not surprising that far more deaths result from gun attacks in this country than in other industrialized countries where there are many fewer guns per person.

- ___ 1. The author feels that people argue more in this country than in other countries.
- ___ 2. The author suggests that if there were fewer guns in this country, there might be fewer arguments.
- ___ 3. The author suggests that if there were fewer guns in this country, there might be fewer murders.
- ___ 4. The author feels that the idea “guns don’t kill, people do” is a useful way of explaining the murder rate in this country.
- ___ 5. The author feels that when people have violent arguments, they are likely to use whatever weapons are available.

SAMPLE 2:

Read the paragraph and answer the following comprehension questions according to the paragraph.

Parents who try to hide their arguments from their children behind closed doors may actually be depriving them of a valuable lesson in relating to others. First of all, children are very sensitive to feelings and will not be fooled by such statements as, “We aren’t fighting; we’re just having a discussion.” Unless the argument becomes a violent battle, with extreme verbal or physical abuse, there is no harm in children looking on. In fact, parents can use such situations to teach their children that it’s okay to be angry sometimes, even with someone they love and respect, that anger does not cause permanent damage to the object of the anger, and that people can use words to express their feelings and resolve conflicts. Children need to learn that the opposite of love is

not anger, but indifference, and that temporary feelings of anger towards a loved one are normal and permissible. Without this lesson, they might grow into adults who have difficulty expressing anger and are frightened by their own hostile feelings.

Comprehension Questions

1. Can watching nonviolent arguments be valuable learning experiences for children?
2. Do some parents support the idea of letting their children witness their argument?
3. Is it okay to be angry with someone you love?
4. How might people use what they learned from their parents' arguments in their adult life?

3. Inference Questions at the Passage Level

SAMPLE 1:

Read the following passage and answer the comprehension questions related to the passage.

Oscar Stohr and Jack Yufe are identical twins who were separated as babies after their parents' divorce. Oscar was reared as a strict Catholic by his maternal grandmother in the Sudetenland of Czechoslovakia. As a member of the Hitler youth movement in Nazi Germany, he learned to hate Jews. By contrast, his brother Jack was reared in Trinidad by the twins' Jewish father. Jack joined an Israeli settlement at age 17 and later served in the Israeli army. During World War II, he felt loyal to the British, reflecting his years in Trinidad, and hated the Nazis.

The brothers met briefly in 1954, but Jack was warned by a translator not to tell Oscar that he was Jewish. In 1979, at age 47, the twins were reunited by social scientists interested in studying the degree to which environmental forces shape human behavior. Since Oscar and Jack were born with the same genes, any later differences in personality must result from their dissimilar upbringings.

Researchers found that, while physically alike, the twins differ in many important aspects. Jack is a workaholic; Oscar enjoys leisure - time activities. Whereas Oscar is a traditionalist who is domineering toward women, Jack is a political liberal who is much

more accepting of feminism. Finally, Jack is extremely proud of being Jewish, while Oscar never mentions his Jewish heritage.

Comprehension Questions

1. Was Oscar loyal to the Nazi cause during World War II ?
2. Did the twins' parents have the same religion?
3. Why did the translator warn Jack not to tell that he was Jewish?
4. Why did they meet again?

SAMPLE 2:

Read the following passage and answer the comprehension questions related to the passage.

The horse of 50 millions years ago, called the Dawn Horse, was a little creature the size of a fox terrier. The species had four toes on each front foot and three toes on each hind foot. Its "toenails" were little hooves. When this animal lived, there were no grasslands. Its home was the forest, where it fed on tender shoots and leaves.

There is proof that this little creature was an ancestor of the horse of today. Scientists have excavated fossils of certain animals that lived a few million years later and found that, although they were bigger than the animal of earlier times, they resembled it and the modern horse.

The horse family survived when many other animals died out because it had two advantages. The little horse was swift, as we can guess from its slim body and slender legs. It also was fairly intelligent ; its skull shows that its brain was large in proportion to its body.

Comprehension Questions

1. How many species of horse have existed?
2. How many toes did the Dawn Horse have totally?
3. Are many contemporaries of the Dawn Horse extinct?
4. Was the brain of the Dawn Horse larger than the other animals' ?

4. Restatement Questions at the Sentence Level

SAMPLE 1:

Read the following sentence and put a check next to the restatements.

When there is an absence of reliable information about drugs, the risks involved in using them are greatly increased.

- a. There is no reliable information about drugs.
- b. Using drugs is more dangerous when we don't know what effects and dangers are involved.
- c. The risks involved in using drugs have increased.
- d. People should try to find out about drugs before using them.
- e. There are no risks involved in using drugs if we have reliable information about them.

SAMPLE 2:

Read the following sentence and answer the comprehension question given after the sentence.

Had more young people voted, Mr. Smith would have won the election.

Comprehension Question

1. Why didn't Mr. Smith win the election?

5. Restatement Questions at the Paragraph Level

SAMPLE 1:

Read the paragraph below and put a check next to the restatements.

Often people who hold higher positions in a given group overestimate their performance, while people in the lowest levels of the group underestimate theirs. While this may not always be true, it does indicate that often the actual position in the group has much to do with the feeling of personal confidence a person may have. Thus,

members who hold higher positions in a group or feel that they have an important part to play in the group will probably have more confidence in their own performance.

___ a. If people have confidence in their own performance, they will achieve high positions in a group.

___ b. If we let people know they are an important part of a group, they will probably become more self-confident.

___ c. People who hold low positions in a group often overestimate their performance.

___ d. People in positions of power in a group may feel they do better work than they really do.

___ e. People with higher positions in a group do better work than other group members.

SAMPLE 2:

Read the paragraph below and answer the comprehension questions related to the paragraph.

The office building was made possible by two innovations in technology: structural steel (steel shaped for use in construction) and the elevator. Previously, buildings were supported by their walls. Large buildings had to be built with walls of heavy masonry (stonework or brickwork). Masonry walls made it difficult to put up structures higher than a hundred feet because the upper walls would weigh too much for the lower stories to bear. Steel changed all that completely. The weight of the building could now be borne entirely by a light steel skeleton frame. The outside walls, completely relieved from the duty to bear weight, were now a mere "skin" and could be made of anything; tiles, metal panels, and glass. And with the elevator, buildings could climb until they scraped the sky.

Comprehension Questions

1. What are the two new things in technology used in office building?
2. Is it practical to use masonry walls in high buildings?
3. How is it possible to hold up the weight of the building?

6. Restatement Questions at the Passage Level

SAMPLE 1:

Read the following passage and answer the comprehension questions related to the passage.

In the late 1700s, slavery in the North became a dying institution. In 1774, Philadelphians, among them Benjamin Franklin, organized an abolition society. Pressure from this group and from antislavery Quakers resulted in Pennsylvania becoming the first state (1780) to declare slavery illegal. Soon other states followed.

Slaves themselves were also very active in challenging human bondage. Quok Walker of Massachusetts ran away from his master in April 1781 and sought shelter with a friendly neighbor. His master located Walker a few days later and attacked him with a whip. Beaten severely, Walker stood his ground. He sued for his freedom, pointing out that the new state constitution had proclaimed that "all men are born free and equal." The State Superior Court upheld Walker in 1783, and this decision signaled the beginning of the end of slavery in Massachusetts.

Comprehension Questions

1. When did slavery begin to be considered illegal?
2. Which state proclaimed the illegality of slavery first?
3. Was Quok Walker a slave in Massachusetts?
4. Were slaves brave against people who were supporting the idea of slavery?

SAMPLE 2:

Read the following passage and answer the comprehension questions related to the passage.

In making its pricing decision, a company needs to consider the other members of the pricing chain. The consumer price of a product is often the result of several separate decisions.

Consumer goods usually pass from manufacturers to wholesalers to retailers. The manufacturer makes the product and decides on an initial price. Then the manufacturer

sells the item to a wholesaler, who sells the item to a retailer at a new price. The retailer then tries to sell the product to the consumer at yet another price. If nobody buys the item the retailer may reduce the price. At every level in the chain, the price of the product is increased enough for that member to make a profit.

Because a number of parties are involved in setting the final price of a product, no one has total control. The manufacturer may recommend a certain pricing strategy for a product. But there is no guarantee that other links in the chain will abide by the recommendation.

Comprehension Questions

1. Who decides on the first price of the product?
2. Is the product sold to a retailer by the wholesaler?
3. Who sells the product to the consumer with an increased price?
4. In which circumstances may the price of the product be decreased by the retailer?

7. Inference, Restatement, and Interpretation Questions About the Same Passage

SAMPLE 1:

Read the following passage and answer the comprehension questions according to the passage.

In 1816 a Scottish natural philosopher, David Brewster, invented the kaleidoscope. As he was studying theories about polarized light, he discovered how to reflect beautiful images in multiples. He himself thought up the name for his invention; the Greek root of "kaleidoscope" means "device to make beautiful images".

Used first as a toy, the kaleidoscope soon was used by pattern makers. Recently, this use has increased as the crafts movement in the U.S. has formed a new market for high-quality handmade objects. Some modern-day kaleidoscopes come with special sound effects.

As the popularity of kaleidoscopes has grown so have the prices. It is possible now to pay thousands of dollars for some versions which have been created by well-known artists.

Comprehension Questions

1. Was Brewster's discovery of the kaleidoscope accidental?
2. Who used kaleidoscopes first?
3. Has the range of kaleidoscopes gone down over the years?
4. What kind of relationship is there between the popularity of a product and its price?
5. Are some kaleidoscopes produced by famous artists expensive today?

SAMPLE 2:

Read the following passage and answer the comprehension questions according to the passage.

Little League baseball in its present form should be abolished. For one thing, the pressure that children are put under to succeed may harm them more than help them. One mother discovered her son taking Maalox tablets from the medicine chest whenever a game approached. He explained that they helped relieve the stomach burn he would feel during the game. Other children have been found taking tranquilizers. Another drawback to today's Little League baseball is that some parents take the game too seriously and set a bad example for their children. Recently, a disillusioned coach said, "At our field, we put the bleachers way back from the dugout where the players are. That way, parents can't be hissing down advice to their children all the time and getting them upset." A final reason Little League should be abolished is that it doesn't offer enough success to most players. Instead, the game revolves around the more developed kids who are able to hit and throw the ball harder than the smaller children. In one recent game, most of the batters were clearly afraid of the speed of the hardball, which was pitched by a boy bigger than many of the other players.

A workable alternative to Little League hardball would be lob-pitch softball. The ball is pitched slowly and underhand, which offers a high level of success to kids without a high level of ability. Lob-pitch softball would get more children involved in the game, and help people remember that it is a game - not an adult arena where one is branded with success or failure.

Comprehension Questions

1. Do some children in Little League take drugs to reduce their anxiety?
2. What is recommended instead of Little League hardball?
3. Why is it recommended to use a softball?
4. Why would lob-pitch softball get more children involved in the game?
5. Which one is important whether you win or lose, or how you play the game?

APPENDIX 5

Sample Lesson Plan

1. Brief introduction on what implicit question is and what answering implicit questions requires.
2. A short introduction on the inference questions.
3. Explanation of guidelines for making inferences.
4. Demonstration of the ways answering inference questions using the sample exercise.

Sample Exercise:

Read the following paragraph and check the three inferences that are most logically based on the given information.

The *Chicago Tribune* once wrote that Henry Ford was an ignoramus. Ford sued, challenging the paper to “prove it”. During the trial, Ford was asked dozens of simple, general information questions: “When was the Civil War?” “Name the presidents of the United States.” And so on. Ford, who had little formal education, could answer very few. Finally, exasperated, he said, “I don’t know the answers to those questions, but I could find a man in five minutes who does. I use my brain to think, not store up a lot of useless facts.”

- ___ 1. Henry Ford was probably angered by the article in the *Chicago Tribune*.
- ___ 2. Ford frequently sued people.
- ___ 3. Ford won the case in court.
- ___ 4. The *Tribune* won the case in court.
- ___ 5. Ford would have been more successful had he had a formal education.
- ___ 6. Ford believed that knowing where to find a fact is good enough.
- ___ 7. Ford regretted not having a more formal education.
- ___ 8. Ford believed that knowing how to think is more important than knowing facts.

5. Discussion of the answers for sample exercise providing evidences from the paragraph.

6. Students are given paragraphs with comprehension questions which include inference questions.

Sample Paragraph 1:

Read the following paragraph and answer the comprehension questions related to the paragraph.

A corporate president recently made a visit to a nearby Native American reservation as part of his firm's public relations program. "We realize that we have not hired any Indians in the five years our company has been located in this area", he told the assembled tribespeople, "but we are looking into the matter very carefully". "Hora, hora," said some of the audience. "We would like to eventually hire 5 percent of our total work force from this reservation," he said. "Hora, hora," shouted more of the audience. Encouraged by their enthusiasm, the president closed his short address by telling them that he hoped his firm would be able to take some hiring action within the next couple of years. "Hora, hora, hora," cried the total group. With a feeling of satisfaction, the president left the hall and was taken on a tour of the reservation. Stopping in a field to admire some of the horses grazing there, the president asked if he could walk up closer to the animals. "Certainly," said his guide, "but be careful not to step in the hora."

Comprehension Questions

- 1) To get the main point of this paragraph, the meaning of which word do you need to infer?
- 2) Did the audience believe the president's speech?
- 3) What did the president think as a result of the Native Americans' reaction to his speech?
- 4) What was the main concern of the president? His company or Native Americans?
- 5) Who are called Native Americans?

Sample Paragraph 2:

Read the following paragraph and answer the comprehension questions related to the paragraph.

Television changed my family forever. We stopped eating dinner at the dining - room table after my mother found out about TV trays. We kept the TV trays behind the kitchen door and served ourselves from pots on the stove. Setting and clearing the dining - room table used to be my job; now, setting and clearing meant unfolding and wiping our TV trays, then, when we'd finished, wiping and folding our TV trays. Dinner was served in time for one program and finished in time for another. During dinner we used to talk to one another. Now television talked to us. If you had something you absolutely had to say, you waited until the commercial, which is, I suspect, where I learned to speak in thirty - second bursts. As a future writer, it was good practice in editing my thoughts. As a little girl, it was lonely as hell. Once in a while, I'd pass our dining - room table and stop, thinking I heard our ghosts sitting around talking to one another, saying stuff.

Comprehension Questions

- 1) Where do they usually eat their dinner?
 - 2) Which one does the author prefer, eating at the dining - room table or eating in front of the TV?
 - 3) Did she remember good or bad times when she imagined the ghosts?
-
7. Students read the paragraph.
 8. Students read the comprehension questions, and try to answer these questions individually. In the meantime, they draw conclusions based on the information given in the paragraph in order to answer inference questions.
 9. Discussion of the answers with the whole class.
 10. Discussion of the different ways students follow finding the appropriate inferences. Students explain how and where in the paragraph they found the proper answer providing evidences from the given paragraph.
 11. A review of the steps through which the knowledge could be transferred to other related reading activities and tasks.

APPENDIX 6

**Scores of The Experimental and Control Groups in The Practice TOEFL Reading
Exam**

<u>Experimental Group</u>		<u>Control Group</u>	
<u>Subjects</u>	<u>Scores</u>	<u>Subjects</u>	<u>Scores</u>
1	12	1	10
2	13	2	18
3	15	3	9
4	8	4	11
5	8	5	16
6	12	6	14
7	6	7	15
8	13	8	3
9	8	9	8
10	7	10	8
11	15	11	20
12	10	12	7
13	17	13	13
14	8	14	6
15	10	15	15
16	8	16	8
17	11	17	11
18	13	18	11
19	10	19	9
20	14	20	14
21	16	21	9
22	13	22	13
23	10	23	8
24	6	24	10

Experimental Group**Control Group**

<u>Subjects</u>	<u>Scores</u>	<u>Subjects</u>	<u>Scores</u>
25	12	25	12
26	16	26	21
27	10	27	11
28	9	28	9
29	10	29	15
30	16	30	16
31	16	31	10
32	9	32	13
33	15	33	8
34	8	34	10
35	9	35	9
36	12	36	9
37	14	37	9
38	12	38	5
39	16	39	7
40	12	40	11
41	13	41	10
		42	10
		43	12
		44	10
		45	10
		46	9
		47	10

APPENDIX 7

**Scores of FI and FD Learners in The Experimental Group in The Practice TOEFL
Reading Exam**

<u>FI Learners</u>	<u>Reading Scores</u>	<u>FD Learners</u>	<u>Reading Scores</u>
Subjects		Subjects	
1	12	1	15
2	13	2	10
3	15	3	17
4	8	4	8
5	8	5	10
6	12	6	8
7	6	7	11
8	13	8	13
9	8	9	10
10	7	10	14
11	16		
12	13		
13	10		
14	6		
15	12		
16	16		
17	10		
18	9		
19	10		
20	16		
21	16		
22	9		
23	15		
24	8		

FI Learners **Reading Scores**

Subjects

25	9
26	12
27	14
28	12
29	16
30	12
31	13

APPENDIX 8
Scores of FI and FD Learners in The Control Group in The Practice TOEFL
Reading Exam

<u>FI Learners</u>	<u>Reading Scores</u>	<u>FD Learners</u>	<u>Reading Scores</u>
Subjects		Subjects	
1	10	1	13
2	18	2	8
3	9	3	10
4	11	4	9
5	16	5	9
6	14	6	9
7	15	7	5
8	3	8	7
9	8	9	11
10	8	10	10
11	20	11	10
12	7	12	12
13	13	13	10
14	6	14	10
15	15	15	9
16	8	16	10
17	11		
18	11		
19	9		
20	14		
21	9		
22	13		
23	8		
24	10		

<u>FI Learners</u>	<u>Reading Scores</u>
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25	12
26	21
27	11
28	9
29	15
30	16
31	10

APPENDIX 9

The Pre- and Post-Test Scores of The Control Group

<u>Subjects</u>	<u>Pre-test</u>	<u>Post-test</u>
1	20	30
2	30	40
3	25	35
4	30	35
5	15	20
6	30	27.5
7	27.5	30
8	15	17.5
9	15	25
10	26.7	20
11	35	30
12	15	15
13	35	27.5
14	26.7	26.7
15	20	27.5
16	15	17.5
17	25	32.5
18	20	15
19	35	40
20	30	30
21	25	25
22	40	40
23	25	30
24	22.5	37.5
25	30	25
26	30	30
27	30	20

<u>Subjects</u>	<u>Pre-test</u>	<u>Post-test</u>
28	20	25
29	15	27.5
30	12.5	20
31	20	10
32	20	35
33	15	16.7
34	20	17.5
35	15	22.5
36	20	17.5
37	20	25
38	30	35
39	17.5	25
40	25	35
41	30	20
42	30	30
43	20	20
44	20	25
45	25	20
46	12.5	10
47	25	20

APPENDIX 10
The Pre-and Post-test Scores of The Experimental Group

<u>Subjects</u>	<u>Pre-test</u>	<u>Post-test</u>
1	25	31.7
2	30	25
3	15	20
4	25	25
5	10	20
6	15	25
7	26.2	20
8	30	35
9	35	30
10	20	25
11	10	45
12	13.7	35
13	25	42.2
14	20	25
15	20	25
16	25	30
17	25	30
18	15	30
19	30	36.7
20	25	30
21	35	25
22	30	40
23	30	25
24	0	20
25	30	35
26	22.5	40
27	20	20

<u>Subjects</u>	<u>Pre-test</u>	<u>Post-test</u>
28	5	25
29	35	30
30	30	30
31	20	40
32	20	35
33	30	30
34	25	25
35	25	20
36	10	35
37	15	30
38	25	37.5
39	30	30
40	20	20
41	25	30

APPENDIX 11

**Scores of FI and FD Learners in The Experimental and Control Groups in The
Pre-test**

<u>Experimental Group</u>				<u>Control Group</u>			
<u>FI</u>	<u>Score</u>	<u>FD</u>	<u>Score</u>	<u>FI</u>	<u>Score</u>	<u>FD</u>	<u>Score</u>
1	25	1	10	1	20	1	20
2	30	2	13.7	2	30	2	15
3	15	3	25	3	25	3	20
4	25	4	20	4	30	4	15
5	10	5	20	5	15	5	20
6	15	6	25	6	30	6	20
7	26.2	7	25	7	27.5	7	30
8	30	8	15	8	15	8	17.5
9	35	9	30	9	15	9	25
10	20	10	25	10	26.7	10	30
11	35			11	35	11	30
12	30			12	15	12	20
13	30			13	35	13	20
14	0			14	26.7	14	25
15	30			15	20	15	12.5
16	22.5			16	15	16	25
17	20			17	25		
18	5			18	20		
19	35			19	35		
20	30			20	30		
21	20			21	25		
22	20			22	40		
23	30			23	25		
24	25			24	22.5		
25	25			25	30		
26	10			26	30		
27	15			27	30		
28	25			28	20		
29	30			29	15		
30	20			30	12.5		
31	25			31	20		

APPENDIX 12

**Scores of FI and FD Learners in The Experimental and Control Groups in The
Post-test**

<u>Experimental Group</u>				<u>Control Group</u>			
<u>FI</u>	<u>Score</u>	<u>FD</u>	<u>Score</u>	<u>FI</u>	<u>Score</u>	<u>FD</u>	<u>Score</u>
1	31.7	1	45	1	30	1	35
2	25	2	35	2	40	2	16.7
3	20	3	42.2	3	35	3	17.5
4	25	4	25	4	35	4	22.5
5	20	5	25	5	20	5	17.5
6	25	6	30	6	27.5	6	25
7	20	7	30	7	30	7	35
8	35	8	30	8	17.5	8	25
9	30	9	36.7	9	25	9	35
10	25	10	30	10	20	10	20
11	25			11	30	11	30
12	40			12	15	12	20
13	25			13	27.5	13	25
14	20			14	26.7	14	20
15	35			15	27.5	15	10
16	40			16	17.5	16	20
17	20			17	32.5		
18	25			18	15		
19	30			19	40		
20	30			20	30		
21	40			21	25		
22	35			22	40		
23	30			23	30		
24	25			24	37.5		
25	20			25	25		
26	35			26	30		
27	30			27	20		
28	37.5			28	25		
29	30			29	27.5		
30	20			30	20		
31	30			31	10		

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