

DİNLEME-ANLAMA YETİSİNDE
ALAN BAĞIMLILIĞIN VE ALAN BAĞIMSIZLIĞIN
BELİRLİ AKTİVİTE VE SORU TİPLERİNİN
PERFORMANSINA ETKİSİ

THE EFFECTS OF FIELD DEPENDENCY AND
FIELD INDEPENDENCY ON THE PERFORMANCE
OF CERTAIN ACTIVITY OR QUESTION FORMS
IN LISTENING COMPREHENSION ABILITY

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YÜKSEK LİSANS TEZ ÖZÜ

DİNLEME-ANLAMA YETİSİNDE ALAN BAĞIMLILIĞIN VE ALAN BAĞIMSIZLIĞIN BELİRLİ AKTİVİTE VE SORU TİPLERİNİN PERFORMANSINA ETKİSİ

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Bu çalışma, dinleme-anlama yetisinde, alan bağımlılığın ve alan bağımsızlığının belirli aktivite ve soru tiplerinin performansına etkisini araştırmaktadır. Öğrenmeyi etkileyen tüm faktörleri yeteri kadar bilemememiz dil öğretimini zorlaştırmaktadır. Bireylerin farklı dil öğrenme yetileri, bazı araştırmacıları öğrenmede bireysel farklılıkların bir sebebi olan bilişsel tipler üzerinde çalışmaya yönlendirmiştir. Dinleme-anlama becerisi öğretmenler için öğretmesi çok kolay fakat öğrenciler için öğrenilmesi çok zor olan bir beceri olarak düşünülmektedir. Öğretmenler için en zorlayıcı sorunlardan birisi, öğrencilerine dinleme-anlama becerisindeki zorluklarını yenmede nasıl yardım edecekleri konusudur. Bu nedenden dolayı, bilişsel tipler açısından öğrencilerin öğrenmelerine yardım edecek, dinleme-anlama becerisini açıklayan bilgilere gereksinim vardır.

Bu çalışma Anadolu Üniversitesi Eğitim Fakültesi İngiliz Dili Eğitimi Programında gerçekleştirilmiştir. Çalışmaya toplam 88 birinci sınıf öğrencisi katılmıştır. Öğrenciler, Saklı Şekiller Grup Testindeki puanlarına göre alan bağımlı ve alan bağımsız olarak ayrılmıştır. 9 hafta (18 saat) boyunca, çeşitli dinleme-anlama metinlerinde sekiz aktivite tipi - boşluk doldurma, doğru-yanlış, çoktan seçmeli, bilgi soruları, resimleri eşleme, konuşmacıların anlatım biçimlerini eşleme, tablo tamamlama ve sıraya dizme - üzerine çalışılmıştır. Her hafta 2 aktivite tipi üzerinde durulmuş ve bu aktiviteler bunu takip eden 2 hafta içinde 2 kez test edilmiştir.

Çalışmanın sonuçlarına göre, alan bağımsız öğrencilerin resimleri eşleme, tablo tamamlama ve çoktan seçmeli soru tiplerindeki performanslarının, alan bağımlı öğrencilerin bu soru tiplerindeki performanslarına göre daha iyi olduğu görülmüştür. Öğrenciler, dinleme-anlama yeterliliklerine göre seçildiklerinde bu sonuçlar farklılık göstermiştir. Bu durumda, alan bağımsızlığının aktivite tiplerindeki performansa etkisine rastlanamamıştır. Bu çalışma, alan bağımlı ve alan bağımsız öğrencilerin performanslarının dinleme-anlama yeterlilik seviyelerine bağlı olarak farklılık gösterdiğini öne sürmektedir. Alan bağımlı öğrencilerin dinleme-anlama yeterlilik seviyeleri ne kadar yüksek olursa, alan bağımsız öğrencilerin bilişsel yapılarından dolayı performanslarının daha iyi olacağı beklenen aktivite tiplerindeki performansları, alan bağımsız öğrencilerinkine göre, o kadar daha iyi olmaktadır.

Sonuç olarak diyebiliriz ki, öğrencilerin belirlenen activite ve soru tiplerindeki performanslarında, sadece bilişsel tiplerinin değil dinleme-anlama yeterlilik seviyelerinin de etkili olduğu gözlenmiştir.

ABSTRACT

This study investigates the effects of field dependency and independency on the performance of certain activity and question forms in listening comprehension ability. Teaching a language is so difficult that we do not know enough about all the factors affecting learning. Individuals with different language learning abilities have led some researchers to investigate on cognitive style as a source of individual variation in learning. Listening comprehension ability is thought too easy to teach for teachers but too difficult to learn for students. One of the most frustrating questions for teachers is how to help their students overcome their difficulties in listening comprehension ability. Therefore, a clear understanding about listening skill is needed to help students in their learning within the cognitive styles.

This study was conducted at Anadolu University Education Faculty English Language Teaching Program. 88 freshmen participated in this study. They were classified as field dependent and field independent based on their scores of the GEFT. They were provided eight activity forms - gap filling, true-false, multiple choice, comprehension questions, matching pictures, matching the tones of the speakers, chart completion and sequencing - in various listening comprehension texts in the course of 9 weeks (18 classroom hours). Each week two forms of activity were practised, and they were tested two times in the following two consecutive weeks.

The results of the comparison of the performances of field dependent and field independent learners showed that field independent learners were better in the performances of the question forms of matching pictures, multiple choice and chart completion. The interesting finding of the study was that the results changed when the students were selected based on their listening proficiency level. In that case, field independency did not have an effect on the performances of these activity forms. This study suggests that performances of FI and FD learners differ depending on their listening proficiency level. The higher proficiency FD

learners have, the better they may perform in the question forms in which FI learners are expected to be better because of their cognitive restructuring.

In conclusion, the results showed that, not only the cognitive style but the listening proficiency level may also effect the performances on some certain activity or question forms.

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CHAPTER 1

INTRODUCTION

1.1. Background to the Problem

When people come together, whether to play, fight or make love - they talk. People live in a world of language. They cannot live without talking. Even if people who cannot speak the same language live together, they create a new language in which they can communicate. Language keeps people together and make them human. To some people speaking Latin, a child is not called 'human' but 'infants', a thing cannot speak or does not have a language. Similarly, for some African people, only by the act of learning does the child become a human being (Fromkin & Rodman, 1988).

Language distinguishes humans from animals. However, we are like the little dogs of Mother Goose. When two people are together, they must talk to each other.

Two little dogs sat by the fire
Over a fender of coal dust;
Said one little dog to other little dog,
"If you don't talk, why, I must."

As people become acquainted with others, they learn more about themselves. The cultural, social, political and technical changes all over the world have required people to learn about other people's way of life or thinking in addition to the keeping up with the pace of modern life. With the necessity of improving and increasing the relations with other countries, researchers have shown increasing interest in discoveries throughout the history of language teaching.

To communicate with native speakers, people first must learn to understand the spoken language they hear. Therefore, the skill of listening comprehension should have received the emphasis it has always deserved. Unfortunately, it is probably the most neglected of the four

language skills (Kalikova, 1986, Chaistain, 1988, Rost, 1990, Shrum and Glisan, 1994). Both language teachers and students tend to overlook the importance of listening comprehension skills. Their attention is fixed so completely on their ultimate goal, speaking, that they fail to recognise the need for listening comprehension skills. The learners may realise this after stepping off the plane in a country where their foreign language is spoken or when they are imperfect in getting the messages at the point of reception. It may even sound so strange that they wonder whether they are in the right country at the airport or speaking the same language. Usually a panic sets in. Have my years of foreign-language study been a big deception? he wonders. What was wrong with it?

We know that, as Anderson and Lynch (1988) and Underwood (1989) point out, listening is a complex process and the teaching of this process is as complex as the listening process itself. For years, problems have always taken place in the teaching of listening comprehension. In the past, it was assumed that if learners were taught to cope with the sounds, words and the structure of the language, they would put these together for themselves and become proficient in the language as a whole. There was little attempt to help learners understand the overall message of a piece of spoken language, or to arrive at an inference or a conclusion from what they had heard (Rixon, 1986). It was believed that set of drills would develop listening skills as well as pronunciation. The teaching methodology during those years was essentially derived from the behaviourist tradition. There have been, however, considerable changes in the approach to listening comprehension. Teachers have started to use listening texts that contain spontaneous spoken language in listening activities. The notions of authenticity and context and the view that teachers should provide learners with authentic and contextualised examples of language have developed (Brown, 1987). The most innovative methods of language teaching in the last decade such as Total Physical Response, Silent Way, Community Language Learning, Suggestopedia, Natural Approach and others, all share one common goal: Communicative competence. With the communicative language teaching, it is emphasised that listening should be dealt within a real life frame; focus should be on meaning and not on form in authentic materials. For all these methods, another perspective - humanistic aspects of learning - gained increasing prominence in language teaching. Encouragement of

positive feelings of the students are seen to be as important as their learning of language (Harmer, 1991). In many of these methodologies, seeing students as a 'whole person', thus helping them to develop themselves as people is emphasised. Hence individual differences appear on the stage. Considering that the characteristics of the learner play a role in Second Language Acquisition variation, some researchers have focused on the characteristics of successful and unsuccessful language learners. Since intelligence is not the factor that determines successful language learning, then what other factors explain individuals' language learning abilities ask some researchers (Jamieson, 1992). This question has led some to investigate cognitive style as a source of individual variation in learning. Since the characteristics of cognitive style indicate a person's mode of understanding, thinking, remembering, judging and solving problems, researchers have dealt with the relationship between the cognitive styles and the learning process. The knowledge of new methods for studying the brain and its functions has effected language teaching approaches by suggesting different classroom techniques and activities for a maximum achievement.

The emphasis on the nature of skills has brought new dimensions in teachers' teaching process. Namely, for listening skill, having an idea of how people understand spoken language, listening comprehension should be understood better in terms of the problems that students have in their comprehension process. However, as Anderson and Lynch (1988) state, we can never actually observe the problems that students may experience and the skills they use. We are able only to deduce what the listeners did with the message and what they found difficult by examining their response. Many students hear but do not comprehend (Rivers, 1986). Also understanding the words themselves is not enough to understand spoken text. Whilst hearing can be thought as a passive condition, listening is always an active process (Underwood, 1989). Listening is the activity of paying attention to and trying to understand the things we hear. Successful listeners work out what speakers mean when they speak in particular settings and in particular ways; and they are thought to be involved actively in the communication process (Chastain, 1988). By learning to listen, we want our students to attend to what they hear, to process it, understand it, interpret it, evaluate it and respond to it. In other words, they are required to involve in communication process and be active listeners.

1.1.1 Problems in the Teaching of Listening Comprehension

Language learners often feel inundated with problems when they first attempt to listen to a new language. In listening success depends in part on the learners' active participation (Anderson & Lynch, 1988). Thus, the important thing is to find ways of giving listeners more confidence providing various exercise forms to help them increase the amount of speech they can understand with ease, and to make them participate actively. Therefore, we should determine some factors affecting listening comprehension.

According to Rubin (1994), there are five major factors that affect listening comprehension:

1. Text characteristics (variation in a listening passage, text or associated visual support),
2. Interlocutor characteristics (variation in the speaker's personal characteristics),
3. Task characteristics (variation in the purpose for listening and associated responses),
4. Listener characteristics (variation in the listener's personal characteristics),
5. Process characteristics (variation in the listener's cognitive activities and in the nature of the interaction between speaker and listener).

In terms of text characteristics, studies indicate that the perception of stress, rhythm, word order, discourse markers, text type and the visual aids affect comprehension. In the area of interlocutor characteristics, sex bias and the speaker expertness on listening recall is considered. The ways for assessment - question forms - are regarded in terms of task characteristics. Listener characteristics - their proficiency level, age, gender, background knowledge, and memory - appear to have considerable impact on individual's listening comprehension. The last factor - process characteristics - is the more difficult or a major one. It refers to how listener interpret input in terms of what they know or identify what they don't know. It also refers to the way in which learners use different kinds of signals to interpret what is said. Each of these factors have been considered in various studies for an effective teaching.

Other factors influencing listening comprehension are mentioned by Samuels (1984). According to him, constructing meaning out of the speaker's message depends on the

knowledge and skills in the listener's head and on environmental factors which are external to the listener. In other words, two reasons may cause failure in comprehension: Lack of Inside-the-Head Knowledge which is on the part of the listener, and Outside-the-Head Factors which is on the part of the speaker. While intelligence, language facility, background knowledge, speech registers, metacognitive strategies, kinesics, and motivation are in the part of the Inside-the-Head Factors, discussion topic, speaker awareness of listener needs, clarity of the message and context are in the part of the Outside-the-Head Factors.

To narrow down, all these factors may relate with cognitive style. The brain is the center of cognition which is defined as "the mental process or faculty by which knowledge is acquired"(Chaistain, 1988). Cognition involves all types of mental processing, such as perception, comprehension, rehearsal, elaboration, retrieval, problem solving and thinking. In other words, students are different and they learn in different ways because of their cognitive structure. They see and make sense of the world in different ways or they approach their environment differently and they construct relationships differently. This cognitive process enhance or hinder their progress in learning a language. Therefore, in some aspects, listener characteristics may be related with his cognitive style. Listener's comprehension may also be related with his preferences of text and task characteristics and with his information processing. Hence, teachers should be aware of this cognitive style factor in terms of planning their lesson and, adjusting their materials.

1.1.2 Listening Comprehension, Activity Forms and Cognitive Styles

In recent years, the fields of cognitive psychology, artificial intelligence and linguistics have combined efforts in developing theories of comprehension. But the L2 listening comprehension literature over the past two decades includes only a small number of empirical studies in a few basic areas (Long, 1989). Nevertheless, many articles have appeared in support of various techniques for teaching and testing L2 listening comprehension. During the 1970s, cognitive psychology began to focus on the individual as an active processor of linguistic input. As Long (1989) states, learners construct meaning during the comprehension process by segmenting and chunking input into meaningful units, actively matching the results

with their linguistic and world knowledge, and filling in the gaps with logical guesses. She also adds that intake is recoded and stored in long-term memory in the form of propositions, or basic meaning forms.

Goodenough (1976) defines cognitive styles as dimensions of individual differences involving the form of cognitive functioning. Thus research on the relationships between perception and learning-memory is a natural progress of cognitive-style considerations. In theory, field dependence or independence is considered to be one expression of a more general individual-difference dimension. As Witkin, Dyk, Faterson, Goodenough & Karp (cited in Goodenough, 1976, p7) define, it is at one extreme by a global mode of field approach and at the other extreme by an articulated mode of field approach. In other words, for some people who have a global cognitive style, experiences can be governed by the organisation of the field. By contrast, for the people who have a field independent cognitive style, experiences can be analysed and structured in new ways, depending on the task.

So, the language is a complex cognitive skill described within the context of cognitive theory. To be more efficient, a theory of listening comprehension must be able to describe how knowledge about language is stored in memory and how comprehension occurs. Therefore, a clear understanding about listening process is needed in developing classrooms activities and materials for teaching and testing listening comprehension.

1.2. Aim and Scope of the Study

The aim of the study is to determine whether there is a cognitive style effect in terms of the performance on certain activity forms in listening comprehension.

Cognitive styles of field dependence and independence were chosen in this study because the most widely used and investigated cognitive style is field-dependence (FD) and field-independence (FI) (Witkin, 1962; Saracho, 1989). We know that different characteristics of FD and FI learners suggest different learning styles. The relationship between the terms of 'learning style' and 'cognitive style' are sometimes used interchangeably in the related literature (Keefe & Ferrell, 1990). Some researchers (e.g. Claxton & Ralston, and Kolb cited in Keefe &

Ferrell, 1990, p58) classify cognitive style as a type of learning style. Both cognitive and learning styles require different learning and teaching situations because learners differ in the way they learn. In other words, 'one' teaching methodology may not be appropriate for all students in the classroom. Similarly, all activity forms may not fit all the students. Some students may fail since they respond differently to instructions or they are required to learn with inappropriate methods or materials with their styles. Listening skill was chosen in this study because it was thought to be too difficult to learn for students while too easy to teach for teachers. Both students and teachers should concentrate on the listening skills in order to overcome some difficulties in listening comprehension. Therefore, a clear understanding about listening process is needed for developing teaching methods and materials.

This study can provide a basis to classroom teaching, strategy training and evaluation of students' learning in listening comprehension. From the teachers side, having an idea of cognitive styles and their performance on various activity or question forms in listening skill, they expand their teaching materials according to their students' cognitive styles in order to enhance their learning. Teachers can provide guidelines and alternatives in their teaching. They can teach with several different ways by giving chance to the students with different styles to learn more efficiently. Teachers can also help their students master some strategies to perform better in the certain activities or question forms that do not match their styles. So, this will help them in reaching more students and bringing a variety to their teaching and testing listening comprehension as well as a more positive classroom environment in which students have better motivation and a feeling of success.

1.3. Research Questions

The following research questions were asked in the study:

- 1) Are there certain activity forms in which FI learners perform better than FD learners in listening comprehension?
- 2) Are there certain activity forms in which FD learners perform better than FI learners in listening comprehension?

The next chapter presents the characteristics of the cognitive styles of field-dependence and independence in details.

CHAPTER 2

COGNITIVE STYLES

FIELD-DEPENDENCE & FIELD-INDEPENDENCE

Before examining the relationship between listening comprehension and performance of different cognitive styles on various activity forms, it seems necessary to present the characteristics of cognitive styles of field dependence and field independence in general.

The concept of cognitive style refers to psychological dimensions. In other words, it concerns individual differences in the process of cognition, perception, thought, memory and imagery (Mahlios, 1989). A great deal of experimental research have been conducted to investigate the ways that people perceive and conceptualise their environment.

Many researchers defined cognitive styles in terms of different characteristics. As Witkin, Moore, Goodenough and Cox (1977a) state, cognitive styles carry a message about what we traditionally call 'personality'. So, as they claim, it is a feature of personality, not alone of cognition alone in a narrow sense. Even (1982) also relates personality to cognitive style stating that personality and behaviour of adults are influenced greatly by their preferred cognitive style. As she defines, cognitive styles are the ways in which an individual perceives, gathers, and processes information in order to learn, solve problems, work, relate to others, choose a career, raise children, act in groups or participate in activities.

Another characteristic of cognitive styles is that they are stable over time (Witkin et al. 1977a; Korchin, 1986; Saracho, 1988). But according to Witkin et al. (1977a), this does not imply that they are unchangeable; some may easily be altered in time. Also as they pointed out, cognitive styles are bipolar. It means that each pole has adaptive value under specified circumstances; each may be seen as especially suited to meet the requirements of particular tasks. According to Korchin (1986), this bipolarity also points the fact that they are value neutral. In other words, neither pole is better or worse than the other. Therefore, each one has qualities that help people adapt to particular circumstances (Witkin et al., 1977a).

In the studies of the brain and nerve system, neuro-physiologists try to measure cognitive style. Various dimensions of cognitive style have been identified. The most famous, widely used and investigated cognitive style is “field dependence and field independence” (Witkin, 1979; Saracho, 1989). Although it is impossible to directly measure cognitive styles, researchers try to determine some differences inferred from the observation of individual’s performance under certain conditions.

Rod-and-Frame Test (RFT) is one of the instruments that is commonly used although it is not the only or even the first test developed for measuring a person’s manner of conflict resolution. A *Tilting-Room Test*, a *Rotating-Room Test*, and many other devices were created for Hy’s studies; and the term field-dependent was first used to describe the effects of the visual fields used in these tests (Goodenough, 1986). Hy was the leader of the New Look movement in perception of the 1940s. This movement criticised approaches to perceptual theory which neglected the personality of the perceiver. With this tradition, hundreds of studies of literature led to new interpretations of the field dependence and a new and, much more convenient assessment method was provided. By 1962, field independence had been redefined, and *The Group Embedded Figures Test (GEFT)* became an accepted test (Goodenough, 1986), replacing RFT.

Field dependent / independent (FDI) dimension of cognitive style identifies field dependent and field independent persons by differentiating the techniques they use in dealing with complex and confusing events and in reacting to a variety of circumstances in a cognitive way (Saracho, 1989). FI individuals process information by actively segmenting information into relevant parts and analysing the interrelationships among those parts. By contrast, FD individuals process information in a global, holistic and passive fashion. In other words, in their extreme forms, one will not be able to “see the forest for the trees” in the case of FI, yet one will only see the forest and not the individual trees in the case of FD (Alptekin & Atakan, 1990). As Saracho (1988, p 214) defines, the characteristics of FD individuals in general is as follows:

They:

- 1) "depend on the surrounding perceptual field;
- 2) encounter their environment in a comparatively global fashion as they comply to the influence of the prevailing field or context;
- 3) rely on authority;
- 4) interact with others in close proximity;
- 5) are sensitive to the others' feelings, which assist them in obtaining social skills, and
- 6) select occupations which permit them to work with others;

In contrast, she also defines FI individuals as follows:

They:

- 1) can abstract objects from surrounding perceptual field;
- 2) can withdraw an item from the surrounding field in an analytic fashion;
- 3) are independent authority and rely on their own standards and values;
- 4) are cold and distant;
- 5) are socially removed but possess analytic skills, and
- 6) select occupations which permit them to work alone"

These are the extreme behaviours. On the other hand, most people have, to some extent, the traits of both cognitive styles. Many studies have been conducted to clarify the differences among styles. In terms of *age*, the consistency of cognitive style has been investigated; and researchers (Witkin, Dyk, Faterson, Goodenough & Karp cited in Saracho, 1989, p78) have found that as subjects get older, they become more FI. They provided evidence to show that young children are predominantly more FD and their potential to separate an object from the context develops with age. With increases with age, there is a tendency to move in the field independent direction. But a child, compared with other children of same age, tends to maintain the same relative position on the field-dependence continuum with increases in age, and this tendency stabilises in early adulthood (Witkin & Goodenough cited in Davis & Cochran, 1989, p130). Children remain quite stable over a seven year period. Field independency stabilises around approximately at the age of 30 when it gradually begins to decrease (Chapelle & Roberts 1986; Hansen 1984). Moreover, some individuals may be 'mobile' in that they function with a high degree of cognitive restructuring (field-independence) and a high degree of social

competence (field-dependence). Other individuals are 'fixed', therefore, they show characteristics of either cognitive restructuring or social competence (Davis & Cochran, 1989).

There are also *sex* differences in the development of field-dependence. In many research, preschool girls were found to be more FI than boys. On the other hand, for adolescents and adults, males tend to be more FI than females (Witkin & Goodenough cited in Davis & Cochran, 1989, p130; Chapelle & Roberts, 1986). Therefore, sex differences may be confounded by age differences as well. Although many studies support these results, there are other studies which are not consistent with the cited results above.

Beside sex and age effects, researchers have found that *culture* influences on individuals' cognitive style. In some studies FI style is found in a relation with the type of society and home in which child is raised. Democratic, industrialised societies with more relaxed rearing patterns produce FI persons while highly socialised and strict rearing norms tend to produce more FD persons (Hansen, 1984).

Regarding literature on relations between cognitive style and achievement in particular vocations, FI students have been found to do significantly better in sciences, mathematics, architecture and engineering than FD learners (Dubois & Cohen; Greenfield; Margulis; Rosett; Robins & Watson; and Williams cited in Witkin, Moore, Oltman, Goodenough, Friedman, Owen & Raskin, 1977b, p207). According to Korchin (1986), FI persons are able to isolate and manipulate abstract concepts, and FD persons are more at home with people to provide judgement and action. Therefore, it is no surprise that FI persons move toward fields such as mathematics and the sciences while FD persons favour humanities, social sciences, and human-helping professions.

Some research indicate that the nature of the social roles in particular circumstances are influenced by the cognitive styles. For example, in terms of the roles of woman in family, FD women favour a more "conventional" family oriented role while FI women favour a more "liberated" career oriented role. In the study of Greenwald (cited in Witkin et al., 1977a, p52) it was seen that FI women strongly prefer an 'intellectual role' for themselves, whereas FD

women favour a 'woman's role'. Another study (Pollack & Kiev cited in Witkin et al., 1977a, p31) about therapist roles indicates that FI and FD therapists adopt different approaches to their treatment. Indeed, this idea lead some researchers to investigate how FI and FD teachers teach and how these different teaching styles based on their cognitive style effect the performance of FI and FD students. FI and FD teachers were found to be different based on their cognitive style in using different techniques in their teaching process. FD teachers use discussion and discovery approaches to foster interpersonal relations while FI teachers use lecturing and a direct approach which minimises interpersonal interactions. Both FI and FD students have a better performance with FI teachers. FI students achieved well either a teacher who matches or mismatches their cognitive style while FD students are more successful with a teacher who mismatches their cognitive style (Saracho, 1990).

As the findings discussed before suggest, cognitive styles play an identifiable role in career differentiation and teaching / learning processes. Therefore, knowledge about students' cognitive styles may be useful to students themselves as a guide in the identification of suitable career goals. In terms of education, for teachers, knowing about students' cognitive styles may be fruitful in designing their teaching. They can adjust their teaching situation according to their students' cognitive styles to help them perform better in the subjects that the students choose.

The next chapter will present the review of literature about educational implications of field independency and field dependency.

CHAPTER 3

REVIEW OF LITERATURE

It has been observed that second language learners differ in the level of proficiency they attain in the new language and that some learners approach language learning tasks better than others. The language learning literature supposes that some sets of cognitive and metacognitive behaviours can lead to this success and, in the case of successful learners, it is believed that they have particular sets of cognitive processes and behaviours which make them successful. One of the behaviours that makes some learners more successful than others is related with the cognitive style of field independency and field dependency since different characteristics of field independency or field dependency suggest different learning styles which affect learners' language performance in general. If it is accepted that changing cognitive styles is too difficult, or perhaps not possible, and if the teachers want to guide their students and help them overcome their learning difficulties so that they can be successful learners, one thing to do for teachers may be to arrange the classroom environment according to their students' cognitive styles. In other words, teachers may choose their teaching methods, activities, etc. by taking their students' cognitive styles into consideration to insure their success.

Experimental studies investigating the effects of cognitive style of field dependency and field independency on learning have been conducted both inside and outside the language field. In this section, the findings of studies investigating learning principles of learners with different cognitive styles and especially their performance in language skills including various activity and question forms are presented.

3.1. The Effect of Field Dependence-Independence Cognitive Style On Learning

Researchers define 'cognitive styles' as the specific ways in which individuals perceive and approach mental tasks. Cognitive styles include perceptual, intellectual and social-interpersonal processes. Therefore, some researchers focused on learning and memory in terms of cognitive styles.

Chastain (1988) mentions the relationship between learning and memory, stating that the value of learning correlates directly with the amount of learned information that is stored in memory and the proportion of that material that the individual can recall. In other words, as he states, if learners cannot store, retain or recall information, they have not really learned it. It means that they may have understood it but have not learned it.

Learning theorists relate 'learning' with different types of memory. They typically divide memory into two types: short-term memory and long-term memory. Short-term memory is limited, and as Chastain (1988) states, it is also conscious memory that individuals use while working with newly received or recalled information. Such information is stored for short periods of time while it is being analysed and interpreted. Once the message or information is understood, the data may become part of long term memory (permanent memory). If it is no longer needed, it may fade from short term memory (Richard, Platt and Platt, 1992). On the other hand, long-term memory deals with the information which is stored for longer periods of time. But the information may not be stored in the same form in which it is received (Richard, Platt and Platt, 1992).

The theory of field dependence has a number of implications for learning and memory processes. When Witkin studied on cognitive styles in 60s and 70s, there was a small number of investigations on field dependency / field independency and learning memory and the relationships between them were not so clear. Today we can say that a number of studies illuminate the relationships between field dependency and independency and learning-memory abilities.

Memory differences are related to encoding, retrieval, or organisation processes. Davis and Frank (1979) (cited in Davis & Cohran, 1989, p135) investigated free recall and found that FI learners tend to cluster more than FD learners and recall better than FD learners in difficult patterns and organisation.

The studies of Annis (1979) and Berger & Goldberger (1979) (cited in Davis & Cohran, 1989, p133) supported this finding. They have also demonstrated that FI students were better at

learning and remembering textual information which was high in structural importance. In Berger & Goldberger's study (1979), FI learners did recall significantly more digits on the more difficult interference tasks. On the other hand, there was no difference between FD and FI learners on simpler tasks.

A similar result was obtained in Frank's study (1983) (cited in Davis & Cohran, 1989, p133). He investigated recall cues and found that when the recall cues were the same as those presented during learning, FI and FD learners did not differ. On the other hand, when the recall cues were different than those presented during learning, FI learners demonstrated better recall than FD learners. Thus, it appears that FI learners encode information in a more versatile manner than FD learners.

On the contrary, FD persons show superior memory for social information. Crutchfield (1958) (cited in Witkin et al., 1977a, p18) found that FD army officers did significantly better than FI officers in recognising photographs of other officers who had spent several days with them at an assessment center. However this situation differs when the task is one of intentional learning of faces. In that case, their superiority was of a function of selective attention to the faces of their peers rather than of better ability to learn and remember such material.

A similar result was seen in Fitzgibbons' study (1965) (cited in Witkin et al. 1977a). He asked subjects to remember the words they hear. There were neutral words and some words with social connotations. FD subjects recalled more words with social connotations than FI subjects, but for the neutral words there was no difference. So, the findings indicated that FD persons were better at remembering social material and that this superiority was because of their selective attention to social material. Consistent with these findings, Saracho (1990) states that FD persons learn better with materials which have social content while FI persons prefer materials focusing on general principles.

Field dependence has also been investigated from the perspective of working memory. As Case (cited in Frank & Keene, 1993, p15) suggested working memory is the information-processing system that mediates the performance superiority of FI persons over FD persons on

complex cognitive tasks. Frank & Keene (1989) also defines working memory as an information processing system including typical short term memory storage functions, plus executive or control systems for processing information. Hence, the capacity of this information processing system can be used to perform in restructuring and organising. In other words, all subject matter must pass through the individual's information processing system to be learned, retained, and recalled. Information is stored briefly in perceptual memory after being received from the external environment through the senses. Then the mind makes a decision: It may reject the information, memorise it for short term recall, transform it to conform to prior messages, or to learn it by integrating, assimilating, differentiating, or associating it in working and long term memory (Keefe & Ferrell, 1990). For FI and FD individuals, the end result is a changed cognitive structure in long term memory.

All the studies discussed above suggest that FI and FD learners do differ in long term and short term memory processes. These results are also consistent with the cognitive restructuring hypothesis advanced by Witkin and Goodenough. According to this hypothesis, field dependent and independent individuals differ in the ability to restructure information in both perceptual and cognitive modes. As Goodenough (1979) states, a person has to restructure perceptions of symbolic representations to meet the requirements of the task and FI people are better at accomplishing such restructuring. He also relates this result with most factor-analytic studies suggesting that the restructuring competence is related to field independence in perception of the upright.

In terms of lateral specialisation, since field dependent and independent people have different lateral specialisation, it is expected that they should have differences in the functions of the two hemispheres (Witkin, Goodenough and Oltman, 1979). The left hemisphere, served most directly by the right visual field and right ear, seems suited to the processing of verbal-conceptual and executive motor functions. On the other hand, right hemisphere functioning was served most directly by the left visual field and left ear.

However, psychologists do not agree on the way the brain encodes and transmits information. Some believe that the brain translates the stimuli received from the external world.

Then it codes it so that the neurones can process. Others feel that the brain processes visual images or verbal material and some others feel that thought takes place as an abstract process. However, most cognitive scientists believe that the brain processes information in a number of ways, including semantic, visual, auditory, or other representation (Chastain, 1988). However, there are many differences between left and right brain characteristics. The left hemisphere is associated with logical and analytical thought with mathematical and linear processing while the right hemisphere perceives and remembers visual, tactile, and auditory images. Although they have different information processing procedures, they operate together as a “team”. Left and right brain dominance is often considered to be a cognitive style (Brown, 1987). Preferences for left and right functioning differ across individuals and cultures and there is a strong relationship between both hemispheric preference and field independence. As Brown (1987) states, in dealing with either type of cognitive style, researchers are dealing with two styles that are highly parallel.

To conclude, it can be said that, there are dimensions of individual differences involving the form of cognitive functioning. One of the factors which accounts for differences in the manner individuals learn concerns the area of cognitive styles which can be defined as the specific ways in which individuals perceive and approach mental tasks. Therefore, the relationship between learners’ cognitive styles and their learning process was investigated by many researchers and it was found that FI and FD learners were different from each other in terms of information processing, encoding, recalling and restructuring processes and that they learn a subject at different rates.

Although the language is a complex cognitive skill described within the context of cognitive theory, language teachers tend to overlook the importance of individual differences in their teaching process. Therefore, the importance of cognitive style in language learning field has been emphasised by many researchers

3.2. The Effect of Field Dependence-Independence Cognitive Style On Language Learning

Related studies showed that all learners do not benefit from the same kind of learning situation. This finding led many researchers to investigate the language success of FD and FI learners. They were concerned with the performance of FI and FD learners in different language skills. The findings indicated that both FI and FD learners have some advantages and disadvantages in some certain tasks.

In terms of language success in general, many studies (Hansen & Stansfield, 1981; Stansfield & Hansen, 1983; Hansen, 1984; d'Anglejan & Renaud, 1985; Chapelle & Roberts, 1986; Hansen-Strain, 1987; Jamieson, 1992) indicated that higher level of field independent cognitive style was associated with higher scores on language tests.

Bialystok and Frohlich (cited in Jamieson, 1992, p492) found a significant, positive correlation between field independency and reading, writing and grammar tests for high school students. On the other hand, Tucker, Haayan and Genesee (cited in J. Hansen & Stansfield, 1981, p351) did not find this relationship for younger students on tests including listening comprehension, reading comprehension or oral production tasks. However, as these investigators state, when FI was combined with other experimental factors, field dependency and independency was not a significant predictor of success of second language reading, listening, and writing tasks.

However, field independency was found as a significant predictor on the structure and dictation tests. Additionally, FI was seen as a significant factor of all the skills measured in the TOEFL exam (Chapelle & Roberts, 1986). For the speaking ability, FD students were found to be more able since field dependence possibly allow them to communicate with ease and use the new language appropriately for social and communicative purposes. For the listening ability, field independence was significantly related to better performance on listening comprehension tasks (Hansen & Stansfield, 1981).

Consistent with these results, it was found that field independency was related to success for twelfth graders on the listening section of a French achievement test and an imitation test in a study of Naiman, Frohlich, Stern and Todesco (cited in Behçetoğulları, 1992).

Despite the limited amount of previous research examining field dependence / independence and their performance on language skills, proposals are being made to adopt language teaching and testing methods and materials to accommodate learners differences. Jamieson (1992) hypothesises that field independent learners may have some advantages in classroom language learning because of the formal or structure-oriented nature of classroom tasks as opposed to a more 'natural' or functional use of language for communication of meaning. For instance, many classroom activities and most testing procedures focus on manipulating foreign language forms in which social functions and meanings are mostly minimised. This may be a reason which makes the performance of FD learners worse than FI learners. Hence such a possibility led some researchers to study the relationship between the cognitive styles of learners and their performance on different activity or question forms. The common idea was that FI and FD learners could succeed in different question types. Therefore, many studies attempt to address the issue of cognitive style and its effects on their preferences of certain question forms in language skills.

In language performance tests evidence seems to indicate a positive relationship between field dependency / field independency and selected question forms. The study of Alptekin & Atakan (1990) showed a positive correlation between FI and L2 achievement. The findings of the study indicated that GEFT scores and L2 achievement scores showed significant and positive associations between performance on the GEFT and performance on EFL tests and subtests including discrete point, cloze, grammar, reading and listening tests.

Another study by Stansfield & J. Hansen (1983) supports the previous findings indicating that FI learners are better than FD learners on language tests. This study was conducted to see the influences of field independency and dependency in cloze test performance. The results indicated that a field independent cognitive style was associated with a higher level of achievement on second language proficiency tests. It seemed that FI learners do

indeed fill in the blanks on a Cloze Test more easily than do FD learners because of their cognitive restructuring abilities. These abilities, as they state, are more conducive to success on a cloze reconstruction task.

Hansen (1984) also conducted a study to analyse the relationship between field sensitivity and cloze test performance in a multicultural second language classroom. The findings supported the Stansfield and Hansen's (1983) hypothesis of a minor cognitive bias in cloze tests. However, in terms of results, there were group differences in the FD / I cloze test performance. Group differences indicated that the relationship may not be significant for all cultures. In her study, in the lower achievement group a significant correlation was found between cognitive style and cloze test score while there was not such a relationship in the high achievement group.

Hansen-Strain (1987) conducted another study on second language test performance in general. In this study, she wanted to determine whether there is a relationship between cognitive styles and test performance. The results were consistent with the previous studies, indicating that FI learners had a better performance on language tests than FD learners.

Another study about the relationship between language achievement and cognitive styles was conducted by Hansen & Stansfield (1981). The results indicated that field dependence was related to better performance in a formal introductory-level language course, supporting that field independence, or cognitive restructuring ability, is an individual learner trait that plays a positive role in language development.

As some studies suggest, the teachers' instructional method can influence FD and FI learners' preferences of certain activity or question forms. So, it led some researchers to investigate the relationship between success and language teaching method.

A study by Abraham (1985) was conducted to discover whether FI learners perform better with deductive lessons. One lesson was based on a traditional deductive approach; the other on an inductive one - no rules but directed attention to examples. The findings indicated

that FI learners performed better with the deductive lesson while FD learners were better with the inductive lesson.

On the other hand, the findings of a study conducted by Behçetoğulları (1992) are not consistent with these findings. Behçetoğulları investigated whether there is a relationship between a learner's cognitive style and the teaching method (deductive-inductive). Her hypothesis was that FI learners would score significantly higher than FD learners in grammar and that there would be significant differences between FD and FI participants in their scores on two different types of tests, multiple choice and cloze tests, after having deductive and inductive teaching. The tests consisted of two mini tests; a discrete-point test in multiple choice form and an integrative test in cloze form. The findings concerning the effect of field dependence and independence on performance on a multiple-choice test was consistent with the results of the Hansen-Stansfield (1981), Hansen (1983), Hansen (1984), Hansen-Strain (1987) and Alptekin and Atakan (1990). In terms of cloze test performance, FI learners were better in filling in the blanks on the cloze test more easily than FD learners. But Behçetoğulları's central hypothesis was rejected since the findings did not indicate any interaction between methods and the cognitive style. In other words, she did not find any correlation between the learner's cognitive style and the teaching method, contrary to Abraham's findings (1985).

To conclude, studies show us that since some commonly practised activity and question forms that are used to expose the students to the target language and to assess the course may not match with the students' cognitive styles, FI and FD learners may have some advantages and disadvantages in their learning processes. Therefore, the relationship between various activity or question forms and the performance of the learners with different cognitive styles should be investigated to determine if field independency / dependency are really relevant to their language performance.

The next chapter presents the methodology of the study.

CHAPTER 4

METHODOLOGY

This study, as stated in Chapter 1, attempts to identify whether there is a cognitive style effect in choosing certain activity or question forms in listening comprehension. In order to reach this goal, the study addresses the following research questions:

- 1) Are there certain activity forms in which field independent learners are better than field dependent learners in listening comprehension?
- 2) Are there certain activity forms in which field dependent learners are better than field independent learners in listening comprehension?

In this present chapter, the methodology followed in this research is presented. First, the subjects participated in the study are described. Then, the instruments used to collect data, the way the data were collected and the statistical method employed to analyse these data are discussed.

4.1. Subjects

The subjects for the study were 88 freshmen (between the ages 18-20) in English Language Teaching Department at Anadolu University. The choice of first year students was motivated on Hansen's findings (1984). Hansen investigated the test performance of different proficiency levels, and found that the lower level showed a significant relationship between cognitive style and their test performance while the high level did not. This suggests that not only the cognitive style but the proficiency level may also effect the results.

Classification of 88 freshmen's cognitive style was determined by their Group Embedded Figures Test scores (GEFT). Scores on the GEFT range from 0 (highly field dependent) to 18 (highly field independent). Since none of the subjects scored 11, the learners between the range

of 1-10 were classified as field dependent (FD) and 12-18 were classified as field independent (FI). There were 39 FD and 49 FI learners.

Another criterion of classification was also used in this study: they were given the listening part of Practice TOEFL exam to determine whether they are at the same listening proficiency level. At the time of the study, they all had completed a period of 9 weeks, 2 hours a week, of listening comprehension course.

4.2. Materials

The materials used in this study were the Group Embedded Figures Test (GEFT), the listening part of the practice TOEFL exam, some practise materials designed for the study and the tests including certain question forms practised as the activity forms in the classroom.

4.2.1. Classroom Materials

Students were provided with different listening texts focused on certain activity forms. The activities were chosen from various listening course books called *The Listening File* from Longman and *Advanced Masterclass CAE* from Oxford University Press. An audio tape was used to present the aural texts. In the course of 9 weeks, the students practised eight types of activity in various listening comprehension texts. These activities were gap filling, true-false, multiple choice, comprehension questions, matching pictures, matching tones of the speakers, chart completion and sequencing. (See Appendix 1)

In the activity form of *matching pictures*, students were required to compare what they heard with the information given them in a picture and then to match them with the right speaker. In *matching the tones of the speakers* students were asked to pick up the clues (i.e. words, sentences or the intonation of the speaker) describing the attitude of each speaker. Then they were required to match these tones with the appropriate speakers. In *sequencing*, students put the topics in correct order based on the aural text they listened. In *multiple choice* exercises, they were required to choose the correct answer. In *true-false* items, students were expected to decide whether the sentence was true or false based on the text. If it was wrong, they were

asked to correct the sentence. In the activity form of *gap-filling*, they were expected to fill in the blanks with the words they hear while listening. Similarly, in the *chart completion* form, students wrote very brief answers in the parts of the chart. In the *information questions*, students were expected to answer the questions freely based on the aural text.

In the related literature FI learners were found better than FD learners in terms of their performance in the activities of Matching Picture, Dictation, Problem Solving, Multiple Choice, Cloze Testing, Discussion and Composition. In this study the forms of Matching Pictures, Multiple Choice, True-False, Gap Filling, Sequencing, Chart Completion, Matching the Tones of the Speakers and Information Questions (Comprehension Questions) were randomly chosen among the activities commonly used in listening comprehension books.

4.2.2. Tests

4.2.2.1. The Group Embedded Figures Test (GEFT)

Students' cognitive style was determined according to their scores on the Group Embedded Figures Test (GEFT). The GEFT was developed by Witkin, Oltman, Rasking, and Karp in 1971 to measure FD / FI. It is a three-section paper and pencil test. The first section is 2 minutes long just for practice. The remaining two sections are both 5 minutes long. The GEFT requires subjects to perceive and outline a simple geometric shape within a complex design. The subjects are required to separate the relevant information from the contextual field. They must overcome the organisational context, "disembedding" discrete, relevant information from the field. "This ability to locate, or separate an item from context has been associated with the ability either to restructure a given organisational context or to impose structure on a field which lacks a clear organisation" (Witkin & Goodenough, cited in Hansen and Stansfield, 1981, p354). At one extreme, mode of perception was designated 'field dependent' when it was strongly dominated by the prevailing field. On the other hand, at the other extreme, where the person experiences items as more or less separate from the surrounding field, the designation 'field independent' was used (Witkin, Moore, Goodenough & Cox, 1977-a). The score is the number of correct answers, ranging from zero to eighteen. A high score indicates

FI and a low score FD. In this study, the Turkish version of the GEFT, developed by Okman-Fişek (1979), was used. The booklet is exactly the same as the original. The reliability of the Turkish version was established through the Spearman-Brown formula and found to be .91. This estimate is higher than the one by Oltman et al. (1971), which was .82. (See Appendix 6)

In this study the score of 11 was omitted since none of the subjects scored 11. So, the learners between the range of 1-10 were classified as FD and 12-18 were classified as FI.

4.2.2.2. The Practice TOEFL Listening Exam

The listening part of Practice TOEFL exam was used to determine students' listening proficiency level. It was chosen because it is accepted as a standard test of listening comprehension. As Jamieson (1992) states, according to the information given in the TOEFL manual, the listening comprehension section measures the ability to understand English as it is spoken in the United States (p 494). In the TOEFL listening exam, there are three subparts: choosing one statement that is closest in meaning to a statement heard; choosing an answer to a spoken question based on a dialogue between two speakers; and answering questions based on short talks, conversations, or presentations. All three parts, as well as the rest of the test, are in a multiple choice format.

4.2.2.3. Classroom Tests

8 classroom tests were used in this study. These tests consisted of the question forms of gap filling, true-false, multiple choice, comprehension question, matching pictures, matching tones of the speakers, chart completion and sequencing, which were practised in the classroom. Each test included 2 question forms. Since there was no readily available tests including all these question forms, the textbook activities were arranged as test forms. The *Listening File* from Longman and *Advanced Masterclass CAE* from Oxford University Press were used for classroom practising and testing procedures. (See Appendices 2,3 and 4)

Each test included the question forms concerning the activities practised in the last two weeks. For each question form, students were assessed with 10 questions. Only gap filling question form was assessed with 20 questions because of the nature of this type. In this form

students were expected to fill in the blanks with the words they hear. It was important to let the students see a few sentences without blanks since it gives them an opportunity to get used to the topic and the style of the passage (Heaton, 1990). However, the chosen texts were long, and it would be inappropriate to listen to the whole texts for only 10 blanks without doing anything in the remaining part of the texts. Therefore 20 blanks were randomly chosen in the texts allowing them to listen to the sentences and to get used to the topics of the passages in order to complete the blanks (See Table 4.1)

4.3. Procedure

125 freshman were given the GEFT to determine their level of field independence and dependence. They were informed in advance that they would take the GEFT, and were told that their responses would not affect their course grades. The students were also informed that the GEFT was designed to help students understand better how they learn.

Within the same week they were given the listening part of the Practice TOEFL exam to determine whether they are at the same proficiency level.

All data were collected during 9 weeks (18 classroom hours). Data collection started at the beginning of the second semester, Spring 1997. In the classroom, an audio tape was used to present the aural text. The lesson consisted of pre-listening, while-listening and post-listening activities. In the warm up sessions and pre-listening stages, students had short discussions. This was done to provide background knowledge about the topic because current views on listening comprehension agree that background knowledge or prior knowledge can affect listening comprehension (Richards, 1983; Chiang & Dunkel, 1992, Rubin, 1994). The while-listening activities consisted of listening to the text and answering certain question forms. The post-listening activities were done after the listening was completed. Some of them were extensions of the work done at the pre-listening and while-listening stages and some related only loosely to the listening text itself.

Table 4.1
Characteristics of the Tests

Question Forms	The Number of each question form in each test	The testing frequency of each question form (week)	Total number of questions tested in 9 weeks
Comprehension Quest	5	2	10
Gap Filling	10	2	20
Chart Completion	5	2	10
True - False	5	2	10
Matching Pictures	5	2	10
Matching the Tones	5	2	10
Multiple Choice	5	2	10
Sequencing	5	2	10

The subjects were given a test per week for a eight week period. As seen in Table 4.1, each week, two forms of activity were practised, and they were tested two times in the following consecutive weeks. For each test they listened to the aural texts three times. Before the tests, small discussions were also made to reduce the anxiety and to provide background knowledge about topics. Students were given detailed instruction for each question form and were asked if they had any questions about them. After reading the questions, they listened to the text three times. After the third listening, they were given time (2 minutes) to check their answers. This procedure was repeated for each test.

4.4. Data Analysis

In the GEFT, the subjects were classified as FD and FI based on their scores. There were 18 questions in the GEFT, and the score is the number of correct answers, ranging from zero to eighteen. A high score indicates FI and a low score FD. Hence, 49 subjects with the scores ranging from 1-10 were classified as FD, and 39 students with the scores ranging from 12-18 were classified as FI. The score of 11 was accepted to be the mid point in some earlier studies

(Behçetoğulları, 1992; and Abraham cited in Behçetoğulları, 1992, p41). Since none of the subjects scored the mid point, the score of 11 was omitted in this study.

In the listening part of the Practice TOEFL exam, there were 50 questions. Each question was given 2 points. So, the subjects have their scores out of 100.

All data were collected from eight tests given in 9 weeks. Two forms of activity were tested each week. So, every activity form was tested 2 times during the following two weeks. There were 5 questions for each activity form in each test except the activity form of gap filling which were 10. '1 point' was given for each correct answer. Then students' correct responses to each question form were totalled and the results were divided by two (two times per question form) to provide an average for each question form. These scores for each question form were examined to determine whether there was an overall difference between two cognitive style - FD and FI in terms of their performance in each question form and whether FI or FD students performed better with certain question forms.

To determine if there was a significant difference between the scores of each question form, an unpaired t-test (t-test for independent samples), employing the StatView 512+ statistical software, was used. The results were considered significant if they reached the level .05 or below. The tests given during the course were also graded for their regular listening course grade in the program.

The next chapter presents the results of the statistical analysis between cognitive styles and their performance on certain question forms.

CHAPTER 5

RESULTS

The aim of this study was to determine if there is an effect of cognitive style of field dependency and independency in terms of their performance on some certain types of activity or question forms in listening comprehension. Therefore tests scores were calculated.

5.1. Test Results

Test results of the learners of different cognitive styles - field dependent and field independent - were analysed by using t-test for independent samples. This was done to determine if the two cognitive styles were similar in terms of their performance on some certain questions forms.

At the beginning of the study, subjects were given a listening part of practice TOEFL exam to determine whether they are a homogenous group in terms of their listening proficiency. TOEFL was chosen because it is accepted as a standardised proficiency test, and it is used by nearly 1000 institutions of higher education in the United States as an indicator of a prospective student's ability to undertake academic work in an English medium (Brown, 1987; Jamieson, 1992). Traditionally, proficiency tests have consisted of standardised multiple choice items on grammar, vocabulary, reading comprehension, aural comprehension and sometimes of a sample of writing. As Dieterich, Freeman, and Crandall (cited in Brown, 1987, p108) state, such proficiency tests often have validity weaknesses: they may confuse oral proficiency with literacy skills, or they may confuse knowledge *about* a language with ability to *use* a language; a number of other weaknesses may pertain.

As in the other standard exams, in the TOEFL listening exam, learners are required to answer certain types of questions. The questions are in multiple choice form and some require inferences. The TOEFL listening exam has three subparts: choosing one statement that is closest in meaning to a statement heard; choosing an answer to a spoken question based on a dialogue between two speakers; and answering questions based on short talks, conversations,

or presentations. As discussed in Chapter 2, the results of some studies suggest that FI learners are better in inferencing and they performed better in the question form of the multiple choice. It was thought that giving an extra chance to field independent learners may be another weakness of standardised proficiency tests. Thus, in this study, determining the language proficiency of the learners with a practice TOEFL exam or the other standard exams seemed controversial since FD learners may have disadvantages in these tests.

However, they were classified based on their scores of the practice TOEFL listening exam. 18 FD learners and 30 FI learners were taken and their test results were analysed. Table 5.1 presents a summary mean scores of FD and FI learners, classified based on TOEFL scores, of certain question forms.

Table 5.1
Summary of the Mean Results of the Tests of
FD and FI learners

Question Forms	FD	FI	Mean Difference	p Value
Comprehension	2.61	2.60	0.01	0.9577
Gap Filling	5.69	5.28	0.41	0.2855
Chart Completion	1.66	1.83	0.17	0.2427
True-False	2.75	3.11	0.36	0.1438
Matching Pictures	3.80	4.26	0.46	0.072
Matching the Tones	2.66	3.00	0.34	0.1207
Multiple Choice	3.52	3.96	0.44	0.0550
Sequencing	3.47	3.41	0.06	0.8494

The difference between the overall scores of FD and FI learners in the performance of *Comprehension Questions* did not approach significant difference ($p=0.9577 > \alpha =0.05$). In *Gap Filling*, the mean scores showed that there was no significant difference between two cognitive styles ($p=0.2855 > \alpha =0.05$). The mean scores of FD and FI learners in the question

form of *Chart Completion* also suggested that there was no significant difference ($p=0.2427 > \alpha=0.05$). The t-test results, as Table 5.1 presents, indicated that field independency and field dependency did not have a significant effect on the performance of *True-False* question form ($p=0.1438 > \alpha=0.05$). In *Matching Pictures*, no significant difference was found between the two cognitive styles in terms of their performance ($p=0.072 > \alpha=0.05$). The difference between the overall scores of FD and FI learners did not show a significant difference in the performance of the question form of *Matching the Tones of Speakers* ($p=0.1207 > \alpha=0.05$). In the *Multiple Choice* question form, no significant difference was found between the two cognitive styles ($p=0.055 > \alpha=0.05$). The mean scores of the question form of *Sequencing* indicated that there was no significant difference in terms of performance of FI and FD learners ($p=0.8494 > \alpha=0.05$).

5.2. The Results of Question Forms

As discussed before, determining the listening proficiency of learners with any standard exam seemed controversial since it was thought that standard tests give extra chance to FI learners because of their format. Also Hansen's (1984) findings, indicating that there is a significant difference in the cloze test performance for FD and FI learners in the high achievement group while there is not in the low achievement group, suggest that proficiency gets better, the effect of FI/D distinction is minimised. Therefore, in this study, students' performance on different question forms was re-evaluated irrespective of their performance on TOEFL. There were 39 FD and 49 FI learners when they were not classified based on their listening proficiency level. The mean scores of 39 FD learners and 49 FI learners for each question form were compared.

5.2.1. Comprehension Questions

A t-test comparing the average score of the test for the *comprehension questions* showed that there was no significant difference between the two cognitive styles ($p=0.2367 > \alpha=0.05$). Field independent and field dependent learners were similar in their performance. As

shown in Table 5.2, the overall performance mean was 2.41 for FD learners and 2.62 for FI learners.

Table 5.2
Summary of Differences in the Question Form of
Comprehension Questions

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	2.41	-1.192 (p= 0.2367)
Field Independent	39	2.62	

5.2.2. Gap Filling

In gap filling, the mean score for FD learners was 5.35 and 5.41 for FI learners. The difference between the overall scores of FD and FI learners did not approach statistical difference ($p=0.8412 > \alpha =0.05$). This suggests that FD and FI learners were similar in their performance of the question form of *Gap Filling*. Table 5.3 shows the mean scores of FD and FI learners' performance on Gap Filling (Table 5.3).

Table 5.3
Summary of Differences in the Question Form of
Gap Filling

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	5.35	- 0.201 (p= 0.8412)
Field Independent	39	5.41	

5.2.3. Chart Completion

A t-test comparing the average score of the test for the *Chart Completion* showed that there was a significant difference between the two cognitive styles. The means for FD was

1.60, and the mean for FI was 1.91 with a 0.31 mean difference ($p=0.0398 < \alpha =0.05$). This suggests that the performance of FI learners was better than the performance of FD learners in the Chart Completion question form.

Table 5.4
Summary of Differences in the Question Form of
Chart Completion

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P value</u>
Field Dependent	49	1.60	- 2.087 ($p= 0.0398$)
Field Independent	39	1.91	

5.2.4. True - False Questions

The t-test results, as Table 5.5 presents, indicated that field independency and field dependency did not have a significant effect on the performance of the *True-False* question form ($p=0.0924 > \alpha =0.05$). The mean was 2.83 for FD learners, and the mean was 3.12 for FI learners. The mean difference was 0.29 with FI learners having the higher score. However, this difference was not statistically significant.

Table 5.5
Summary of Differences in the Question Form of
True-False Questions

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	2.83	- 1.702 ($p= 0.0924$)
Field Independent	39	3.12	

5.2.5. Matching Pictures

According to the results of the t-test analysis, as Table 5.6 shows, there was a significant difference between the two cognitive styles in their performance of the *Matching Pictures* question form. The mean of FD learners was 3.80 while it was 4.23 for FI learners. The mean difference was 0.43 with FI learners having the higher score ($p= 0.0071 < \alpha =0.05$). This suggests that FI learners were better in the question form of the Matching Pictures.

Table 5.6
Summary of Differences in Question Form of
Matching Pictures

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	3.80	- 2.756 ($p= 0.071$)
Field Independent	39	4.23	

5.2.6. Matching the Tones of Speakers

As shown in Table 5.7 there was no significant difference for the question type of the *Matching the Tones of the Speakers*. The mean was 2.67 for FD learners, and the mean was 2.86 for FI learners. As it suggests, both styles were similar in their performance on this question form ($p=0.1525 > \alpha =0.05$).

Table 5.7
Summary of Differences in the Question Form of
Matching the Tones of Speakers

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	2.67	- 1. 443 ($p= 0.1525$)
Field Independent	39	2.86	

5.2.7. Multiple Choice

In the question type of the *Multiple Choice*, a significant difference was found between the two cognitive styles. The mean was 3.64 for FD learners, and the mean was 3.95 for FI learners. The mean difference was 0.31 ($p = 0.0322 < \alpha = 0.05$). This suggests that FI learners were better than FD learners in their performance of the Multiple Choice Questions (Table 5.8)

Table 5.8
Summary of Differences in Question Form of
Multiple Choice

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value And P Value</u>
Field Dependent	49	3.64	- 2.177 ($p = 0.0322$)
Field Independent	39	3.95	

5.2.8. Sequencing

As indicated in Table 5.9, the mean was 3.28 for FD learners, and the mean was 3.29 for FI learners in the question form of *Sequencing*. There was no significant difference between FD and FI learners in terms of their performance in this question type ($p = 0.9568 > \alpha = 0.05$).

Table 5.9
Summary of Differences in the Question Form of
Sequencing

<u>Cognitive Style</u>	<u>n</u>	<u>Mean</u>	<u>t Value and P Value</u>
Field Dependent	49	3.28	- 0.054 ($p = 0.9568$)
Field Independent	39	3.29	

5.3. Summary of Test Results

Table 5.10 shows the results of the tests of FI and FD learners. As seen in the table, the means of the three types of question forms were greater for FI learners. FI learners achieved higher scores in the question forms of Chart Completion, Matching Pictures and Multiple Choice when compared with the mean scores of the FD learners.

Table 5.10
Summary of the Mean Results of the Question Forms
of FD and FI Learners

Question Forms	FD	FI	Mean Difference	P Value
Comprehension	2.41	2.62	0.21	0.2367
Gap Filling	5.35	5.41	0.06	0.8412
Chart Completion *	1.60	1.91	0.31	0.0398
True-False	2.83	3.12	0.29	0.0924
Matching Pictures *	3.80	4.23	0.43	0.0071
Matching the tones	2.67	2.86	0.19	0.1525
Multiple Choice *	3.64	3.95	0.31	0.0322
Sequencing	3.28	3.29	0.01	0.9568

* Statistically Significant

5.4. Tests Results of Various Range of Cognitive Styles

As mentioned before, classification of the students' cognitive style was determined by their Group Embedded Figures Test scores (GEFT). Scores on the GEFT range from 0 (highly FD) to 18 (Highly FI). A score above 11 was regarded as FI and a score below 11 was regarded as FD because in earlier studies (Behçetoğulları, 1992 and Abraham, 1981) the cut off of 11 was chosen as a basis of their studies. Since the higher scores indicates FI and lower scores FD, it is thought that the higher or the lower scores they get, the more different

characteristics based on their style they have. In this study based on earlier studies, the score of 11 was also chosen as a mid point, but it was omitted since none of the subjects scored "11". However, to determine whether there are any differences between different ranges of cognitive styles, another comparisons were made among various scores of the GEFT.

5.4.1. Test Results of FD (1-9) and FI (13-18) Learners

Subjects with GEFT scores between 1-9 (FD) and 13-18 (FI) were taken. There were 33 FD learners and 41 FI learners. When the mean scores for each question type were compared, the mean scores of FI learners were found to be statistically significant in the performance of the question type of *Matching Pictures* . As seen in Table 5.11, there were no significant differences between the performance of FD and FI learners in the other question forms.

Table 5.11
Summary of the Mean Results of
the Question Forms of FD and FI Learners
FDI Range: 1-9 /13-18

Question Forms	FD	FI	Mean Difference	P Value
Comprehension	2.45	2.57	0.12	0.5342
Gap Filling	5.30	5.36	0.06	0.8433
Chart Completion	1.62	1.84	0.22	0.1700
True-False	2.86	3.05	0.19	0.1964
Matching Pictures *	3.80	4.14	0.34	0.0215
Matching the Tones	2.65	2.74	0.09	0.4533
Multiple Choice	3.69	3.86	0.17	0.2149
Sequencing	3.16	3.32	0.16	0.5723

* Statistically Significant

Table 5.13
Summary of Mean Results of
FD and FI learners
in Various Cognitive Ranges of Styles

Quest. Forms	1-10 12-18	1-9 13-18	1-8 14-18
Comprehension	0.2367	0.5342	0.3076
Gap Filling	0.8412	0.8433	0.5336
Chart Completion *	0.0398	0.1700	0.2805
True-False	0.0924	0.1964	0.5436
Matching Pict. *	0.0071	0.0215	0.0022
Matching the Tones	0.1525	0.4538	0.4121
Multiple Choice *	0.0322	0.2149	0.1924
Sequencing	0.9568	0.5723	0.2477

* Statistically significant

In the FDI range of 1-9 / 13-18, only the performance of the question form of *Matching Pictures* of FI learners were found to be statistically significant. In the FDI range of 1-8 / 14-18, again the performance of FI learners in the question form of *Matching Pictures* was better than FD learners. Table 5.13 presents the summary mean scores of FD and FI learners in various range of cognitive style.

The next chapter presents the discussion of the statistical analysis of the results.

CHAPTER 6

DISCUSSION

The aim of this study was to determine whether field independency and field dependency had an effect on the performance of some certain listening activity or question forms. When the scores of the practice TOEFL listening exam were taken into account, there were 18 FD and 30 FI learners. Their test results were analysed and no significant differences were found between two cognitive styles in terms of their performance on the question forms of comprehension, gap filling, true-false, chart completion, matching pictures, matching the tones of speakers, multiple choice and sequencing. This indicates that FI and FD learners were similar in terms of their performance on these question forms in listening comprehension when they were classified based on their listening proficiency level.

This result is not consistent with the studies in which FI, in particular, has been found to correlate positively and significantly with second language learning. Hansen & Stansfield (1981) found that FI played a major role in the acquisition of linguistic competence. The same researchers (Stansfield & Hansen, 1983) further found that a positive correlation between the scores on cloze tests and FI style. Likewise, Hansen-Strain (1984; 1987) found a significant positive correlation between FI and the scores on second language tests. Finally, Chapelle & Roberts (1986) found support for the correlation of FI with second language learning in general.

In this study, subjects were classified based on their listening proficiency scores (scores between 40-60): There were 18 FD and 30 FI learners. Interestingly, the mean score of the practice TOEFL listening exam of FD learners (48.5) was greater than the scores of FI learners (47.5). FD learners with higher proficiency may have performed better than FI learners. This supports Hansen's findings (1984); no significant difference was found in the cloze test performance for the two cognitive styles in the *high achievement group* but in the low achievement group. Similarly, for this study, we may say that FD learners with high proficiency may have developed different ways to process information. Therefore, their

performance on some question forms in which FI learners were expected to be better was similar to the performance of FI learners.

Hansen's finding (1984) about positive correlation between cognitive style and test performance in the *lower achievement group* was also supported by the finding of this study. When the practice TOEFL listening scores were taken into consideration in the selection of subjects, the results indicated that there was a relationship between cognitive style and performance on certain activity or question forms. In the activity forms of matching pictures, multiple choice and chart completion, performance of FI learners were found to be better than that of FD learners. It was thought that listening proficiency level may also effect this result. Therefore, although TOEFL listening scores were not taken into consideration in the selection of subjects, the mean score of the TOEFL listening exam was re-analysed to see whether their listening proficiency level effected this result. The mean score of the practice TOEFL listening exam for FI learners was 47.5 while 43.5 for FD learners. This suggests that FD learners did not perform well because their proficiency was lower than that of FI learners. This result is consistent with Hansen's findings; a significant difference was found in the cloze test performance for the both cognitive styles in the low achievement group. It is accepted that cognitive styles are stable over time, but according to Witkin et al. (1977), this does not mean that they are unchangeable; some may easily be altered in time. Cognitive styles differ in the ways an individual perceives, processes information, solves problems, acts in groups or participates in activities. Therefore, it indicates that, FD learners may develop different strategies to perceive and process information when they have higher proficiency.

These findings suggest that not only the cognitive styles but listening proficiency level also may effect the results. Therefore, the performance of 49 FI and 39 FD learners on different question forms was re-evaluated in terms of characteristics of question forms related with the preferences of cognitive styles to identify whether there are other possible reasons besides listening proficiency level.

In the *Chart Completion* questions learners were required to complete the charts with specific information. Since there were no visual elements in the charts the learners had to pay

attention to spoken texts. Completions were also limited to minimal writing but they had to recall immediately to write down the answers while listening process. FI learners performed better than FD learners on this activity form. According to the findings of some studies (Berger & Goldberger cited in Davis & Cohran, 1989, p133; Moray cited in Frank & Keene, 1993, p15), FI learners were better at recalling and short term memory tasks than FD learners. So, the reason for high scores of FI learners may be related to their short term memory process since learners had to recall the details to complete the charts while listening. In this process they should be fast as well. Also this result is consistent with the study of Robinson & Bennink (cited in Davis & Cohran, 1989, p134), which showed FI learners responded faster and with fewer errors.

The test results indicated that FI learners were also better in the *Multiple Choice* activity or question form. This result supported a number of studies (Chapelle & Roberts, 1986; Hansen-Strain, 1987; Hansen, 1984; Jamieson, 1992; Tucker, Hamayan and Genesee cited in Hansen & Stansfield, 1981, p351) which indicated that FI learners performed better in Language Proficiency Tests such as the TOEFL, the Michigan Test of English Language Proficiency which are multiple choice tests. In addition to standard test performance, specifically a multiple choice grammar tests (Chapelle & Roberts, 1986) showed the same result. This may be due to the analytic nature of FI learners. According to Rost (1990), the multiple choice question form is a closed task which requires a selection of strategies. A wrong answer, as he states, is evidence that learner has made inferences based on links between unmatched items from the text. To choose the right answer, learners should infer and use hypothesis testing strategy. Inferencing is defined by Stansfield & Hansen (1983) as an ability to exploit maximally all available information sources in order to arrive at new insights. In hypothesis testing process, learners are required to infer or project acceptable information on the basis of a whole message. Details from the information are recalled to choose the acceptable information. They process information. As Parham (1988) states, in the information processing, person selectively attends to stimuli, employs strategies for storing information, and uses cues to evoke memories. Also as she mentions, this process is subdivided into three categories - encoding, storage and retrieval - which must work together for an individual to

remember. If any one of them breaks down, the result is failure to remember. Even in some studies (Davis & Cochran, 1989; Annis cited in Davis & Cochran, 1989, p132; Durso, Reardon and Jolly cited in Davis & Cochran, 1989, p132) FI individuals were found to be better than FD individuals in attention, encoding, and long term memory processes.

Another reason of better performance of FI learners in multiple choice questions may be related to their attention focused on task-relevant information. According to Jolly & Reardon's findings (cited in Davis & Cochran, 1989, p132), FD learners shift their attention on more task-irrelevant stimuli while FI learners refocus their attention on more task-relevant information. In the process of choosing the right answer among choices, since FI learners are faster (Robinson & Bennink cited in Davis & Cochran, 1989, p134), they may focus on task relevant information faster and chose the right information.

Another fact revealed in the results of the *Matching Pictures* question form was that FI learners performed better than FD learners. There were pictures and speakers talking about events. The learners were required to match these pictures with the appropriate speaker they listen to. In listening comprehension, the use of contextual visuals improves comprehension and enhance students' ability to formulate correct hypothesis as Mueller states (1980). So, the pictures can help learners use hypothesis testing strategy discussed in the question form of multiple choice. Additionally, visuals help learners use their mental imagery. As Paivio (cited in Parham, 1988, p242) states, the stronger use of imagery is associated with better memory. Similarly, it may be said that FI learners were better in matching pictures question form because of the imagery strategy they use. It supports the study of Pierce (cited in Davis & Cochran, 1989, p135) which indicated that FI children remembered more about the story than FD children after they had been taught to use the imagery strategy while listening to a story. As Richards, Plat & Plat (1992) state, in recalling process, learners using that strategy may think of the image or picture and later they use this to recollect the information in the text.

In the question form of matching pictures, FI learners may have created their mental images of the events while listening to the speakers and use them for recalling and hypothesis testing in their matching. Additionally, this supports the study of Shinar, McDowell, Rackoff

and Rockwell (cited in Davis & Cochran, 1989, p133) which showed the visual abilities of FI learners. In their study, FI individuals were examined in terms of their eye movements under simulated driving conditions, and were found that FD individuals needed more time than FI individuals to process information. FI individuals were also found more effective than FD individuals in searching visual patterns. Therefore FI learners may have performed better in the matching pictures question form because of their visual abilities.

As with the multiple choice question form, better performance of FI learners in matching pictures may be related to task-relevant information and information processing. In the case of task relevancy, in matching pictures with speakers, FI learners may have focused on task-relevant information while FD learners may have dealt with task-irrelevant information. In the case of information processing, again supporting some studies (Davis & Cochran, 1989; Annis cited in Davis & Cochran, 1989, p132; Durso, Reardon and Jolly cited in Davis & Cochran, 1989, p132), FI learners may have been better in matching picture question form since they encode and store better than FD learners. Using imagery and hypothesis testing strategies, dealing with task relevancy, being fast, and being visual individuals in their information processing may be reasons which make the performance of FI learners more effective and better than FD learners in this question form.

Contrary to the literature about the question form of *filling the gaps*, in this study, FI learners were not better than FD learners in their performance. In this question form, the learners were required to fill in the blanks with the words while listening to the aural text. The result was not statistically significant. It did not support the studies of Stansfield & Hansen (1983), Chapelle & Roberts (1986), Hansen-Strain (1987) and Jamieson (1992). They all found that FI learners were better in cloze test performance. They support their findings claiming that this better performance was related to restructuring abilities of FI learners. As Witkin & Goodenough (1977) state, restructuring can take various forms. Learners can break up an organised field and view its parts as discrete from the background. In other words, it involves changing or acting upon the 'field' of available information rather than using it 'as is' (Hansen & Stansfield, 1981). Kaluger & Kaluger (1984) support this 'changing' mentioning

that this reconstruction is as an ability to put together or reproduce a symbol or a pattern from memory when asked to do so. Davis & Cochran (1989) also state that this process involves three components, based on the restructuring hypothesis advanced by Witkin and Goodenough:

- 1) breaking a stimulus down into its component elements;
- 2) providing a structure for an ambiguous stimulus; and,
- 3) providing a structure different than that inherent in the stimulus.

The first component is related to the process of attention. As cue salience hypothesis suggests, FI and FD individuals differ in terms of attentional processes. The current studies showed that FD individuals are dominated by the most noticeable features of a stimulus ignoring many other features while FI individuals attend to both the noticeable elements and the broader range of elements. The second and the third components of this hypothesis are supported by encoding and long term memory studies discussed in the question form of Matching Pictures (Durso, Reardon and Jolly; Annis; Robinson & Bennink cited in Davis and Cochran, 1989). These studies could be interpreted as showing that FI individuals are more adaptable in dealing with task ambiguity and the reorganization of information. These interpretations suggest that FI learners would be better in the question form of gap filling based on restructuring hypothesis.

Another study supports this expectation, too. Stansfield & Hansen (1983, p30) clarify the better performance of FI learners on the cloze question form based on Gestalt Psychology. As they state (1983, p30), "Gestaltists believe that learning follows a sequence through which one first understands the whole or broader issues, and then grasps the individual details. Similarly, the cloze procedure requires the student to perceive the whole by filling in the missing words as if they were not missing at all." Therefore, based on all these hypotheses discussed before, FI learners were expected to be better in the question form of gap filling.

On the other hand, in this study, FI and FD learners did not differ in terms their performance in this question type. Possible reasons except listening proficiency level were not identified to clarify the situation. Based on Hansen's study, it was thought that their listening proficiency level may have effected the results. As discussed before, Hansen (1984) investigated some factors (grades, language measures and sex) affecting the outcome in the

cloze test. As she states, proficiency level effects the results. This study supports her findings. FI and FD learners did not differ in terms of their performance when their listening proficiency level was taken into consideration. On the other hand, the results differed when they were regarded homogeneous in terms of their listening proficiency level. This result also agreed with the mean scores of FI and FD learners in both situation. When they were classified based on their listening proficiency level, in the gap filling question form the mean score for FD learners was 5.69 and the mean score for FI learners was 5.28. FD learners performed better than FI learners because their proficiency was higher than that of FI learners. On the other hand, when they were regarded as a homogeneous group in which the mean score of listening proficiency of FD learners was lower than FI learners', the mean score of gap filling question form for FD learners was 5.35 and 5.41 for FI learners. In other words, FI learners performed better than FD learners. This suggests that the higher listening proficiency FD learners have, the better they may perform in the restructuring, recalling, encoding, hypothesis testing and attentional processes which are thought to be required for this question form.

This finding also agreed with the mean results of *sequencing* and *comprehension question* forms. When the listening proficiency level of FD learners was higher than FI learners', they performed better on these question forms. However, the result was not statistically significant although mean scores of FD learners were higher than FI learners'.

In the other question forms - *matching the tones of speakers, true-false, comprehension questions* and *sequencing*, FI learners were thought to perform better than FD learners since they had superior cognitive restructuring skills. Contrary to what had been expected, the performance of FI learners did not differ on these question forms. In the related literature, specifically, no research focused on these activity or question forms were met. On the other hand, based on some related activity forms in some research, FI learners were expected to have better performance than FD learners. As Frank & Keene (1993) state, FI learners engage in organisational strategies when faced with demanding memory tasks. They were better in organising to make generalisations (Chapelle & Roberts, 1986), in analysing and structuring the material (Hansen & Stansfield, 1981). Because of greater cognitive restructuring ability of

field independency which is related to better achievement on discrete point tests (Hansen & Stansfield, 1981), FI learners were expected to have significantly better performance on the forms of *Sequencing* and *Comprehension questions*. In Sequencing, learners were expected to put the topics in correct order according to the aural text they listened. This form required organisational strategies and restructuring abilities. Similarly, in Comprehension Questions, they were expected to answer the questions freely based on the aural text. Analysing, structuring and inferencing abilities were needed to achieve it. These two question forms also involve utilising representations of discourse to make appropriate responses. They involve the skill of formulating a propositional sense. Unlike sequencing, comprehension question form involves other language skills as well, such as lexical retrieval and written expression. Both short and long term memory processes can be active in these question forms depending on the learners' strategies. If they catch the cues and recall them immediately while listening, their short term memory works. Furthermore, if they encode, store and then retrieve the cues to restructure, their long term memory process operates. They also deal with some organisational and imagery strategies in information, restructuring, hypothesis testing and attentional processes. In terms of all these processes, FI learners were found to be better and faster than FD learners because of their cognitive structuring. However, the data reported in this study provides counter evidence to a general claim for cognitive style bias in these question forms. The result is same for the other question forms, *true-false* and *matching the tones of speakers*. In the question form of true-false, learners were required to indicate the statements 'true' or 'false' based on the aural text. They were expected to answer the questions by evaluating statements. It also involves the skill of using representations of discourse to make appropriate responses. In matching the tones of speakers, learners were required to match the attitude of speaker based on a given tone. To do so, they needed some cues in combining and analysing the text in terms of speakers. Inferencing and hypothesis testing were also required to achieve in both question forms. The performance of FI learners was expected to be better in these question forms because of their analytic structure and the memory process. Again, the data reported in this study are against the general claim about cognitive styles and their learning process in general.

In terms of different ranges of the GEFT, the results were also re-evaluated. When the subjects with the GEFT scores between 1-9 (FD) and 13-18 (FI) were taken, the mean score of FI learners on the performance of the question form of *matching pictures* was found statistically significant. There were no significant differences between the performance of FI and FD learners in the other question forms. The result was same for the subjects with the GEFT scores between 1-8 (FD) and 14-18 (FI). Different ranges of the GEFT scores were analysed because it was thought that subjects at more extreme points would differ more. However, contrary to what had been expected, this study suggests that there were no differences in various ranges of cognitive styles in terms of performance of FI and FD learners on various question or activity forms.

CHAPTER 7

CONCLUSION

7.1. Summary of the Study

The language is a complex cognitive skill described within the context of cognitive theory. Research show that the students learn a subject at different rates. However, most of the language teachers tend to overlook the importance of individual differences in their teaching and testing processes.

Teaching a language is so difficult that we do not know enough about all the factors affecting learning. The questions about the factors explaining individuals' language learning abilities have led some of the researchers to study on cognitive style as a source of individual variation in learning. Learning, as Caine & Caine (1990) state, is as natural as breathing, and it is possible to either inhibit or facilitate it. So, learning is influenced by the natural development of the body and the brain. The brain is the center of cognition which is defined as "the mental process or faculty by which knowledge is acquired" (Chastain, 1988, p43). Since each person has his own individual cognitive style which has its own information processing habits, the learning problems, therefore, can be solved through dealing with cognitive styles.

In the Age of Communication, in order to keep up with the pace of modern life, learners give prominence to communication skills. To communicate with native speakers, they first must learn to understand the spoken language they hear. Therefore, listening skill is gradually receiving the emphasis within the language classroom. Unfortunately, it has been probably the most neglected of the four language skills of language classrooms (Kalikova, 1986, Chastain, 1988, Rost, 1990, Shrum and Glisan, 1994). It was thought to be too easy to teach for teachers while too difficult to learn for students. So, one of the most frustrating questions for teachers to solve is how to help their students to overcome their difficulties in listening comprehension. Both students and teachers should concentrate on the listening process in order to improve the listening skills that lead to comprehension. In order to do it, teachers should design their

teaching process according to their students' needs. Since each student may require different learning and teaching situations, 'one' teaching methodology may not be appropriate for all students in the classroom. Similarly, all types of activities may not fit all the students. On the other hand, matching the teaching process to every learner's needs is very difficult and sometimes impractical. Some critics also appear about this idea, supporting 'matching' to cognitive style characteristics *all the time* or *in the initial stages of learning*. However, 'matching all the time' receives little support. On the other hand, it is believed that 'matching to cognitive style characteristics in the initial stages' provides students motivation.

A teacher, therefore, may try to provide a variety of activity forms to accommodate the cognitive styles of his students in the initial acquisition of skills. Then all students will have at least some activities that appeal to them based on their cognitive style, and they are more likely to be successful and motivated in their learning process. Therefore, a clear understanding about listening process which is thought to be the most difficult skill by learners needs to be developed variety of classrooms activities and materials for teaching listening comprehension to help the learners overcome their problems.

This study sought to answers to solutions for problems in the listening comprehension skill. It was done to determine the effects of cognitive styles on the performance of certain activity or question forms in listening comprehension. In the study, 88 subjects - 39 FI and 49 FD - were used. They were provided eight activity forms - gap filling, true-false, multiple choice, comprehension questions, matching pictures, matching the tones of the speakers, chart completion and sequencing - in various listening comprehension texts in the course of 9 weeks (18 classroom hours). The books called *The Listening File* from Longman and *Advanced Masterclass CAE* from Oxford University Press were used for classroom practising and testing procedures. The subjects were given a test per week for a eight week period. Each week two forms of activity were practised, and they were tested two times in the following two consecutive weeks. The scores for each question form were examined to determine whether there was an overall difference between two cognitive styles - FI and FD - in terms of their performance, and whether FI or FD students performed better at certain activity forms.

7.2. Conclusion

Some studies in the field of cognitive styles are conducted to reveal questions which appear in our minds when we have certain problems in our classrooms. It is important for a teacher to be aware of cognitive styles and certain learning preferences of his students , and of his own preferred way of instructing. Adjustments can be then made to accommodate the students' needs. This study is an outcome of such an experience.

Two research questions were asked in this experimental study. These questions were:

- 1) Are there certain activity forms in which FI learners perform better than FD learners in listening comprehension?

There was a significant difference between the performance of FI and FD learners in three activity forms. The performance of FI learners were better in the activity forms of chart completion, matching pictures and multiple choice. This means that field independency could have an effect on the performance of these activity forms. Group was regarded homogeneous in terms of listening proficiency level in this study. The interesting finding of the study was that the results changed when students' listening proficiency level was taken into account to classify the students. In that case, field independency did not have an effect on the performance of these activity forms. This suggests that performance of FI and FD learners differ depending on their listening proficiency level. The higher listening proficiency FD learners have, the better they may perform in the question forms in which FI learners are expected to be better because of their cognitive restructuring. As Rubin (1994) states, most researchers also support the importance of proficiency level in listening comprehension emphasizing that cognitive processing will vary depending on learners' knowledge of the language.

- 2) Are there certain activity forms in which FD learners perform better than FI learners in listening comprehension?

There were no activity form investigated in which FD learners performed better than FI learners. The analysis revealed that there was no statistical difference between the performance of FD and FI learners. This means that field dependency did not have an effect on the

performance of certain activity forms. On the other hand, when the listening proficiency level of FD learners was higher than FI learners', the mean scores of FD learners of the question forms of comprehension, gap filling and sequencing were higher than the mean scores of FI learners although the difference between overall scores of FD and FI learners did not show a significant difference. This also suggests that not only cognitive styles but listening proficiency level also had an effect in the performance on these question forms.

As a conclusion, cognitive styles and their performance on various activity or question forms can provide a basis to classroom teaching, strategy training and evaluation of students' learning not only in the listening comprehension but also in other skills. Having the knowledge of cognitive styles is equally valuable and fruitful for learners and teachers. Students do not fail because of the curriculum. They can learn almost any subject matter when they are taught with methods and approaches responsive to their learning style strengths (Dunn, 1990). Some students may fail since they respond differently to instructions or they are required to learn with inappropriate methods or materials with their styles. On the other hand, style should not be an excuse for failure, but a tool for success. Both styles - FI and FD - may have some advantages and disadvantages in some learning situations. However, brain power is there. Only they have a different style of learning. In other words, learners are different, they respond differently to a variety of instructions; and we need to respect individual differences in our teaching and testing. So, having come to the realisation that each learner possesses different cognitive traits, if students are taught by explaining new concepts several different ways, or given several options for demonstrating their mastery, both styles will have advantages equally in their learning processes.

However, it is not enough to diagnose the style and prepare alternative teaching methods. Teachers should also make detailed assessments, such as planning the lesson content and the activities into a format that both styles favour, and then testing with various question forms that allow both styles to achieve. Many researchers have repeatedly documented that when the learners are taught with approaches that match their preferences, they demonstrate statistically higher achievement at test scores than when they are taught with approaches that mismatch their

preferences (Dunn, 1990). Therefore, teachers might be trained to adjust their instructional strategies, materials and testing methods to benefit all students

Considering the effect of listening proficiency level in the performance of certain question or activity forms in teaching process, FD learners can be provided with listening exposure especially in the low achievement groups to make their performance better. They can be taught how to overcome their problems in listening comprehension. In terms of testing process, this study also suggests that in low listening proficiency levels, it may be inappropriate to judge listening comprehension ability on the basis of the results of standardised listening tests since FD learners have disadvantages because of their cognitive structure. Therefore, learners may be tested with a variety of question forms which serve both styles.

In addition to teaching and testing processes, teachers can provide guidelines to help their students become aware of their styles and help them develop some learning strategies. FD learners can be encouraged to practice and master some strategies in the activity or question forms in which they do not perform well, especially in the low proficiency levels. FD learners may also be given extensive remedial works which will help them to become more proficient listeners. Therefore, the higher the proficiency level FD learners achieve, the better they perform in the question or activity forms in which FI learners perform better. Also dealing with how the other style attacks particular problems, both styles can add new strategies to their repertoires. This means that they become better equipped to deal with methods, materials, and question forms that do not match with their cognitive styles. They begin to see how they can learn more effectively and efficiently. Hence, they gain confidence and have a feeling of success which will enhance their learning.

From the teachers side, having an idea of cognitive styles and their performance on various activity or questions forms, they expand their teaching methods and materials which will help in reaching more students and bringing a variety to their teaching and testing. They focus on student strengths rather than weaknesses. "If the students do not learn in the way we teach, then we should teach them in the way they learn" Dunn says (1990), supporting the idea of 'style-based education'. But this idea may require some changes, which seems impractical,

in the education system. Therefore, some critics appear on the scene. Researchers have not resolved whether optimal results are achieved when styles of the learners are systematically matched or systematically mismatched, to curriculum, methods and materials.

Witkin et al. (1977a) suggest that matching students with teachers or instructional materials according to their cognitive styles might facilitate students' initial acquisition of skills and provide them important motivation. Some researchers believe (e.g. O'Neil, 1990) that teaching to every student's style, in any case, tries to reinforce a student's strengths without encouraging his weaknesses. Also if it is so difficult to deal with diversity in learning levels, it is got to be even more difficult to deal with different styles (O'Neil, 1990). Some (e.g. Dunn, 1990) assume that 'matching' to cognitive style characteristics all the time; others believe in matching some of the time. Snow & Lohman (cited in Curry, 1990, p52) support matching in the initial stages of learning, and then moving to systematic mismatches as the student becomes more proficient with the material. Generally, tailoring instruction for individual learners has frequently received little support (Curry, 1990).

In conclusion, teachers should be aware of different cognitive styles, and take action accordingly. There is more than one way to cut the pie, and these ways should be provided to reach more students. This puts greater responsibility on teachers since they should be familiar with a wider range of materials, exercises and activities that will benefit all students. Today while the emphasis in education is on students as the focus of learning, it must be remembered that the teacher is still the person specially trained to guide students, to help them select appropriate learning materials, and to create a positive classroom environment.

7.3. Suggestions for Further Research

As discussed in Chapter 4, the length of the study was 18 hours. Another research could be done with a time length of a year. The findings could reveal different answers to the effectiveness of cognitive styles in terms of performance of activity or question forms since listening proficiency level which effects the results may change in a year.

Also another activity forms could be chosen. Since the length of the study was limited, only 8 activity forms were practised. Also they were tested two times. In a longitudinal study, the findings could reveal different answers dealing with many times testing.

In this study, different ranges of field independency and field dependency were also examined whether there would be a difference among ranges. Contrary to the expectation that extreme scores of the GEFT should differ in the performance of activity forms, the findings indicated that there was no statistically difference among extremes. No reasonable explanation was found. Another study could investigate the relationships between the scores of the GEFT and their performance.

This study was conducted for listening comprehension. The effect of cognitive styles on the performance of other skills like reading, writing, speaking or grammar could be investigated also.

The reason why FI learners were better in some certain activity forms than FD learners could be investigated in terms of strategies they use or the performance of FI and FD learners could be compared based on the strategies differ. Since it is believed that strategies are trainable, dealing with the strategies that FI and FD learners use, then, another study could focus on training a range of strategies that a given style does not use to see whether it will effect their performance.

Finally, when their listening proficiency level was taken into account, the results were different than when it was accepted a homogenous group. Therefore, the relationship between proficiency level and performance could be investigated further in another study.

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APPENDICES

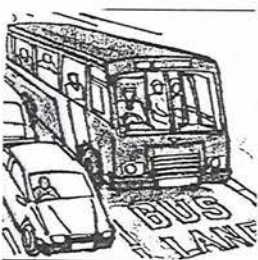
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Appendix 1

Sample Classroom Lesson

(A) You're going to listen to four people talking about different ways of getting around.

As you listen, match each speaker to one of the pictures.



Speaker 1: Picture

Speaker 3: Picture

Speaker 2: Picture

Speaker 4: Picture

(B) As you listen, also match each speaker to one of the feelings.

Speaker 1

a. bored

Speaker 2

b. enthusiastic

Speaker 3

c. annoyed

Speaker 4

d. enthusiastic

Appendix 3

Sample Test 2

You're going to hear an acupuncturist talking about his work. Before you listen, read the sentences below. You're going to listen it 3 times.

Before I anybody, I take some time to study a patient's medical history. I also read the body's We can take the pulse at 12 different places and each place relates to a different organ.

From this information I can decide if there are any in the flow of or indeed any of energy. It's at this point that I decide where I'm going to the needles. These needles or the flow of energy when they are inserted and twisted at the appropriate meridian points. Don't worry - it doesn't and you won't

Answer the following questions.

1. What does 'chi' mean?
2. Does a healthy person have it?
3. What can acupuncture make a person's energy flow?
.....
4. For what Chinese use acupuncture?
5. How do people feel in the treatment?

Part 2: You're going to listen to a radio interview about a dam development. Complete the information while listening.

ASIAN DAM PROJECT

SIZE:	 high
LOCATION:	
AREA TO BE FLOODED:	 hectares
PURPOSE:	deliver to Malaysia
SPONSORED BY:	

True / False 1. Work on the dam began in the 1980s.

True / False 2. It will cost \$ 600 to relocate the local inhabitants in the south.

True / False 3. Three tribes will be affected by the flooding.

True / False 4. Most of the electricity generated by the dam will leak out under the sea.

True / False 5. Britain will be contributing only a small amount towards the project.

Appendix 4

Sample Test 3

You're going to hear five people talking how they were treated by others when they had done something wrong. Before you listen, read the sentences below. You're going to listen it 3 times.

Part 1: Look at the pictures and decide what each person is talking about. Then match the speakers to the pictures.

Speaker 1
Speaker 4

Speaker 2
Speaker 5

Speaker 3



Part 2: Listen to the tape again concentrating this time on the tone of each person's voice. How does each person feel?

- | | |
|-------------------------------|--|
| a unfairly treated | e worried about what might have happened |
| b surprised by the severity | f tough but just |
| c terrified by the suddenness | g unconcerned about outcome |
| d extremely upset | h relieved by annoyed |

Speaker 1 Speaker 2 Speaker 3 Speaker 4 Speaker 5

Part 3: Listen to the speakers again and decide whether the statements TRUE or FALSE.

True / False 1. She was locked out by her parents since she missed the bus. (Speaker 1)

True / False 2. He was sacked after the first event. (Speaker 2)

True / False 3. They thought it was a good idea to park the car close to the pavement while they were doing shopping. (Speaker 3)

True / False 4. He was fined for being drunk and riding the motor cycle. (Speaker 4)

True / False 5. She knew that she would be fined since she brought her cat with her from abroad. (Speaker 5)

GROUP EMBEDDED FIGURES TEST

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

Translated by: Guler Okman

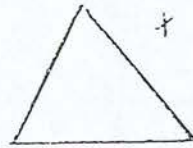
Name:.....

Female/Male

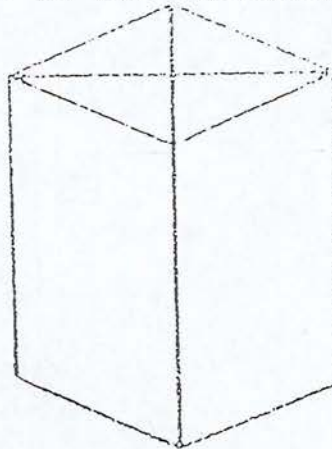
Date:.....

Date of Birth:.....

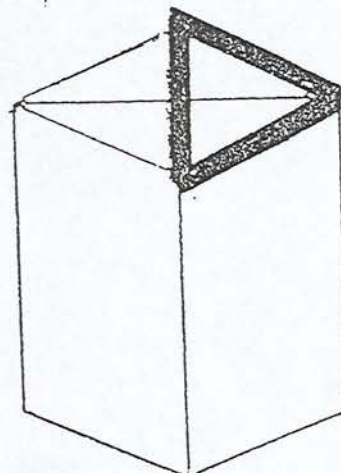
Explanation: This test measures your ability to identify a simple figure embedded in a complex one. Look at the simple figure x given below.



This figure is embedded in the following complex figure.

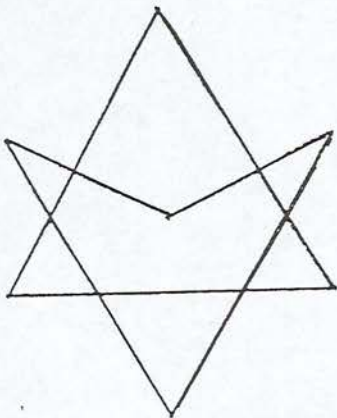
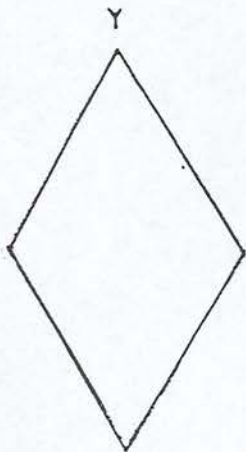


Identify the simple figure (x) embedded in the complex figure and darken it with a pencil as illustrated in the following figure. The simple figure is embedded in the complex figure in the same size, proportion and direction. The following figure illustrates the correct answer in which the simple figure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

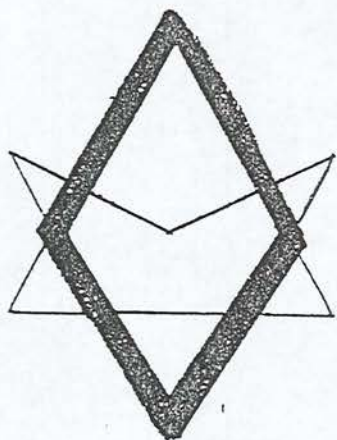


Note: The triangle on the right is the correct figure. The one on the left is wrong because it is in the opposite direction.

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.



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

Türkeye uygulayan : Güler Okman

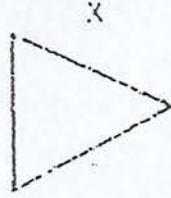
İsim :

Kız/Erkek:

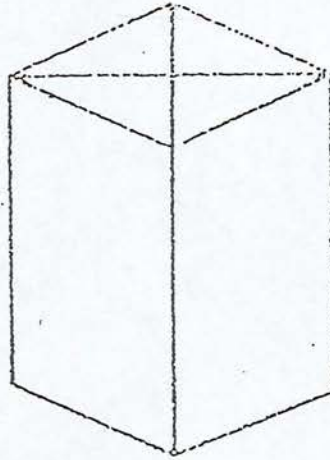
Tarih:

Doğum tarihi:

Açıklamalar: Bu test sizin karmaşık bir şekil içinde
saklanmış bir basit şekli bulma yeteneğinizi ölçer.
Aşağıda bir X ile işaretlediğimiz bir basit şekil var:



X adlı bu basit şekil aşağıdaki karışık şekil içinde
saklıdır:

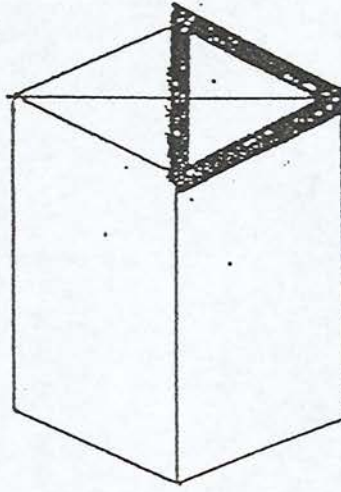


Basit Şekli karmaşık şeklin içinde bulup kalemle şeklin
üzerinden çiziniz.

Basit şekil karmaşık şeklin içinde AYNI BOYDA,AYNI BOYUT-
LARDA VE AYNI YÖNE DÖNÜK olarak bulunmaktadır.

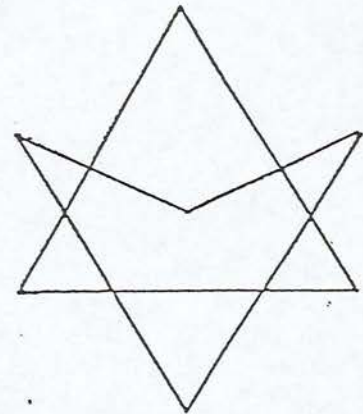
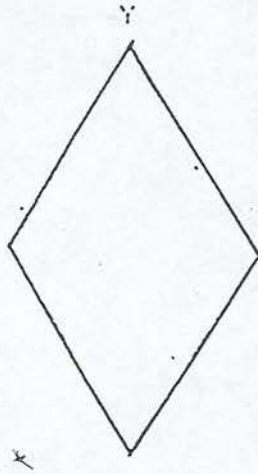
Bunu bitirince sayfayı çevirip doğru çözümü görünüz.

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

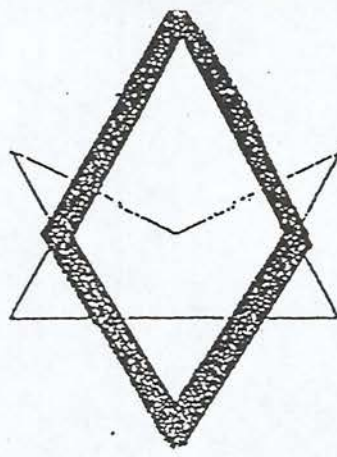


Şu noktaya dikkat edin: Sağ üstteki üçgen doğru şekildedir, Sol üstteki üçgen benzer de olsa değişik yöne dönük olduğu için yanlıştır.

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



Doğru çözüm için bir sonraki sayfaya bakın.



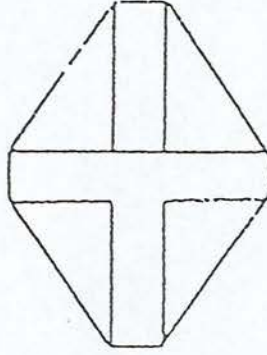
Bundan sonraki sayfalarda yukarıdaki gibi problemler bulacaksınız. Her sayfada bir karmaşık şekil ve onun içinde saklı olan basit şekli belirten bir harf olacak. Bulmanız gereken basit şekli bu kitapçığın ARKA SAYFASINDA görebilirsiniz. Bulduğunuz basit şekli kalemle karmaşık şeklin üzerine çizersiniz.

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 çizersiniz.
Birden fazla basit şekil görebilirsiniz ama bunlardan sadece birinin üzerini çizersiniz.
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.

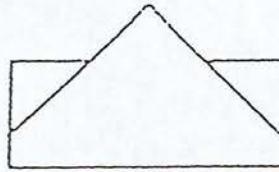
1



Basit Şekil "B" yi Bulun

Identify the simple figure "B".

2



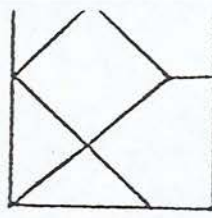
Basit Şekil "G" yi bulun

Identify the simple figure "G".

Sayfayı çevirin

Turn the page.

5

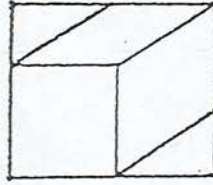


Basit Şekil "D" yi Bulun

Identify the simple figure "D".

Y

4



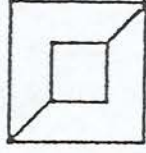
Basit Şekil "E" yi Bulun

Identify the simple figure "E".

Sayfayı çevirin

Turn the page.

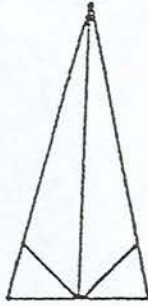
5



Basit Şekil "C" yi Bulun

Identify the simple figure "C".

6



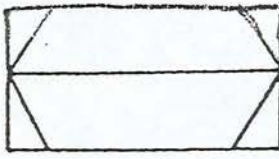
Basit Şekil "F" yi Bulun

Identify the simple figure "F".

Sayfayı Çevirin

Turn the page.

9



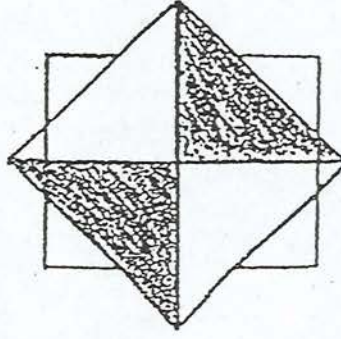
Basit Şekil "A" yı Bulun

Identify the simple figure "A".

LÜTFEN DURUN
Sayfayı çevirmek için işaret
bekleyin.

11

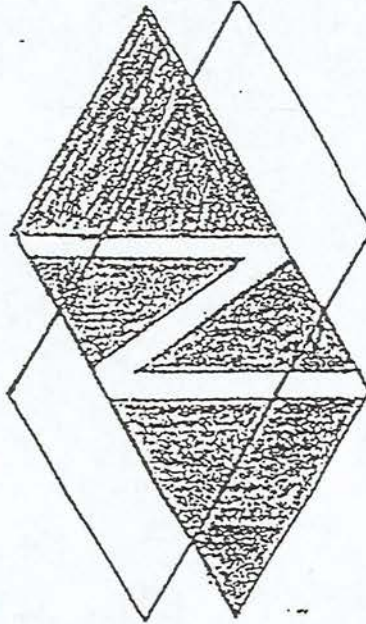
1



Basit Şekil "G" yi Bulun

Identify the simple figure "G".

2



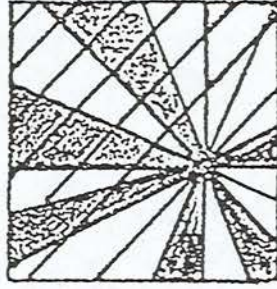
Basit Şekil "A" yı Bulun

Identify the simple figure "A".

sayfayı çevirin

Turn the page. 13

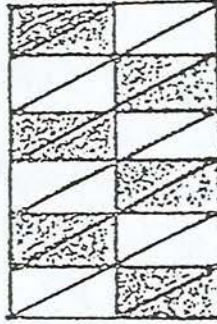
3



Basit Şekil "G" yi Bulun

Identify the simple figure "G".

4



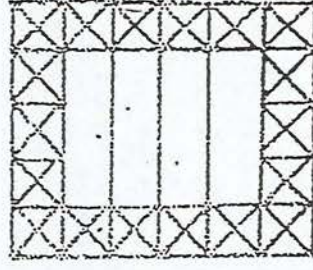
Basit Şekil "E" yi Bulun

Identify the simple figure "E".

sayfayı çevirin

Turn the page. 15

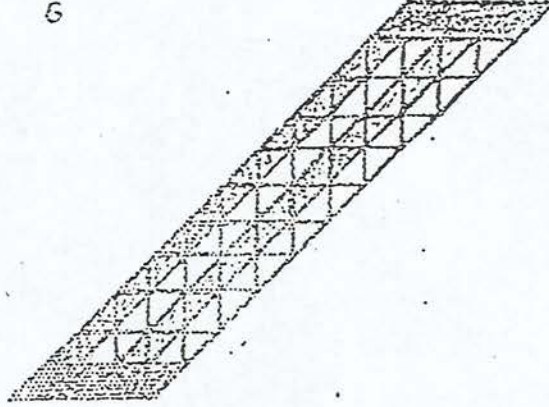
5



Basit Şekil "B" yi Bulun

Identify the simple figure "B"..

6



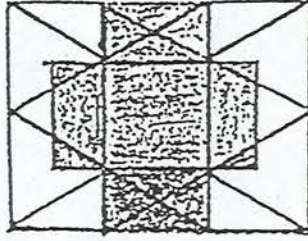
Basit Şekil "C" yi Bulun

Identify the simple figure "C".

sayfayı çevirin

Turn the page. 17

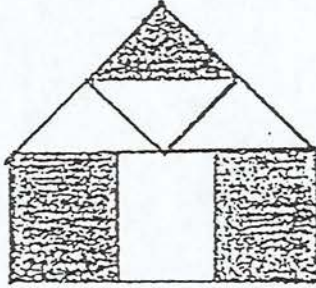
7



Basit Şekil "E" yi Bulun

Identify the simple figure "E".

8

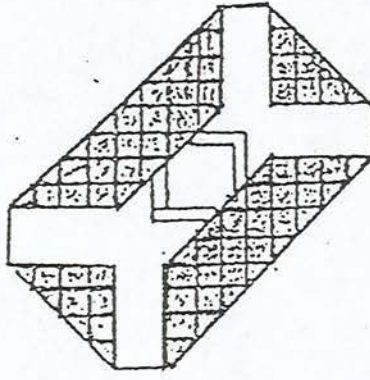


Basit Şekil "D" yi Bulun

Identify the simple figure "D".

sayfayı çevirin

Turn the page. 19



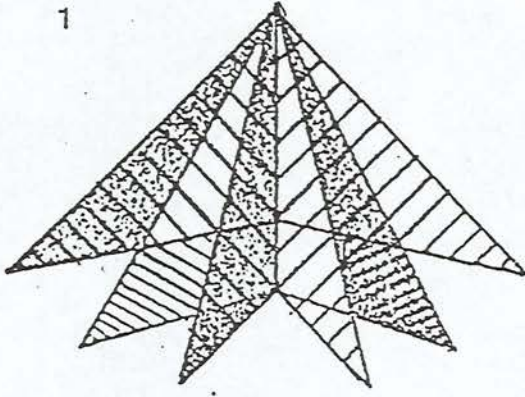
Basit Şekil "H" yi Bulun

Identify the simple figure "H".

LÜTFEN DURUN

sayfayı çevirmek için işaret
bekleyin

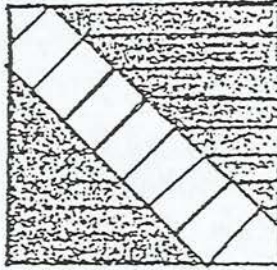
1



Basit Şekil "F" yi Bulun

Identify the simple figure "F".

2



Basit Şekil "G" yi Bulun

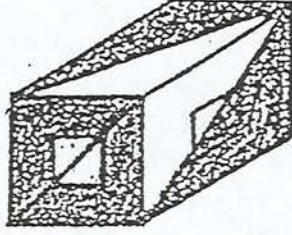
Identify the simple figure "G".

sayfayı çevirin

Turn the page.

23

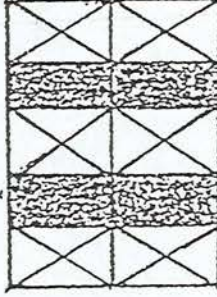
3



Basit Şekil "C" yi Bulun

Identify the simple figure "C".

4



Basit Şekil "E" yi Bulun

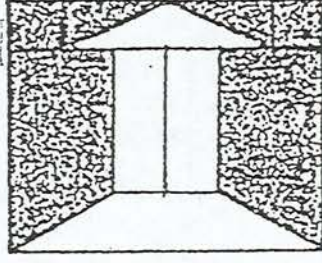
Identify the simple "E".

sayfayı çevirin

Turn the page.

25

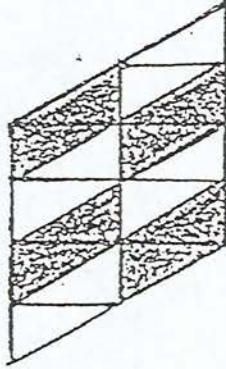
5



Basit Şekil "B" yi Bulun

Identify the simple figure "B".

6



Basit Şekil "E" yi Bulun

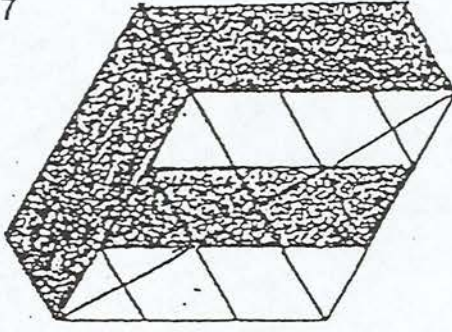
Identify the simple figure "E".

sayfayı çevirin

Turn the page.

27

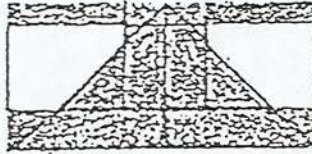
7



Basit Şekil "A" yı Bulun

Identify the simple figure "A".

8



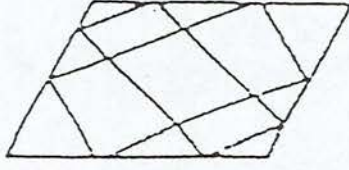
Basit Şekil "C" yi Bulun

Identify the simple figure "C".

sayfayı çevirin

Turn the page. 29

9



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

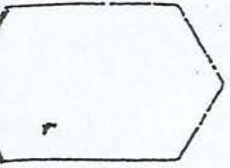
LÜTFEN DURUN

31

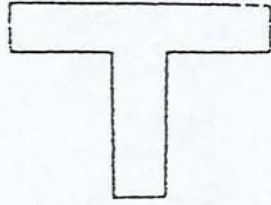
BASİT ŞEKİLLER

LIST OF THE SIMPLE FIGURES.

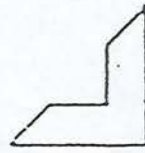
A



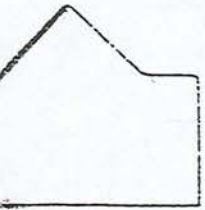
B



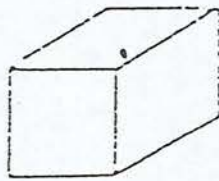
C



D



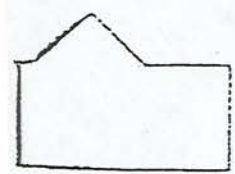
E



F



G



H

