

İNGİLİZCE ÖĞRENEN TÜRK ÖĞRENCİLERİNİN
KULLANDIKLARI DİL ÖĞRENME
STRATEJİLERİ VE DİL DÜZEYİ
İLE CİNSİYETİN STRATEJİ
KULLANIMINA OLAN
ETKİLERİ

LANGUAGE LEARNING STRATEGIES OF
TURKISH EFL STUDENTS AND THE
EFFECTS OF PROFICIENCY
LEVEL AND GENDER ON
STRATEGY USE

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(Yüksek Lisans Tezi)

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A Thesis

Submitted in Partial Fulfilment of the Requirements
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ÖZET

Bu araştırma, 1994-1995 öğretim döneminde Anadolu Üniversitesi İletişim Bilimleri Fakültesi'nin İngilizce hazırlık programında okuyan öğrencilerin hangi dil öğrenme stratejilerini ne sıklıkta kullandıklarını ortaya çıkarmak ve dil düzeyi ile cinsiyetin öğrenme stratejilerinin kullanımına olan etkilerini belirlemek amacı ile yapılmıştır. Araştırmaya 121 öğrenci katılmış, ancak bu öğrencilerin 104 tanesinden toplanan veriler araştırmada kullanılmıştır. Araştırmaya katılan öğrencilere bir dil öğrenme stratejileri anketi ile bir seviye tespit sınavı verilmiştir. Araştırma sonucunda; 1) öğrencilerin genel olarak dil öğrenme stratejilerini orta sıklıkta kullandıkları, 2) telafi stratejileri ile üst-zihinsel stratejilerin oldukça sık kullanıldıkları ve bunları sırası ile; sosyal stratejiler, zihinsel stratejiler, duygusal stratejiler, ve bellek stratejilerinin takip ettiği, 3) dil düzeyi yüksek olan öğrencilerin zihinsel stratejileri düzeyleri düşük olan öğrencilere göre daha sık kullandıkları, ve 4) kız öğrencilerin sosyal stratejileri erkek öğrencilerden daha sık kullandıkları görülmüştür.

ABSTRACT

This study was designed to a) identify the type and frequency of language learning strategy uses by students learning English as a foreign language and b) determine the effects of proficiency level and gender on strategy use. A total of 121 students studying English in the Intensive Language Program at the Communication Sciences Faculty at Anadolu University participated in the study. However, data gathered from 104 students were used in the study. The students were given a paper-and-pencil survey of language learning strategies and a placement examination. Findings indicated that 1) the students used the learning strategies in the medium range in general, 2) compensation and metacognitive strategies were used moderately frequently, followed by social strategies, cognitive strategies, affective strategies, and memory strategies, 3) high level students used cognitive strategies more frequently than low level students, and 4) females employed social strategies more often than males.

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CHAPTER 1

INTRODUCTION

1.1. Background to the Problem

The cultural, social, political, and technical changes seen in the second half of the 20th century all over the world have increasingly required people to learn languages other than their mother tongues. Today, politicians from various countries are in constant contact to negotiate world problems, economic relations, and cultural affairs. Businessmen get together to trade goods and sign agreements. Ordinary people visit other countries to learn about different cultures, histories and ways of life. There are international newspapers and magazines that are published daily or weekly in tens of countries. Many international TV channels broadcast programmes through satellites that are viewed by millions of people all over the world. The Internet, a global computer network that connects millions of computers from some 140 countries around the world, is booming and enabling people from different countries and cultures to communicate as if they are in the same room, sitting face to face. All these changes and developments reflect the necessity for learning languages.

Seeing this necessity, most countries today give great prominence to teaching languages in their educational programs and encourage their citizens to learn languages. Turkey is no exception. In order to keep up with the pace of modern life, to improve and increase the relations with other countries, she implements compulsory language teaching programs in her public and private secondary schools for a time span of six or seven years. Language programs play an important role at the university level, as well.

While some universities require their students to attend to mandatory language courses for a period of four years, others carry out intensive language training programs which students have to complete successfully to move up to upper classes where they continue to take obligatory English lessons. All these programs aim to equip the students with the necessary language skills that will help them in their academic studies and future careers.

As individuals, Turkish people try to learn languages for a variety of reasons. Many people want to go abroad. Some of them want to visit foreign countries to meet people from different cultures, to communicate successfully with them, and to learn about their cultures and lifestyles. Some pursue educational goals. They wish to study in foreign schools to get a better education. A number of them want to immigrate to a foreign country in search of better life conditions and economic opportunities. Even people who do not intend to go abroad are aware that knowing a foreign language has become a necessity today. They understand that they should know a foreign language if they want to find a better job and earn more money, to keep up with the developments in their professions and lead a more successful career, or to simply learn about what is going on around the 'global village'.

In order to reach their goals, they go to private courses, take private lessons, or study on their own. In the meantime, they spend many years and much money.

1.2. Problem

Language teaching programs in Turkish schools and individual attempts to learn languages, however, seem to be mostly unsuccessful in practice

(Sebüktekin, 1981; Göktürk, 1982; Demirel, 1987; Başkan, 1988; Soytekin, 1989). After seven years of extensive language education in private schools where the medium of instruction is English, students' language levels at graduation cannot reach the aimed level (Sarıyılan, 1993) and it is observed that these students cannot even pass the language proficiency exams that they are required to take at some universities before they start their university education (Büyükbacı, 1993) and end up taking intensive language courses for a year or two.

Language learning problem is not restricted only to secondary schools. It can also be observed among the university students and among the students attending Master's and PhD programs. Many university students who have completed intensive language programs in preparatory classes forget what they have learned during their four or five years of university education (Göktürk, 1982) and graduate with a little or no knowledge of a language. A recent survey (Şener and Işık, 1995) carried on 300 students who attended Master's programs in various Turkish universities gives a good picture of the problem. According to the survey, 79 per cent of the participants considered their language levels as "fair". Only 5 per cent of them regarded their levels as "good". Most of them (89 per cent) believed that it was "necessary" for them to take intensive language courses before they started their Master's programs.

Students attending language training programs in schools and individuals attempting to learn foreign languages on their own seem to experience common language problems. Most of them often complain that they cannot learn and retain new vocabulary easily. Some say that they do not understand what they read because most of the words are not familiar to them. Others state that, however hard they try, they cannot express

themselves clearly while they are speaking and writing in the language they are learning. Although there may be many other reasons for the problems they encounter in learning a foreign language, such complaints bring to mind the possibility that they do not know how to study and learn a foreign language efficiently. In other words, they may be “relatively unaware of the strategies they use and do not take advantage of the full range of available strategies” (Oxford and Crookall, 1989, p. 413). This point seems to be largely neglected by language teachers while they are trying to solve their students’ language problems in that they pay more attention to the product of learning than the process of learning. They expect their students to learn without teaching them how to learn (Chastain, 1988). Oxford (cited in Shrum and Glisan, 1994, p. 205) suggests that instructors teach students how to learn, that is, how to use language learning strategies, the often conscious steps or behaviours employed by learners to improve their language learning (Oxford, 1990), to help them in the language learning process. To realise this goal, it seems necessary to establish a learning strategy instructional framework in language training programs. Establishing such a framework, as Chamot and Kupper (1989, p. 19) suggest, might include the following steps:

1. identifying students’ current strategies
2. assessing their strategy needs
3. planning strategy instruction
4. direct teaching of strategies for different language skills
5. providing extensive opportunities to practice using the strategies
6. evaluating the strategy use
7. helping students transfer strategies to new tasks

1.3. Purpose of the Study

This study, thus, attempts to take the first step to constitute such an instructional framework through identifying the language learning strategies used by Turkish students studying English in the Intensive Language Program at the Communication Sciences Faculty at Anadolu University. It also examines the relationship between language proficiency and language learning strategies and probes into the gender differences in strategy use.

In order to reach the goals stated above, the study addresses the following research questions:

1. Which language learning strategies in general are used by Turkish students studying English and how frequently do they use those strategies?
2. Which language learning strategies in general are used by relatively more successful language learners and how often do they use them?
3. Which language learning strategies in general are used by relatively less successful language learners and how frequently do they use them?
4. How does gender affect students' use of language learning strategies?

The answers to these questions may be used as a starting point in establishing learning strategy instructional frameworks in language training programs and the teachers in these programs can help their students to learn how to learn and to take some responsibility for their own success by providing them "with a sense of what a strategy is and how they can develop some of their own strategies" (Brown, 1991, p. 256).

The identification of strategies may be highly beneficial for students and teachers. Firstly, it can help students to develop metacognitive

awareness as they describe their own thinking processes and discover those of their classmates. Secondly, as they discuss their learning strategies with their peers, they can discover new strategies and new applications of familiar strategies. And finally, teachers can assess the strengths and weaknesses in students' current strategy use and use this information to plan strategy instruction.

CHAPTER 2

LANGUAGE LEARNING STRATEGIES

Before examining language learning strategy (LLS) research concerning the goals of this study, it seems necessary to present research terminology used in the inventories of LLSs developed by a number of researchers (O'Malley et al., 1985a; Chamot and Kupper, 1989; Oxford, 1990). Since it is recent, extensive, and based on thorough review of research on LLSs, Oxford's strategy inventory should be paid special attention and, therefore, is summarised below.

2.1. Oxford's Taxonomy of Language Learning Strategies

Oxford (1990) divides strategies into two major classes: direct and indirect (see Figure 2.1). These two classes are subdivided into a total of six groups: memory, cognitive, and compensation under the direct class; metacognitive, affective, and social under the indirect class.

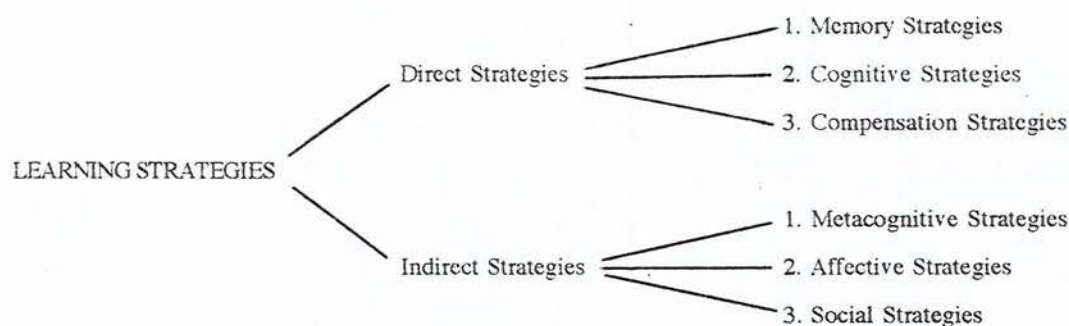


Figure 2.1 Diagram of Oxford's Strategy Classification System: Overview. (Oxford, 1990, p. 16)

According to Oxford (1990, p. 14), "direct strategies and indirect strategies support each other and each strategy group is capable of connecting with and assisting every other strategy group. "To explain this,

she likens the first major class, direct strategies for dealing with the new language, to the Performer in a stage play, using the language itself in a variety of specific tasks and situations. The direct class is made up of memory strategies for storing new information in memory and retrieving it later, cognitive strategies for understanding and producing the language by different means, and compensation strategies for using language despite limitations in existing knowledge. The Performer works closely with the Director for the best possible outcome.

Oxford equates the second major class, indirect strategies for general management of learning, with the Director of the play. This class is made up of metacognitive strategies for organising and evaluating learning, affective strategies for managing emotions and attitudes, and social strategies for learning with others. The Director focuses, organises, guides, checks, corrects, coaches, encourages, and cheers the Performer. The Director also ensures that the Performer works cooperatively with other actors in the play. As the learner accepts responsibility for learning, he or she becomes the host of the functions of both the Director and the Performer.

2.1.1. Memory Strategies

Memory strategies enable language learners to store new information in memory and then retrieve it when needed for communication. They fall into four sets: Creating Mental Linkages, Applying Images and Sounds, Reviewing Well, and Employing Actions (see Figure 2.2).

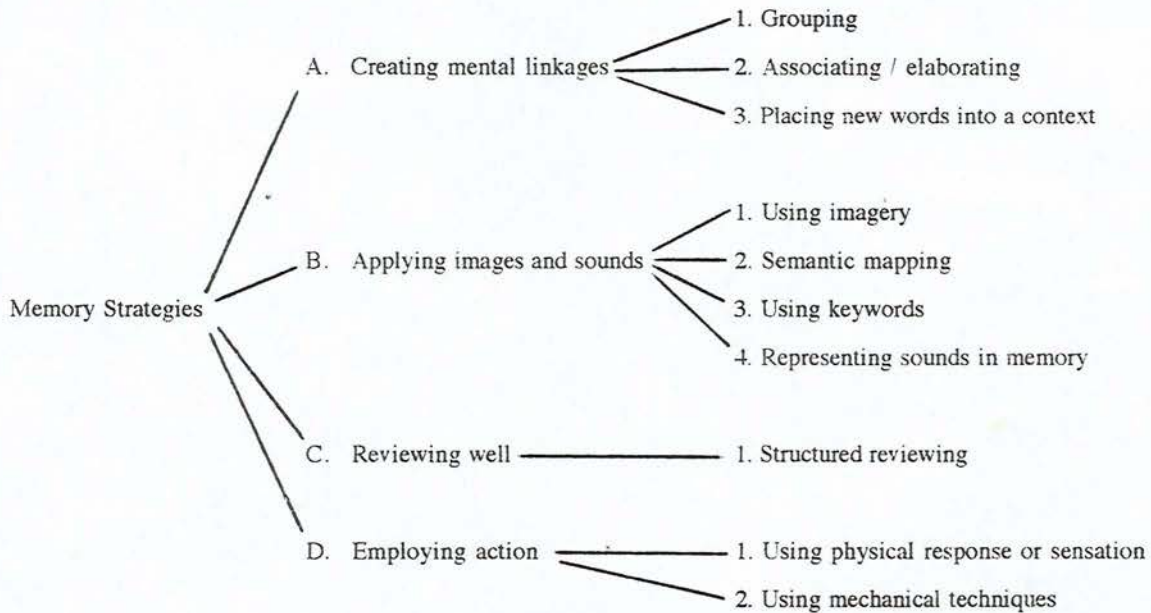


Figure 2.2 Diagram of the Memory Strategies. (Oxford, 1990, p. 39)

A. Creating Mental Linkages

In Creating Mental Linkages set there are three strategies: grouping, associating / elaborating, and placing new words into a context.

1. Grouping: Classifying or reclassifying language material into meaningful units, either mentally or in writing, to make the material easier to remember by reducing the number of discrete elements.

2. Associating / Elaborating: Relating new language information to concepts already in memory, or relating one piece of information to another, to create associations in memory.

3. Placing New Words into a Context: Placing a word or phrase in a meaningful sentence, conversation, or story in order to remember it.

B. Applying Images and Sounds

Four strategies are included in this set: using imagery, semantic mapping, using keywords, and representing sounds in memory.

1. Using Imagery: Relating new language information to concepts in memory by means of meaningful visual imagery, either in the mind or in an actual drawing. The image can be a picture of an object, a set of locations for remembering a sequence of words or expressions, or a mental representation of the letters of a word.

2. Semantic Mapping: Making an arrangement of words into a picture, which has a key concept at the centre or at the top, and related words or concepts linked with the key concept by means of lines or arrows.

3. Using Key Words: Remembering a new word by using auditory and visual links. The first step is to identify a familiar word in one's own language that sounds like the new word (auditory link). The second step is to generate an image of some relationship between the new word and a familiar one (visual link). Both links must be meaningful to the learner.

4. Representing Sounds in Memory: Remembering new language information according to its sound. This is a broad strategy that can use any number of techniques, all of which create a meaningful, sound-based association between the new material and already known material.

C. Reviewing Well

This category contains just one strategy, structured reviewing. Looking at new target language information once is not enough; it must be reviewed in order to be remembered.

1. Structured Reviewing: Reviewing the new language information in carefully spaced intervals, at first close together and then more widely spaced apart. Doing so, the learner becomes so familiar with the information that it becomes natural and automatic.

D. Employing Action

There are two strategies in this set: using physical response or sensation and using mechanical techniques. Both involve some kind of meaningful movement or action.

1. Using Physical Response or Sensation: Physically acting out a new expression (e.g., going to the door), or meaningfully relating a new expression to a physical feeling or sensation (e.g., warmth).

2. Using Mechanical Techniques: Using creative but tangible techniques, especially involving moving or changing something which is concrete, in order to remember new language information. Examples are writing words on cards and moving cards from one stack to another when a word is learned, and putting different types of material in separate sections of a language learning notebook.

2.1.2. Cognitive Strategies

Cognitive strategies help language learners manipulate the target language for reception and production of meaning. There are four sets of cognitive strategies: Practising, Receiving and Sending Messages, Analysing and Reasoning, and Creating Structure for Input and Output (see Figure 2.3).

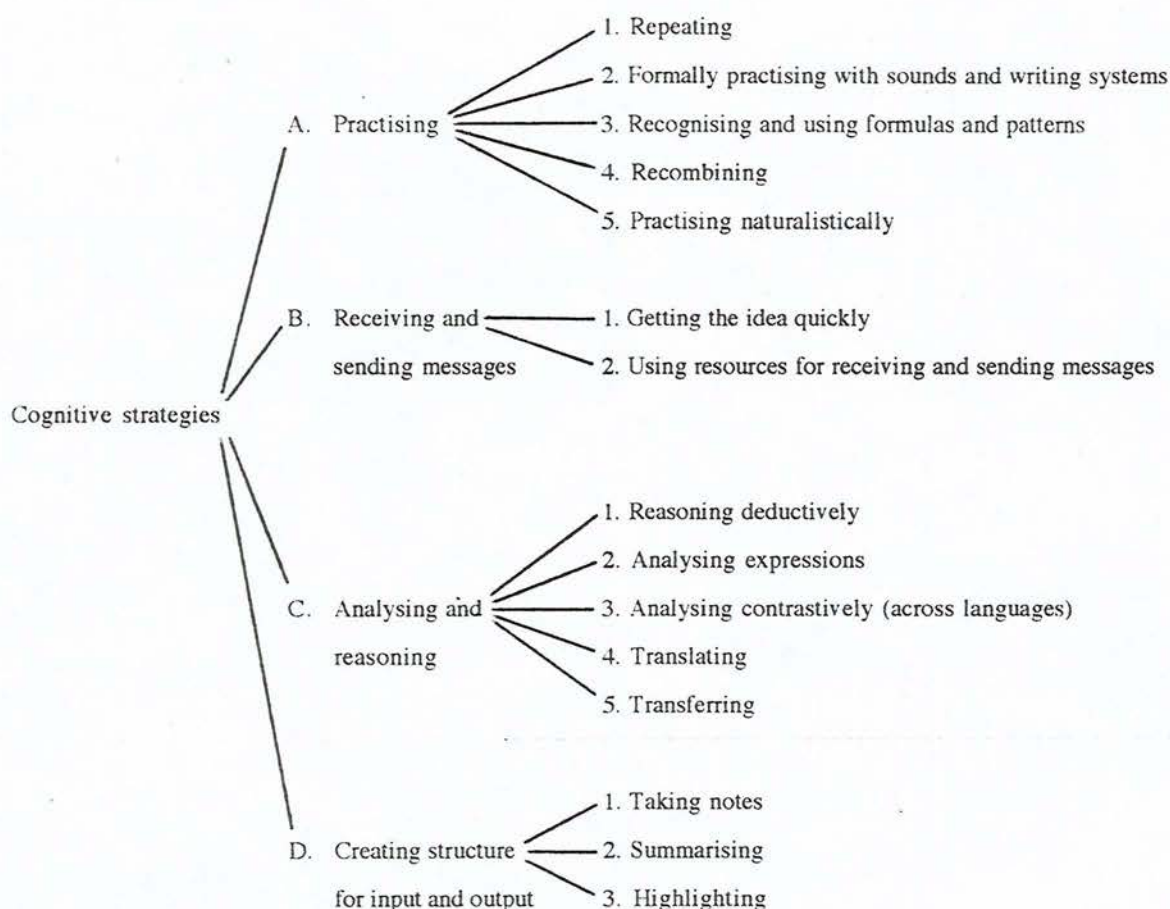


Figure 2.3 Diagram of the Cognitive Strategies. (Oxford, 1990, p. 44)

A. Practising

Strategies for practising are among the most important cognitive strategies and of the five practising strategies, probably the most significant one is practising naturalistically.

1. Repeating: Saying or doing something over and over: listening to something several times; rehearsing; imitating a native speaker.

2. Formally Practising with Sounds and Writing Systems: Practising sounds in a variety of ways, but not yet in naturalistic communicative practice; or practising the new writing system of the target language.

3. Recognising and Using Formulas and Patterns: Being aware of and/or using routine formulas (single, unanalysed units), such as "Hello, how are you?"; and unanalysed patterns (which have at least one slot to be filled), such as, "It's time to ____."

4. Recombining: Combining known elements in new ways to produce a longer sequence, as in linking one phrase with another in a whole sentence.

5. Practising Naturalistically: Practising the language in natural, realistic settings, as in participating in a conversation, reading a book or article, listening to a lecture, or writing a letter in the new language.

B. Receiving and Sending Messages

Two strategies for receiving and sending messages are 1) getting the idea quickly and 2) using resources for receiving and sending messages. The former uses two specific techniques for extracting ideas, while the latter involves using a variety of resources for understanding or producing meaning.

1. Getting the Idea Quickly: Using skimming to determine the main ideas or scanning to find specific details of interest. This strategy helps

learners understand rapidly what they hear or read in the new language. Preview questions often assist.

2. Using Resources for Receiving and Sending Messages: Using print or nonprint resources to understand incoming messages or produce outgoing messages.

C. Analysing and Reasoning

This set of five strategies concerns logical analysis and reasoning as applied to various target language skills. Often learners can use these strategies to understand the meaning of a new expression or to create a new expression.

1. Reasoning Deductively: Using general rules and applying them to new target language situations. This is a top-down strategy leading from general to specific.

2. Analysing Expressions: Determining the meaning of a new expression by breaking it down into parts; using the meanings of various parts to understand the meaning of the whole expression.

3. Analysing Contrastively: Comparing elements (sounds, vocabulary, grammar) of the new language with elements of one's own language to determine similarities and differences.

4. Translating: Converting a target language expression into the native language (at various levels, from words and phrases all the way up to whole texts); or converting the native language into target language; using one language as the basis for understanding or producing another.

5. Transferring: Directly applying knowledge of words, concepts, or structures from one language to another in order to understand or produce an expression in the new language.

D. Creating Structure for Input and Output

The following three strategies are ways to create structure, which is necessary for both comprehension and production in the new language.

1. Taking Notes: Writing down the main idea or specific points. This strategy can involve raw notes, or it can comprise a more systematic form of note-taking such as the shopping-list format, the T-formation, the semantic map, or the standard outline form.

2. Summarising: Making a summary or abstract of a longer passage.

3. Highlighting: Using a variety of emphasis techniques (such as underlining, starring, or colour-coding) to focus on important information in a passage.

2.1.3. Compensation Strategies

Compensation strategies enable learners to use the new language for either comprehension or production despite limitations in knowledge. They are intended to make up for an inadequate repertoire of grammar and, especially, of vocabulary.

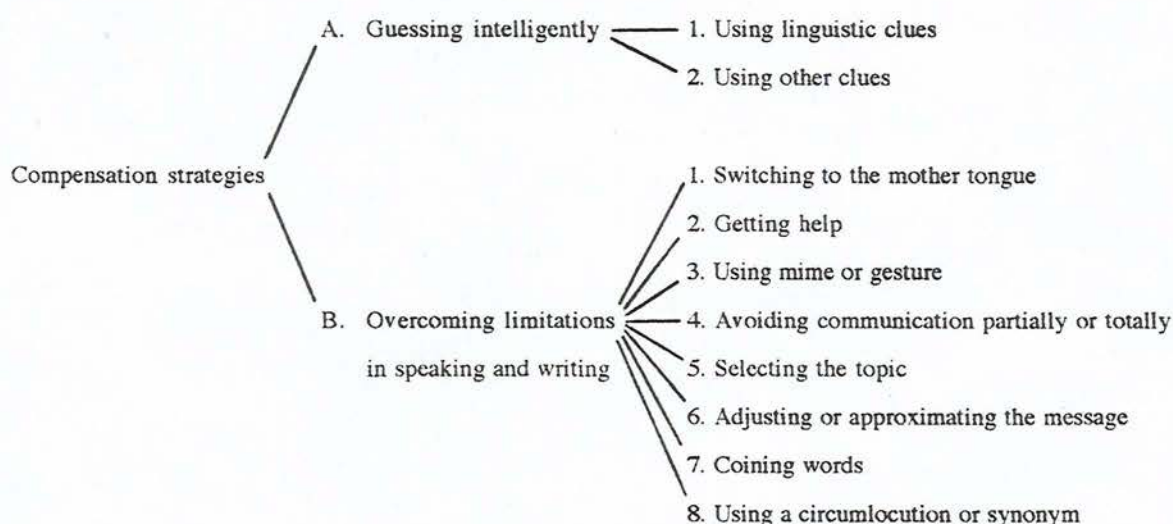


Figure 2.4 Diagram of the Compensation Strategies. (Oxford, 1990, p. 48)

There are ten compensation strategies, clustered in two sets: Guessing Intelligently in Listening and Reading, and Overcoming Limitations in Speaking and Writing (see Figure 2.4).

A. Guessing Intelligently in Listening and Reading

Guessing strategies involve using a wide variety of clues to guess the meaning when the learner does not know all the words. Two strategies which contribute to guessing intelligently refer to two different kinds of clues: linguistic and nonlinguistic.

1. Using Linguistic Clues: Seeking and using language-based clues in order to guess the meaning of what is heard or read in the target language,

in the absence of complete knowledge of vocabulary, grammar, or other target language elements. Language-based clues may come from aspects of the target language that the learner already knows, from the learners' own language, or from another language.

2. Using Other Clues: Seeking and using clues that are not language-based in order to guess the meaning of what is heard or read in the target language, in the absence of complete knowledge of vocabulary, grammar, or other target language elements. Nonlanguage clues may come from a wide variety of sources: knowledge of context, situation, text structure, personal relationships, topic, or "general world knowledge."

B. Overcoming Limitations in Speaking or Writing

Eight strategies are used for overcoming limitations in speaking and writing. Some of these are dedicated solely to speaking, but some can be used for writing, as well.

1. Switching to the Mother Tongue: Using the mother tongue for an expression without translating it, as in *I am a öğrenci* . This strategy may also include adding word endings from the new language onto words from the mother tongue.

2. Getting Help: Asking someone for help by hesitating or explicitly asking for the person to provide the missing expression in the target language.

3. Using Mime or Gesture: Using physical motion, such as mime or gesture, in place of an expression to indicate the meaning.

4. Avoiding Communication Partially or Totally: Partially or totally avoiding communication when difficulties are anticipated. This strategy may involve avoiding communication in general, avoiding certain topics, avoiding specific expressions, or abandoning communication in mid-utterance.

5. Selecting the Topic: Choosing the topic of the conversation in order to direct the communication to one's own interest and make sure the topic is one in which the learner has sufficient vocabulary and grammar to converse.

6. Adjusting or Approximating the Message: Altering the message by omitting some items of information, making ideas simpler or less precise, or saying something slightly different that means almost the same thing, such as saying *pencil* for *pen*.

7. Coining Words: Making up new words to communicate the desired idea, such as *hand-light* for *torch*.

8. Using Circumlocution or Synonym: Getting the meaning across by describing the concept (circumlocution) or using a word that means the same thing (synonym); for example, "what you use to wash dishes with" as a description for *dishrag*.

2.1.4. Metacognitive Strategies

“Metacognitive means beyond, beside, or with the cognitive. Therefore, metacognitive strategies are actions which go beyond purely cognitive devices, and which provide a way for learners to coordinate their own learning process” (Oxford, 1990, p. 136). Metacognitive strategies are divided into three strategy sets: Centering Your Learning, Arranging and Planning Your Learning, and Evaluating Your Learning. Ten strategies exist in these three groups (see Figure 2.5).

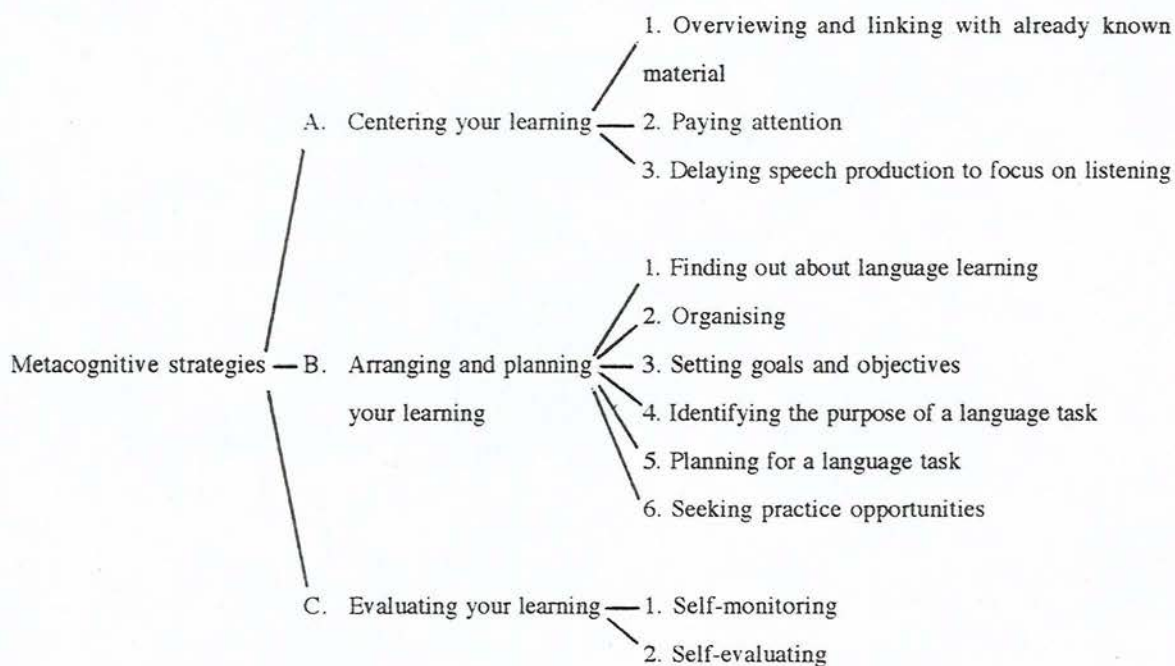


Figure 2.5 Diagram of the Metacognitive Strategies. (Oxford, 1990, p. 137)

A. Centering Your Learning

This set of three strategies helps learners to converge their attention and energies on certain language tasks, activities, skills, or materials. Use of these strategies provides a focus for language learning.

1. Overviewing and linking with already known material: Overviewing comprehensively a key concept, principle, or a set of materials

in an upcoming language activity and associating it with what is already known. This strategy can be accomplished in many different ways, but it is often helpful to follow three steps: learning why the activity is being done, building the needed vocabulary, and making the associations.

2. Paying Attention: Deciding in advance to pay attention in general to a language learning task and to ignore distractors (by *directed attention*), and/or to pay attention to specific aspects of the language or situational details (by *selective attention*).

3. Delaying Speech Production to Focus on Listening: Deciding in advance to delay speech production in the new language either totally or partially, until listening comprehension skills are better developed.

B. Arranging and Planning Your Learning

This set contains six strategies, all of which help learners to organise and plan so as to get the most out of language learning. These strategies touch many areas: finding out about language learning, organising the schedule and the environment, setting goals and objectives, considering task purposes, planning for tasks, and seeking chances to practice the language.

1. Finding Out About Language Learning: Making efforts to find out how language learning works by reading books and talking with other people, and then using this information to help improve one's own language learning.

2. Organising: Understanding and using conditions related to optimal learning of the new language; organising one's schedule, physical environment (e.g., space, temperature, sound, lighting), and language learning notebook.

3. Setting Goals and Objectives: Setting aims for language learning, including long-term goals (such as being able to use the language for informal conversation by the end of the year) or short-term objectives (such as finishing reading a short story by Friday).

4. Identifying the Purpose of a Language Task: Deciding the purpose of a particular language task involving listening, reading, speaking, or writing. For example, listening to the radio to get the news on the stock exchange, reading a play for enjoyment, speaking to the cashier to buy a train ticket, writing a letter to persuade a friend not to do something rash.

5. Planning for a Language Task: Planning for the language elements and functions necessary for an anticipated language task or situation. This strategy includes four steps: describing the task or situation, determining its requirements, checking one's own linguistic resources, and determining additional language elements or functions necessary for the task or situation.

6. Seeking Practice Opportunities: Seeking out or creating opportunities to practice the new language in naturalistic situations, such as going to a second/foreign language cinema, attending a party where the language will be spoken, or joining an international club. Consciously thinking in the new language also provides practice opportunities.

C. Evaluating Your Learning

In this set are two related strategies, both aiding learners in checking their language performances. One strategy involves noticing and learning from errors, and the other concerns evaluating overall progress.

1. Self-Monitoring: Identifying errors in understanding or producing the new language, determining which ones are important (those that cause

serious confusion or offence), tracking the source of important errors, and trying to eliminate such errors.

2. Self-Evaluating: Evaluating one's own progress in the new language, for instance, by checking to see whether one is reading faster and understanding more than they did 1 month or 6 months ago, or whether one is understanding a greater percentage of each conversation.

2.1.5. Affective Strategies

Affective strategies help language learners to manage their emotions and attitudes. Three main sets of affective strategies exist: Lowering Your Anxiety, Encouraging Yourself, and Taking Your Emotional Temperature (see Figure 2.6).

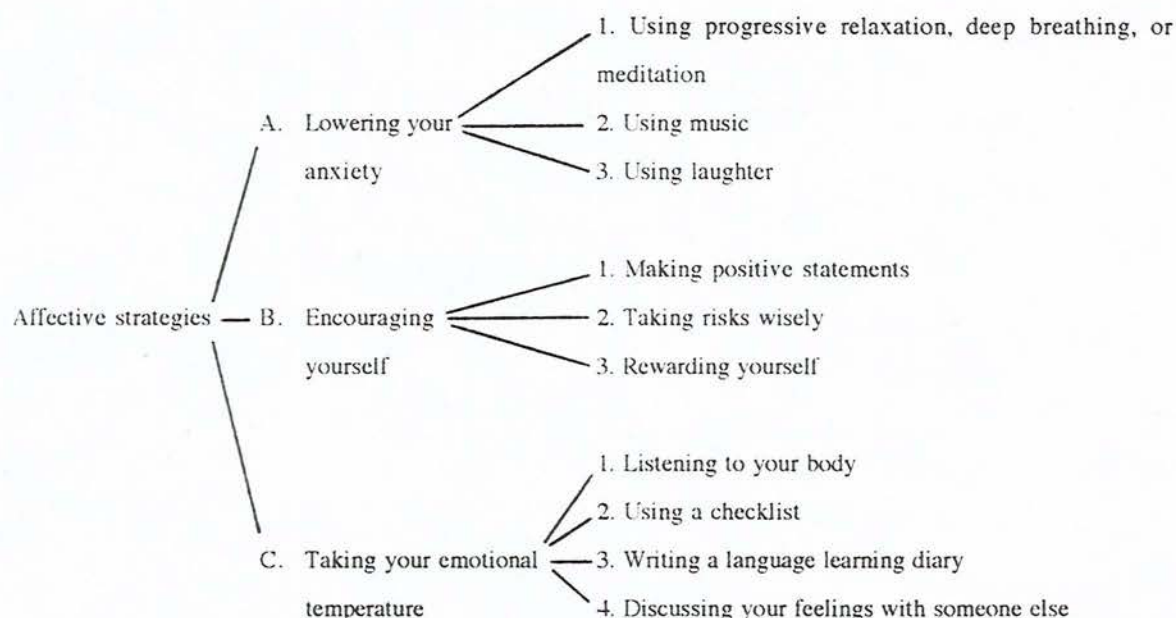


Figure 2.6 Diagram of the Affective Strategies. (Oxford, 1990, p. 141)

A. Lowering Your Anxiety

Three anxiety-reducing strategies are listed here. Each has a physical component and a mental component.

1. Using Progressive Relaxation, Deep Breathing, or Meditation: Using the technique of alternately tensing and relaxing all of the major muscle groups in the body, as well as the muscles in the neck and face, in order to relax; or the technique of breathing deeply from the diaphragm; or the technique of meditating by focusing on a mental image or sound.

2. Using Music: Listening to soothing music, such as a classical concert, as a way to relax.

3. Using Laughter: Using laughter to relax by watching a funny movie, reading a humorous book, listening to jokes, and so on.

B. Encouraging Yourself

This set of three strategies is often forgotten by the language learners, especially those who expect encouragement mainly from other people and do not realise they can provide their own. However, the most potent encouragement -and the only available encouragement in many independent language learning situations- may come from inside the learner. Self-encouragement includes saying supportive things, prodding oneself to take risks wisely, and providing rewards.

1. Making Positive Statements: Saying or writing positive statements to oneself in order to feel more confident in learning the new language.

2. Taking Risks Wisely: Pushing oneself to take risks in a language learning situation, even though there is a chance of making a mistake or looking foolish. Risks must be tempered with good judgements.

3. Rewarding Yourself: Giving oneself a valuable reward for a particularly good performance in the new language.

C. Taking Your Emotional Temperature

The four strategies in this set help learners to assess their feelings, motivations, and attitudes and, in many cases, to relate them to language tasks. Unless learners know how they are feeling and why they are feeling that way, they are less able to control their affective side. The strategies in

this set are particularly helpful for discerning negative attitudes and emotions that impede language learning process.

1. Listening to Your Body: Paying attention to signals given by the body. These signals may be negative, reflecting stress, tension, worry, fear, and anger; or they may be positive, indicating happiness, interest, calmness, and pleasure.

2. Using a Checklist: Using a checklist to discover feelings, attitudes, and motivations concerning language learning in general, as well as concerning specific language tasks.

3. Writing a Language Learning Diary: Writing a diary or journal to keep track of events and feelings in the process of learning a new language.

4. Discussing Your Feelings with Someone Else: Talking with another person (teacher, friend, relative) to discover and express feelings about language learning.

2.1.6. Social Strategies

Social strategies make it possible for language learners to learn with others. There are three sets of social strategies, each set including two specific strategies: Asking Questions, Cooperating with Others, and Empathising with Others (see Figure 2.7).

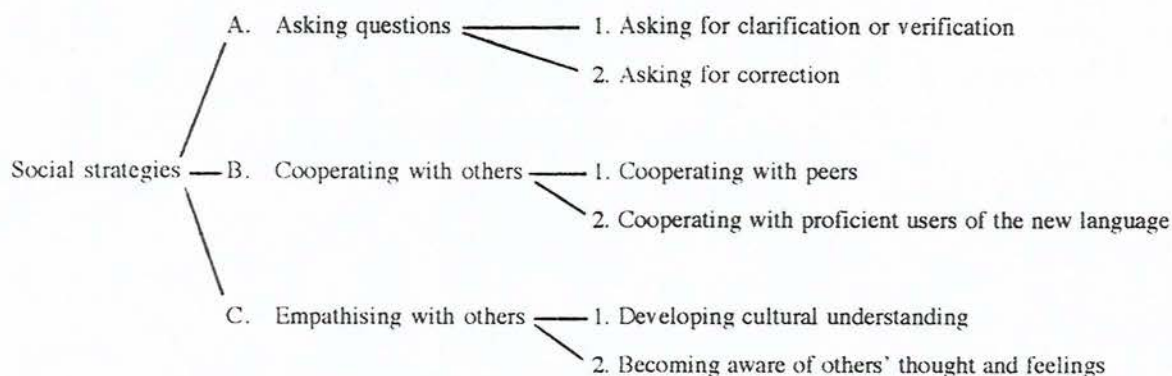


Figure 2.7 Diagram of the Social Strategies. (Oxford, 1990, p. 145)

A. Asking Questions

This set of strategies involves asking someone, possibly a teacher or native speaker or even a more proficient fellow learner, for clarification, verification, or correction.

1. Asking for Clarification or Verification: Asking the speaker to repeat, paraphrase, explain, slow down, or give examples; asking if a specific utterance is correct or if a rule fits a particular case; paraphrasing or repeating to get feedback on whether something is correct.

2. Asking for Correction: Asking someone for correction in a conversation. This strategy most often occurs in conversation but may also be applied to writing.

B. Cooperating with Others.

This set of two strategies involves interacting with one or more people to improve language skills. These strategies are the basis of cooperative language learning, which not only increases learners' language performance but also enhances self-worth and social acceptance.

1. Cooperating with Peers: Working with other language learners to improve language skills. This strategy can involve a regular learning partner or a temporary pair or small group. This strategy frequently involves controlling impulses toward competitiveness and rivalry.

2. Cooperating with Proficient Users of the New Language: Working with native speakers or other proficient users of the new language, usually outside of the language classroom. This strategy involves particular attention to the conversational roles each person takes.

C. Empathising with Others

Empathy is the ability to "put yourself in someone else's shoes" in order to better understand that person's perspective. Empathy is essential to successful communication in any language; it is especially necessary, although sometimes difficult to achieve, in learning another language. Empathy can be developed more easily when language learners use these two strategies.

1. Developing Cultural Understanding: Trying to empathise with another person through learning about the culture, and trying to understand the other person's relation to that culture.

2. Becoming Aware of Others' Thoughts and Feelings: Observing the behaviours of others as a possible expression of their thoughts and feelings; and when appropriate, asking about thoughts and feelings of others.

CHAPTER 3

REVIEW OF LITERATURE

Learning strategy research has been conducted both outside and inside the language field. In this section, the findings of research both outside and inside the language field are presented.

3.1. Research Outside the Language Field

“Research on learning strategies has boomed outside the L2 field and has profoundly influenced language research.” (Oxford, 1992-1993, p. 18). Non-L2 research has revealed that successful learners actively associate new information with existing information in long-term memory and “such a process of association builds increasingly intricate and differentiated mental structures or schemata” (Oxford, 1993, p. 177). They differ from less successful students in their use of well-chosen strategies in many learning areas such as physics, native language reading, and mechanical engineering (Oxford, 1992-1993). When compared with less successful learners, successful learners use more strategies and more effective ones to improve comprehension, retention, and problem-solving (Oxford et al., 1990).

Brown et al. (cited in Oxford, 1992-1993, p. 19) have indicated that successful learners often use metacognitive strategies for organising, evaluating, and planning their learning. Use of these strategies along with cognitive strategies leads to truly effective learning. Additionally, they often use memory strategies such as grouping and using imagery, and compensation strategies such as guessing and inferencing (Oxford et al., 1990). Dansereau and McCombs (cited in Oxford, 1992-1993, p. 19) have

shown that some of the best learners also use affective and social strategies to control their emotions, to stay motivated, to cooperate, and to get help.

3.2. Research in the Language Field

As researchers and teachers' knowledge of second language acquisition increased considerably during the 1970s, they came to realise that some learners seemed to acquire the target language much more easily and competently than others in spite of methods or techniques of teaching. They appeared to have certain abilities to succeed while others lacked those abilities (Brown, 1987). The realisation of such a phenomenon motivated some researchers to look at those learners more closely in order to determine their abilities that led them to success.

Rubin (cited in Wenden and Rubin, 1987, p. 20) was one of the pioneers who focused on the strategies of good language learners. Her rationale was that once the strategies of successful language learners were identified, these strategies could be taught to poorer language learners. She suggested that good language learners:

1. guess willingly and accurately,
2. have a strong desire to communicate,
3. are uninhibited about mistakes,
4. seek out opportunities to use language,
5. attend to form by analysing, categorising and synthesising,
6. monitor their own speech and the speech of others,
7. pay attention to meaning.

Rubin (cited in Carver, 1984, p. 124), in a subsequent research, revised her list and classified learning strategies in the following manner:

A. Processes which may contribute directly to learning

1. Clarification/verification: Asking for examples of how to use a word or expression, putting words in sentences to check understanding, looking up words in the dictionary, and paraphrasing sentences to check understanding.
2. Monitoring: Correcting one's own or others' pronunciation, vocabulary, spelling, grammar, and style and noting sources of errors.
3. Memorisation: Trying to acquire words or other language elements through associations.
4. Guessing/inductive inferencing: Using clues from the surrounding language context to guess meaning or to guess general rules.
5. Deductive reasoning: Looking for and using general rules, comparing native and target language to identify similarities and differences, inferring grammatical rules by analogy, noting exceptions to rules, and finding meaning by breaking down words into parts.
6. Practice: Experimenting with new sounds in isolation and in context, using a mirror for practice, talking to oneself in the target language, and drilling oneself on words in different forms.

B. Processes which may contribute indirectly to learning

1. Creating opportunities for practice: Creating situations with native speakers to practice, spending extra time in the language lab, etc.
2. Production tricks: Using communication strategies, such as circumlocution, a synonym, gestures, or speaking more slowly.

Much like Rubin's study, Stern (cited in Stern, 1983, pp. 414-415) also developed a list of strategies used by good language learners. The ten strategies identified by Stern were:

1. Planning strategy: a personal learning style or positive learning strategy.
2. Active strategy: an active approach to the learning task.
3. Empathic strategy: a tolerant and outgoing approach to the target language and its speakers.
4. Formal strategy: technical know-how of how to tackle a language.
5. Experimental strategy: a methodical but flexible approach, developing the new language into an ordered system and constantly revising it.
6. Semantic strategy: constant searching for meaning.
7. Practice strategy: willingness to practise.
8. Communication strategy: willingness to use the language in real communication.
9. Monitoring strategy: self-monitoring and critical sensitivity to language users.
10. Internalisation strategy: developing second language more and more as a separate reference system and learning to think in it.

Stern revised this set later and suggested four basic sets of strategies which he hypothesised “good language learners are likely to employ while less efficient learners employ them only weakly, fail to maintain them concurrently, or fail to develop them altogether” (Stern, 1983, p. 411). According to the revised list, good language learners:

1. employ first of all an active planning strategy; selecting goals and sub-goals, recognising stages and developmental sequences, and participating actively in the learning process,
2. use an academic (explicit) learning strategy; being prepared to study and practice, paying attention to the rules and relationships between language forms and meanings, developing the target language as a consciously perceived system which they continually revise until the learning process is completed, analysing the language and developing the necessary techniques of practice and memorisation, monitoring their own performance and

revising it in order to improve their target language command, learning to exclude their native language more and more until they acquire internal standards of grammaticality and appropriateness, and treating the language as knowledge and as a skill to be acquired,

3. employ a social learning strategy; seeking communication with target language users and the target language community, developing and using communication strategies, and becoming involved as participants in authentic language use,

4. use an affective strategy; coping with emotional and motivational problems, approaching the problems in a positive frame of mind, developing necessary energy to overcome frustrations, and persisting in their efforts; cultivating positive attitudes towards the self as language learner, towards language and language learning in general, and towards the target language and its society and culture.

Inspired by Stern's ideas about the characteristics of good language learners, Naiman, Fröhlich, and Tudesco (cited in Oxford and Crookall, 1989, p. 406) set out to explore these traits further. They listed six strategies as keys to success. According to their list, good language learners:

1. find a set of learning preferences and select language situations that allow those preferences to be used,
2. become actively involved in the language learning process,
3. develop an awareness of language both as a formal system of rules and as a means of communication,
4. constantly extend and revise individual understanding of the target language system,
5. gradually develop the new language into a reference system and learn to think in it,
6. address the affective demands of language learning.

Reiss (1985) designed a study to find out which of Rubin's strategies (see above) were used most frequently by the successful language learners, to determine which of these strategies were of lesser importance, and to discover any other strategies employed by successful language learners which had not been listed by Rubin. Ninety-eight students at the college level majority of whom were studying language at the elementary or intermediate level participated in the study and they were given a long questionnaire. Of the ninety-eight students who completed the questionnaire, thirty-eight had been singled out specifically by their professors as good language learners. This group was also asked to complete a short questionnaire which consisted of a list of nineteen strategies of which the students had to select those employed most frequently. The strategies were those listed by Rubin in addition to those found to be useful by successful language learners. The purpose of the short questionnaire was to reinforce some of the information gathered in the long questionnaire.

According to the results of her study, Reiss concluded that Rubin's strategies were reaffirmed with the exception of the personality variable of extroversion. The personality variable extroversion/introversion rated much lower than other aspects. Therefore, she suggested, the successful language learner is not necessarily uninhibited. Contrary to her expectation, the use of mnemonic devices was of little importance. In summary, she indicated that good language learners are fairly comfortable with ambiguity. They use a variety of strategies, including monitoring, inferencing, and practising. They like to communicate and enjoy learning a foreign language. They are active participants in the conscious learning process. They are watchful and alert to sound, meaning, and form of the language. Even when silent, they are active mentally and thus become silent speakers. They may not volunteer

nor take chances on errors “aloud” but this does not stop them from practising silently. And finally, they enjoy manipulating the language for its own sake.

In 1985, O'Malley et al. (1985a) conducted a study to a) identify the range, type, and frequency of learning strategies used by 70 beginning and intermediate level ESL (English as a second language) students and b) determine the types of language tasks with which the strategies tend to be associated. Students at beginning and intermediate levels in English proficiency were interviewed in small groups to determine the strategies used to assist in learning each of a number of language tasks: pronunciation, grammar, vocabulary, following directions, listening, making a brief presentation in class, social communication, and functional communication (e.g., applying for a job).

Their findings indicated that strategies could be classified into three broad categories: metacognitive, cognitive, and social mediating strategies (see Table 3.1). These three categories included a total of 26 strategies nine of which were metacognitive strategies, clustered in three sets: planning, monitoring, and evaluation. The greatest differentiation and heaviest use of strategies appeared in planning, regardless of English proficiency. Overall, 82.3 percent of the metacognitive strategies used were for planning learning activities, primarily in advance preparation, self-management, selective attention, and directed attention. Self-monitoring comprised 9.4 percent overall of all metacognitive strategies, while 8.3 percent involved self-evaluation. Self-reinforcement was not used by any of the students. Beginning and intermediate level students were comparable in the pattern of metacognitive strategy use, although self-monitoring was used somewhat more by intermediate than beginning level students.

Table 3.1
Learning Strategy Classification
by O'Malley et al.

A. METACOGNITIVE STRATEGIES

PLANNING	:	advanced organisers, directed attention, selective attention, advanced preparation, self-management, delayed production
MONITORING	:	self-monitoring
EVALUATION	:	self-evaluation, self-reinforcement

B. COGNITIVE STRATEGIES

repetition, resourcing, directed physical response, translation,
grouping, note-taking, deduction, recombination, imagery, auditory
representation, key word, contextualization, elaboration, transfer,
inferencing, question for clarification

C. SOCIAL MEDIATION

cooperation

As with the metacognitive strategies, the pattern of use with cognitive strategies was similar for beginning and intermediate level students. The two most frequently used strategies overall were repetition and note-taking. The next strategies in frequency were cooperation and questions for clarification. The next group of strategies in terms of frequency consisted of imagery, translation, transfer, and inferencing. Among the lower frequency strategies were elaboration, the key word method, deduction, grouping, and recombination. In general, findings indicated that some of the more frequently used strategies entailed less active manipulation of the learning task, and that the students infrequently used active strategies that should lead to greater learning.

Although the pattern of strategy application was comparable for beginning and intermediate level students, there were some interesting differences among strategies at the mid-ranges of use. Beginning level students tended to use translation slightly more than intermediate level students. Imagery was also used more by beginning level students, as was elaboration. On the other hand, contextualization was used more by intermediate level students.

O'Malley et al. concluded that both beginning and intermediate English proficiency students identified and reported use of an extensive variety of learning strategies. Intermediate level students tended to use metacognitive strategies more often than beginning level students, which suggests that students who are more proficient are more able to attend to metacognitive control of learning than are the less proficient ones (Larsen-Freeman and Long, 1991). Whereas intermediate level students used 34.9 percent metacognitive strategies, beginning level students used 27.4 percent metacognitive strategies. On the other hand, beginning level students tended to use cognitive strategies more often than intermediate level students. Whereas beginning level students used 72.6 percent cognitive strategies, intermediate level students used 65.1 percent cognitive strategies. However, overall, both beginning and intermediate students used more cognitive than metacognitive strategies. The percentages were 69.9 and 30.0 respectively. Social-affective strategy use was low both at beginning and intermediate levels.

Ramirez (1986) attempted to determine the successful strategies utilised by 105 adolescent learners studying French at three different levels in New York State schools. The strategies investigated included 1) classroom behaviours, 2) individual study tactics, and 3) social interaction behaviours.

The findings showed that eight strategies contributed differentially to the overall success of the students participated in the study:

1. asking for clarification / verification
2. using inferencing skills or deductive reasoning
3. creating opportunities for practice
4. memorising
5. using vocabulary learning techniques
6. employing available linguistic knowledge and contextual clues
7. being able to self-monitor performance
8. practising

Prokop, Fearon, and Rochet (cited in Ramirez, 1986, pp. 131-132) found that students learning French at a Canadian university placed different emphasis on given cognitive strategies as they became more proficient in the language. Beginning students were more likely to use reading, translation and writing behaviours (psychomotor support strategies) while participating in language learning activities. More advanced students, on the other hand, indicated that they paid more attention to the systematic features of the target language and made greater use of contextual clues.

Cohen (cited in Ramirez, 1986, p. 137) identified six strategies used by successful learners. These include:

1. attention-enhancing strategies (responding silently to tasks asked of other students in the classroom),
2. use of background/contextual sources (using knowledge of a given topic, speaker's gestures and body knowledge),
3. oral production tricks (avoiding unfamiliar topics, asking for help, paraphrasing),

4. vocabulary learning techniques (making associations, noting word structure, creating mental images),
5. reading or text processing strategies (noting communicative purpose of text, using contextual clues, looking for emphasis and cohesion markers),
6. writing techniques (getting ideas on paper, writing multiple drafts, using cohesion devices).

Chamot and Kupper (1989) carried out a three-year project to investigate a number of aspects of learning strategy use by foreign language students and their teachers. They conducted three studies under this project: a) a Descriptive Study, which identified learning strategies used in studying foreign languages, b) a Longitudinal Study, which identified differences in the strategy use of effective and ineffective language learners and analysed changes in strategy use over time, and c) a Course Development Study, in which foreign language instructors taught students how to apply learning strategies.

Sixty-seven high school students drawn from first year, third year, and a combination fifth/sixth year Spanish classes participated in the descriptive study. Teachers identified effective, average, and ineffective language learners at each level of the study, and students at each level of study were interviewed in small groups according to these classifications. In the interviews, students were asked about any special tricks or techniques they applied to foreign language tasks. The results indicated that students at higher levels of study reported using, on the average, more strategies than did beginning level students. Regardless of level all students reported using more cognitive strategies than metacognitive strategies. Most frequently used metacognitive strategies were planning strategies, rather than making use of monitoring or evaluation. Beginning level students mostly used

cognitive strategies of repetition, translation and transfer. Intermediate and advanced level students, on the other hand, began to rely increasingly on inferencing, while still continuing familiar strategies such as repetition and translation. Social and affective strategies were reported infrequently. The most surprising result was the discovery that all ability levels did use learning strategies.

Participants in the longitudinal study were students who had participated in the descriptive study as either effective or ineffective students (the middle group was not included). In that study, students were interviewed individually and given typical language learning activities to perform. They were asked to think aloud while they worked on the tasks. Results of the study demonstrated that more successful students used learning strategies more often, more appropriately, with greater variety, and in ways that helped them complete the task successfully. Less effective learners, on the other hand, not only had fewer strategy types in their repertoires, but also frequently used strategies that were inappropriate to the task or that did not lead to successful completion of the task. Effective students were more purposeful in their approach to a task than ineffective students; they monitored their comprehension and production for overall meaningfulness rather than for individual components and effectively used their prior general knowledge as well as their linguistic knowledge while working on a task.

In a different study, Vann and Abraham (1990) focused on two unsuccessful language learners to discover reasons for their lack of success in completing an academic program. Their results indicated that these two learners were remarkably similar to successful learners in their repertoire of strategies. They were active strategy-users, but they often failed to apply

strategies appropriately to the task at hand. Apparently, they lacked certain necessary high-order processes, what are often called metacognitive strategies, which would enable them to assess the task and bring to bear the necessary strategies for its completion.

According to Oxford (1989), good language learners use strategies in six broad categories: memory, cognitive, compensatory, metacognitive affective, and social. Good language learners use memory strategies, such as grouping, imagery, and structured review, to get information into memory and to recall it when needed. They employ the new language directly with cognitive strategies, such as practising naturalistically, analysing contrastively, and summarising. They overcome limitations in their knowledge through compensatory strategies, such as guessing meanings intelligently and using synonyms or other production tricks when the precise expression is unknown. They manage their own learning process through metacognitive strategies, such as paying attention, self-evaluating, and self-monitoring. They control their emotions and attitudes through affective strategies, such as anxiety-reduction and self-encouragement. Finally, they work with others to learn the language, using social strategies like asking questions and becoming culturally aware. Oxford put together her views on good language learners and developed a comprehensive strategy taxonomy in 1990 (see Chapter 2 for a summary of the taxonomy).

Some researchers carried out research based on Oxford's strategy taxonomy to investigate different aspects of learning strategy use by language learners in various educational, cultural, and geographical settings. Oxford et al. (1993), for example, examined the factors that influenced student achievement in Japanese in the satellite setting. 107 high school students who were learning Japanese through the medium of satellite

television participated in the study. The researchers found that frequency of learning strategy use was a significant predictor of Japanese language achievement. Frequencies of strategy use revealed that cognitive strategies were used the most frequently (mean = 3.02), followed by metacognitive strategies (mean = 3.00), compensation strategies (mean = 2.94), affective strategies (mean = 2.92), social strategies (mean = 2.90), and memory strategies (mean = 2.54). All the frequencies were in the medium use range.

There are several other studies cited by Oxford et al. (1993, pp. 362-363) concerning the strategy preferences of language learners. For instance, Douglas used Strategy Inventory for Language Learning (SILL) to examine the learning strategies of American university students learning Japanese Kanji characters. She found that, while all the strategy groups were used at a medium frequency level, more frequently used strategy categories were metacognitive, social, and cognitive strategies. Less frequently used sets of strategies were compensatory, memory-related, and affective strategies. In contrast, Watanabe, using a slightly different version of the SILL with 316 native Japanese speakers learning English, found that one of his samples -from a prestigious university- used compensatory and affective strategies at a high level, with a medium-level frequency for metacognitive, authentic-communication, and memory-related strategies. His second sample, from a less prestigious college, used all learning strategy categories only at a medium level, but compensatory strategies were again in the lead. In a different study, Noguchi, studying junior high Japanese learners of English with a version of the SILL, found that there was a high use of metacognitive strategies and a low use of social strategies in his group of 174 students.

Green and Oxford (1995) examined the use of language learning strategies by 374 students at three different course levels at the University of

Puerto Rico in relation to L2 proficiency level, gender, and variation in the use of individual strategies. Results demonstrated that overall strategy use varied significantly by course level. There was no significant difference for overall strategy use between Basic and Intermediate courses, the top two proficiency levels (means were 3.12 and 3.15 respectively), but significant differences did occur between each of those levels and the Prebasic level (mean 2.88). Results also showed greater strategy use for females as compared to males (means were 3.13 and 2.96 respectively). Although variation by proficiency and gender was significant, all means fell between 2.5 and 3.4, the range which Oxford (1990, p. 300) defines as medium use. According to the results, there were significant relationships to proficiency, gender, or both for each of the six SILL categories. Proficiency level had a significant effect for the cognitive, compensation, metacognitive, and social strategies (all representing positive variation, i.e., more use by more successful students). Prebasic students used compensation, metacognitive, and social strategy groups significantly less often than Intermediate or Basic students did, but there were no significant differences in levels of use at the Intermediate and Basic course levels. With the cognitive group, there was greater strategy use by the Intermediate students than by the Basic students, who in turn used these strategies significantly more frequently than the Prebasic students did. There were no significant differences between the levels regarding the memory and affective strategy groups. Results indicated that females used the memory, metacognitive, affective, and social strategy groups significantly more often than males. With the cognitive and compensation strategy groups, the differences between females and males were not significant. Although there was significant variation by proficiency and gender, all means for the six strategy categories fell within (or, in the

case of metacognitive strategy use by Intermediate students, Basic level students, and women, very slightly above) the medium range of 2.5 and 3.4.

To summarise, Green and Oxford found greater use of learning strategies among more successful learners and higher levels of strategy use by women than men. Their analysis revealed that with both proficiency level and gender, only some items showed significant variation, and that significant variation by proficiency level did not invariably mean more frequent strategy use by more successful students. The strategies reported as used more often by the more successful students were used in combination with a variety of what Green and Oxford called bedrock strategies, which were used frequently or moderately frequently by learners at all levels. These bedrock strategies, they concluded, contributed significantly to the learning process of the more successful students, although not being in themselves sufficient to move the less successful students to higher proficiency levels.

Politzer (cited in Oxford, Nyikos, and Ehrman, 1988, p. 322) conducted a study of the language learning behaviours of 90 undergraduate students learning French, Spanish, and German. Although he described it as of minor importance, the results of the study indicated a sex difference in LLS use, with females showing a greater inclination than males to engage in second language social interactions with others outside of class.

Oxford and Nyikos (cited in Oxford, Nyikos, and Ehrman, 1988, p. 323) conducted a factor-analytic study to examine the LLSs of 1200 university students studying five different foreign languages: French, Italian, Spanish, German, and Russian. The factors which emerged in this study were: 1) formal rule-related practice strategies, 2) functional practice

(authentic language use) strategies, 3) resourceful, independent language learning strategies, 4) general study strategies, and 5) conversational/input elicitation strategies. The results of this study showed that females used more learning strategies with significantly greater frequency than males in three of the five possible categories: 1) formal rule-related practice, 2) general study habits, and 3) elicitation of target language input from other people. Males did not show statistically greater use of strategies in any categories.

Ehrman and Oxford (1989) examined the learning strategies in relation to: 1) sex differences; 2) career choice; 3) cognitive style; and 4) aspects of personality. For the purposes of their study, they treated cognitive style and personality variables together as psychological type, using a model based on Jung's work. Their results indicated extremely strong sex differences in strategy use. Compared with males, females reported significantly greater use of LLSs in four broad categories. The most significant sex differences occurred in strategies for searching for and communicating meaning, such as guessing meaning from context and finding alternative ways to express meanings in conversations (circumlocutions, synonyms, etc.) and general study strategies, with other significant sex differences in functional practice (authentic language use) strategies and self management (metacognitive) strategies.

In a different study, the same researchers (Ehrman and Oxford, 1990) studied the preferred learning strategies of a sample of twenty people in relation to psychological type preferences. They found no significant differences between the sexes in this study. The number and kind of learning strategies reported by women were similar to those used by men who shared their psychological type preferences.

Oxford et al. (1993) in their study described above found that gender differences favouring females in strategy use were close to significance for three strategy groups: cognitive (female mean = 3.12, male mean = 2.91), social (female mean = 3.04, male mean = 2.76), and affective (female mean = 3.05, male mean = 2.78). In two of the other three strategy groups (memory and metacognitive), female means were slightly higher than male means, but the differences were not statistically significant. Male and female means were equal for compensation strategies. The researchers concluded that these trends, though not statistically significant, followed patterns of significant gender differences found repeatedly in other studies.

3.3. Summary of Research Findings

The findings of the studies reviewed above show that the relationship between strategy use and proficiency is rather complex. The most general finding is that the use of appropriate language learning strategies leads to improved proficiency overall or in specific skill areas (Chamot and Kupper, 1989; Oxford and Crookall, 1989; Oxford et al., 1993). A second major finding is that successful language learners in general use more and better learning strategies than do poorer learners (Oxford, 1993; Green and Oxford, 1995). A third finding is that learners of all levels and abilities use strategies when working with a foreign language. However, more successful students are able to combine effective strategies and use them appropriately, while less successful students frequently use strategies that are inappropriate to the task (Chamot and Kupper, 1989; Vann and Abraham, 1990).

SILL-based research findings indicate that in general students use language learning strategies in the medium use range. In terms of most frequently used strategy groups, the results seem to be inconsistent (Oxford

et al., 1993; Green and Oxford, 1995). The gender difference findings, on the other hand, show that women in general use significantly more learning strategies than men and use them more often (Oxford, Nyikos, and Ehrman, 1988; Ehrman and Oxford, 1989; Oxford et al., 1993; Green and Oxford, 1995).

Despite these general trends, it seems that findings are far from being concrete and that more information on the strategy preferences of language learners and on the effects of gender and proficiency level on strategy use is needed. Therefore, further studies, like the present one, which will be carried out in different geographical and cultural settings may prove fruitful and provide a deeper understanding of language learning strategies used by language learners.

CHAPTER 4

METHODOLOGY

This study, as stated in Chapter 1, attempts to identify the language learning strategies used by Turkish students studying English in the Intensive Language Program at the Communication Sciences Faculty at Anadolu University. It also examines the effects of language proficiency and gender on strategy use. In order to reach these goals, the study addresses the following research questions:

1. Which language learning strategies in general are used by Turkish students studying English and how frequently do they use those strategies?
2. Which language learning strategies in general are used by relatively more successful language learners and how often do they use them?
3. Which language learning strategies in general are used by relatively less successful language learners and how frequently do they use them?
4. How does gender affect students' use of language learning strategies?

In the 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 explained.

4.1. Subjects

A total of 121 students studying in the Intensive English Program at the Communication Sciences Faculty at Anadolu University participated in the study. At the time of the study, they all had completed a period of 26 weeks,

25 to 30 hours a week, of English instruction. The students were given a placement examination and the results of the exam revealed that their language levels ranged between elementary and advanced. The exact number of students at each level are given in Table 4.1:

TABLE 4.1
Distribution of Subjects by Language Level and Gender

Level	Gender		Total
	Male	Female	
Elementary	6	3	9
Low-Intermediate	27	21	48
Intermediate	24	32	56
High-Intermediate	5	2	7
Advanced	1	-	1
Total	63	58	121

As shown in the Table, although there were 48 (27 males and 21 females) students at low-intermediate level and 56 (24 males and 32 females) students at intermediate level, the numbers of students at the other levels were very low (9 at elementary, 7 at high-intermediate, and 1 at advanced level). Therefore, students at elementary, high-intermediate, and advanced levels were excluded from the study. In other words, the data gathered from 104 students (51 males and 53 females) at intermediate and low-intermediate levels were used in the study.

The students at intermediate level were considered to be more successful language learners than their peers at low-intermediate level, on the basis of their scores on the placement exam. Labelling students as more successful and less successful by taking into account the scores they obtained

on a single exam may seem questionable, but this classification is supported by a very recent study, in which the investigators ranked some learners as more successful than the others according to their scores on an achievement test, emphasising the fact that in characterising some students as less successful they were implying no judgement of their potential as learners, but were merely referring to the fact that at the time of their study they had not been successful learners of English, for any of a number of possible reasons (Green and Oxford, 1995).

To be on the safe side, however, another criterion of success was also used in this study: the rate of progress the students showed in the program, that is, the difference between their two placement scores, one from the first placement exam, administered before they started the Intensive English Program, and the other from the same placement exam they took at the time of this study.

While examining the relationship between the LLSs and student progress, only 93 students were included in the study since 11 students (6 males and 5 females) had not taken the first placement exam. These 93 students were divided into three groups. The students who made a progress of more than 30 points were labelled as Group A, the students with a progress of more than 15 points up to 30 as Group B, and the students with a progress of less than 15 points as Group C. This grouping was made considering the fact that 15-point steps were accepted in this study as marking the borders of each language level, except for advanced level. The Group A students were considered to be relatively more successful than the Group B students, since the former progressed more than the latter. Similarly, the Group B was thought to be relatively more successful than the Group C.

The reason for categorising the students participated in the study as being more successful and less successful according to both their scores on a single exam and their rates of progress was to double-check the findings of the related research, which claim that more successful language learners use more language learning strategies, and to see whether that claim held true for Turkish students studying English.

4.2. Instruments

Students' language levels were determined according to their scores on the Michigan Placement Examination. Using a placement exam to measure the language performance seemed sensible enough in our case because in studies conducted in a wide variety of geographical and cultural settings, language performance was gauged in many different ways: self-ratings of proficiency, language proficiency and achievement tests, entrance and placement examinations, language course grades, years of language study, and career status reflecting expertise in language learning (Green and Oxford, 1995).

The highest score possible in the Michigan Placement Examination is 100. There are four parts to the exam: listening comprehension, grammar, vocabulary, and reading comprehension. These four parts include 100 questions: 20 listening, 30 grammar, 30 vocabulary, and 20 reading. The students who scored between 0 and 15, 16 and 30, 31 and 45, 46 and 60, 61 and 75, and 76 and up in the exam were considered to be at Beginner, Elementary, Low Intermediate, Intermediate, High Intermediate, and Advanced levels respectively. In our situation, this way of grouping was tested over an 8-year period and was decided to be the best way of identifying students' language levels.

Another main instrument was the Strategy Inventory for Language Learning (SILL), which is a self-report, paper and pencil survey. The SILL (Version 5.1) consists of 80 statements following the general format "I do such-and-such"; students respond on a 5-point Likert scale ranging from 1 ("Never or almost never true of me") to 5 ("Always or almost always true of me"). The structure of the SILL is based on Oxford's (1990) strategy classification system mentioned in Chapter 2.

A Turkish translation of this instrument (see Appendix A) was used to maximise ease of administration and ensure greater accuracy of results. The translation was done by the researcher himself and checked on a randomly-chosen group of students before it was used in the study.

Another instrument was the SILL Answer Sheet (see Appendix B), on which students wrote down their responses. The six columns titled as Part A, Part B, etc. on the Answer Sheet represent strategy groups. Part A stands for memory strategies, Part B for cognitive strategies, Part C for compensation strategies, Part D for metacognitive strategies, Part E for affective strategies, and Part F for social strategies.

4.3. Data Collection and Analysis Procedures

All data were collected during the last week of the Spring 1995 semester. Students were informed a little in advance that they would take the placement exam, the same exam which they took before they started the Intensive English Program, and the SILL and they were told that their responses would not affect their course grades and were recommended to give their responses to the questions and the statements as sincerely as possible. They were also informed that the SILL was designed to help students understand better how they learn a language and that the

information helps them to become better learners. Before the SILL was administered, the students were told to respond to the items in terms of what they typically did to learn English and were reminded that there were no right or wrong answers. They were given approximately 70 minutes to complete the placement exam, and no time limits for the SILL.

Students' responses (ranging from 1 to 5) to the SILL items were scored on the SILL Answer Sheets. Responses to each strategy group were totalled and the results were put on the lines marked "TOP". Then, these results were divided by the numbers of items in each strategy group to provide an average for each column. These averages were rounded off to the nearest hundredth, as in 2.65. After that, all the TOPs for the different parts of the SILL were added up and the results were divided by 80, the number of items on the SILL, to get the overall averages.

The average for a particular column on the Answer Sheets showed how frequently the students used that particular category of LLSs. The overall average, on the other hand, indicated how frequently the students used LLSs in general.

Significant differences in mean strategy use across the entire SILL and in the six SILL categories as related to language level, progress level, and gender were determined by using one-tailed t-tests, employing the StatView 512+ statistical software. The results were considered significant if they reached the level .05 or below. The results which were close to significance ($p < .06 - .10$) were also reported "because this is an exploratory study and because some of the nearly significant relationships deserve attention and further testing" (Oxford et al., 1993, p. 365). Before analysing the data, it was assumed that the results of the study would be consistent with the

general trend of previous LLS research suggesting more strategy use by more successful language learners than less successful ones and by female students than males.

All the results were analysed assuming that the subjects participated in the study had sincerely answered the questions in the placement exam and the Strategy Inventory for Language Learning (SILL) survey and considering that the results of the study would be limited to Intensive English Program at the Communication Sciences Faculty at Anadolu University. Since the subjects were around the same ages, it was also assumed that age did not affect the results from the questionnaires.

CHAPTER 5

RESULTS AND DISCUSSION

This chapter discusses 1) the significant or near-significant results related to the relationships between overall strategy use and language level, rate of progress, and gender and 2) the results demonstrating significant or near-significant relationships to language level, rate of progress, and gender for each of the six SILL categories.

5.1. Results

5.1.1 Differences in Overall Strategy Use

Frequencies of general strategy use (see Appendix D) revealed that the students participated in the study used the language learning strategies in the medium use range (see Appendix C). Their overall strategy mean was 2.91.

Overall strategy use, according to the t-test results, did not vary significantly by language level. However, the difference was close to significance ($t = 1.571$, $df = 102$, $p < .06$).

Table 5.1
Summary of Differences in Overall Strategy Use
by Language Level

<u>Language Level</u>	<u>n</u>	<u>Mean</u>	<u>t Value and Significance Level</u>
Intermediate	56	2.97	1.571 ($p < .06$)
Low-Intermediate	48	2.85	

As shown in Table 5.1, intermediate and low-intermediate level students' overall strategy means were 2.97 and 2.85 respectively (see Appendices E and F for individual strategy frequencies).

Overall strategy use did not vary significantly by rate of progress either. The t-test results did not show any significant differences for overall strategy use among the three groups of students (see Appendices G, H, and I for individual strategy frequencies).

Table 5.2
Summary of Differences in Overall Strategy Use
by Progress Level

<u>Progress Level</u>	<u>n</u>	<u>Mean</u>	<u>Comparison</u>	<u>t Value and Significance Level</u>
Group A	29	3.00	A versus B	n.s.
Group B	37	2.91	A versus C	1.304 ($p < .10$)
Group C	27	2.85	B versus C	n.s.

As Table 5.2 shows, the difference between the overall strategy uses of the students in Group A (mean = 3.00) and the students in Group B (mean = 2.91) did not approach statistical significance. Similarly, the overall strategy use of the students in Group B did not vary significantly from that of the students in Group C (mean = 2.85). However, the difference for general strategy use between Group A and Group C students was close to significance ($t = 1.304$, $df = 54$, $p < .10$).

The t-tests did not demonstrate any significant difference, as Table 5.3 shows, between the general strategy uses of females and males (see Appendices J and K for individual strategy frequencies). Means were 2.98

and 2.85 respectively, and the difference was again nearly significant ($t = 1.63$, $df = 102$, $p < .06$).

Table 5.3
Summary of Differences in Overall Strategy Use
by Gender

<u>Gender</u>	<u>n</u>	<u>Mean</u>	<u>t Value and Significance Level</u>
Females	53	2.98	1.63 ($p < .06$)
Males	51	2.85	

5.1.2. Differences in Use of the Six Categories of Strategies

Students' overall means for individual SILL categories were in the medium use range, as well. The mean for memory strategies was 2.52, for cognitive strategies 2.89, for compensation strategies 3.34, for metacognitive strategies 3.13, for affective strategies 2.69, and for social strategies 3.03.

Table 5.4
Summary of Differences in Intermediate and Low-Intermediate
Students' Means for Strategy Categories

<u>SILL Category</u>	<u>Intermediate</u>	<u>Low-Int.</u>	<u>t Value and Significance Level</u>
Memory	2.55	2.47	n.s.
Cognitive	3.00	2.77	2.399 ($p < .01$)
Compensation	3.41	3.26	1.53 ($p < .07$)
Metacognitive	3.18	3.08	n.s.
Affective	2.63	2.77	n.s.
Social	3.06	3.00	n.s.

The t-test results, as Table 5.4 presents, indicated that the students at the intermediate level used cognitive strategies significantly more often than

the students at low-intermediate level ($t = 2.399$, $p < .01$). The means were 3.00 and 2.77 respectively. The difference between intermediate and low-intermediate students' uses of compensation strategies (means were 3.41 and 3.26 respectively) was close to significance ($t = 1.53$, $p < .07$). In three of the other four strategy groups (memory, metacognitive, social), intermediate level students' means were higher than those of low-intermediate level students, yet the differences did not approach statistical significance. Intermediate level students' means for the six SILL categories were in the medium use range, except for their mean for compensation strategies (mean = 3.41), which was barely over the upper limit of the range. Low-intermediate level students' means were again in the medium use range, except for their mean for memory strategies (mean = 2.47), which was just below the lower limit of the range.

The results did not demonstrate any significant relationships to the rate of progress that the students in Groups A, B, and C showed throughout the Intensive English Program for each of the six SILL categories.

Table 5.5
Summary of Differences in Group A and Group B
Students' Means for Strategy Categories

<u>SILL Category</u>	<u>Group A</u>	<u>Group B</u>	<u>t Value and Significance Level</u>
Memory	2.58	2.54	n.s.
Cognitive	2.95	2.89	n.s.
Compensation	3.36	3.45	n.s.
Metacognitive	3.25	3.12	n.s.
Affective	2.75	2.67	n.s.
Social	3.15	2.95	1.626 ($p < .06$)

As Table 5.5 shows, the difference between the Group A and Group B students' means for social strategies was close to significant (Group A mean

= 3.15 and Group B = 2.95, $df = 64$, $p < .06$). In four of the other five strategy categories (memory, cognitive, metacognitive, and affective), the Group A students' means were slightly higher than the Group B students' means. For compensation strategies, the reverse was true. However, the differences were far from being significant.

Table 5.6
Summary of Differences in Group A and Group C
Students' Means for Strategy Categories

<u>SILL Category</u>	<u>Group A</u>	<u>Group C</u>	<u>t Value and Significance Level</u>
Memory	2.58	2.43	n.s.
Cognitive	2.95	2.82	n.s.
Compensation	3.36	3.23	n.s.
Metacognitive	3.25	3.09	n.s.
Affective	2.75	2.58	n.s.
Social	3.15	3.04	n.s.

When the students in Group A was compared with the ones in Group C, no significant differences were found between their means for individual SILL categories, although all the Group A students' means were higher than those of the students in Group C (see Table 5.6).

Table 5.7
Summary of Differences in Group B and Group C
Students' Means for Strategy Categories

<u>SILL Category</u>	<u>Group B</u>	<u>Group C</u>	<u>t Value and Significance Level</u>
Memory	2.54	2.43	n.s.
Cognitive	2.89	2.82	n.s.
Compensation	3.45	3.23	1.6 ($p < .06$)
Metacognitive	3.12	3.09	n.s.
Affective	2.67	2.58	n.s.
Social	2.95	3.04	n.s.

No significant differences were found between the Group B and Group C students' means for individual strategy groups, although the Group B students' means were above the means of the Group C students in five of the six categories (see Table 5.7). For social strategies, the Group C students' mean was higher than that of the Group B students. There was a near significant difference between the two groups' means for compensation strategies (Group B mean = 3.45, Group C mean = 3.23, $df = 62$, $p < .06$).

As Table 5.8 shows, females used social strategies significantly more often than males ($t = 3.044$, $p < .01$). The means were 3.19 and 2.87 respectively.

Table 5.8
Summary of Differences in Female and Male
Students' Means for Strategy Categories

<u>SILL Category</u>	<u>Female</u>	<u>Male</u>	<u>t Value and Significance Level</u>
Memory	2.50	2.53	n.s.
Cognitive	2.95	2.83	n.s.
Compensation	3.39	3.29	n.s.
Metacognitive	3.20	3.06	1.296 ($p < .10$)
Affective	2.79	2.59	1.657 ($p < .06$)
Social	3.19	2.87	3.044 ($p < .01$)

Gender differences in strategy use were close to significance for two strategy groups: affective strategies (female mean = 2.79, male mean = 2.59, $p < .06$) and metacognitive strategies (female mean = 3.20, male mean = 3.06, $p < .10$). In two of the three other strategy groups (cognitive and compensation) female means were higher than male means, but the differences were not significant. Female and male means for the six strategy groups were all in the medium use range.

5.2. Discussion

The results of this study indicated that the students' overall strategy mean across the whole SILL and general means for individual SILL categories were in the medium use range, which means that they sometimes employed language learning strategies. This finding is consistent with the general trend of previous SILL studies. The reason for students' moderate use of language learning strategies can be explained by taking into account the foreign language environment they were in. In foreign language situations, as Green and Oxford (1995) suggest, there is limited exposure to the target language and limited communicative demand. Therefore, it may be said that the students were not likely to frequently use at least the strategies that are directly or partly related to communication with target language users, such as seeking practice opportunities, cooperating with the proficient users of the target language, practising naturalistically, developing cultural understanding, and selecting the topic. The medium use of language learning strategies might also be explained with the fact that the students hadn't taken any strategy instruction before they participated in the study, and therefore they were mostly unaware of language learning strategies.

The students' means for the SILL categories revealed that they used compensation strategies (mean = 3.34) for guessing intelligently and overcoming their limitations in their existing knowledge moderately often and that they less frequently organised and evaluated their learning metacognitively (mean = 3.13). Social strategies (mean = 3.03) for learning with others and cognitive strategies (mean = 2.89) for manipulating the language for reception and production of meaning were employed less often. The two lowest-frequency groups were affective strategies (mean =

2.69) for dealing with emotions and memory strategies (mean = 2.52) for entering information into memory and retrieving it later.

Higher use of metacognitive strategies than cognitive strategies and moderately frequent use of social strategies in this study do not agree with the findings of the studies by O'Malley et al. (1985a) and Chamot and Kupper (1989), since in those studies, students reported using more cognitive strategies than metacognitive strategies and an infrequent use of social strategies. It may be said that the students participated in this study did not very frequently used cognitive strategies, such as practising, receiving and sending messages, and analysing and reasoning, which are essential skills in any learning area, while they were fairly aware of metacognitive strategies and were using them moderately often.

Moderately frequent use of metacognitive strategies and compensation strategies by the students participated in the study is rather surprising because the teachers in the Intensive Language Training Program shared the common view that before this study was carried out the students were generally not able to use linguistic clues or other clues to guess the meaning of unfamiliar elements while performing language tasks in the classroom. Also, the teachers indicated that the students were not very willing to ask questions when they experienced difficulties. In addition, they did not seem to be able to transfer their existing knowledge to new tasks and were mostly unaware of the way language learning works. The teachers also observed that the students were frequently inattentive to what was going on in the classroom. And most important of all, they did not seem to be seeking out or creating opportunities to practice the target language in naturalistic situations. Such observations may mean that the students may have given insincere responses to some items on the SILL.

Overall frequencies of use by strategy categories were somewhat similar to those found by Oxford et al. (1993). In their study, top three strategy groups were cognitive (mean = 3.02), metacognitive (mean = 3.00), and compensation strategies (mean = 2.94). The bottom three were affective (mean = 2.92), social (mean = 2.90), and memory strategies (mean = 2.54). Thus, in both studies metacognitive and compensation strategies were among the top three groups, and affective and memory strategies among the bottom three. However, a reversal of frequency groups between the two studies was found for social and cognitive strategies. The strategy frequencies shown by Turkish university level students in this study were again fairly similar to the strategy frequencies found by Douglas (cited in Oxford et al. 1993, p. 368) in his investigation of American university students learning Japanese Kanji characters. In that study, metacognitive and social strategies were among the top three, while affective and memory strategies were in the bottom three. The results of the present study indicated that there was a reversal of frequency groups between the Turkish and American university students for compensation and cognitive strategies. Differences in preferred strategy categories by Turkish students and by those mentioned above might be due to various reasons, such as different educational systems, teaching methods, learning styles, and motivations, among others.

Results indicated that overall strategy use did not vary significantly by language level. However, the difference between the intermediate and low-intermediate level students' overall strategy means was close to significance. The students at the intermediate level used cognitive strategies significantly more often than the students at low-intermediate level and the difference between intermediate and low-intermediate students' uses of compensation strategies approached statistical significance. In all the other strategy groups,

except for affective strategies, intermediate level students' means were higher than those of low-intermediate level students, although the differences were not statistically significant. These trends, though most results did not approach significance level, follow patterns of language level differences (favouring successful students) found repeatedly in other studies.

No significant relationships to the rates of progress of the students in Group A, Group B, and Group C for overall strategy use and for the six SILL categories were found in the study. However, the difference between Group A and Group C students' means for general strategy use, the difference between the Group A and Group B students' means for social strategies, and the difference between the Group B and Group C students' means for compensation strategies were close to significance. In all strategy categories, except for compensation strategies, Group A means were higher than Group B means. Group A means for all strategy groups were higher than those of Group C. And, Group B means for five of the six strategy categories were higher than Group C means. These trends, although not statistically significant, may be said to follow patterns of significant level differences in strategy use found in previous studies, but it seems that more research is needed in order to reach a more concrete conclusion.

The findings of the study did not indicate a significant difference between the general strategy uses of females and males, but the difference was nearly significant. According to the results, females used social strategies significantly more often than males. The differences between female means and male means for affective strategies and metacognitive strategies were close to significance, favouring females. In two of the three other strategy groups (cognitive and compensation) female means were higher than male means, but the differences were not significant. Such

findings concerning gender differences in strategy use seem to be consistent with the findings of similar research (Oxford, Nyikos, and Ehrman, 1988; Ehrman and Oxford, 1989; Green and Oxford, 1995).

Females' significantly more frequent use of social strategies than males found in this study may be due to the reasons suggested by Maccoby and Jacklin, Gilligan, Bardwick, Tyler, Fishman, Lakoff, Tannen, Kramarae, and Gage and Berliner (see Oxford, Nyikos, and Ehrman, 1988, pp. 322-326). According to these researchers, females generally display greater social orientation and show more interest in social activities than males. They remember more conversational details than men; and are more indirect, more polite, and more likely to reach agreement through negotiation than through verbal expressions of power or aggression. Females are more likely to show a continuing need for social approval and a continuing willingness to accept cultural patterning. They are superior than males in verbal ability and typically excel at verbal fluency. They are known for greater speech self-monitoring. There are also conversational language use and speech differences between males and females. And finally, females approach the world as individuals in a network of connections while males live in a hierarchical social order in which they are either one-up or one-down.

Overall, findings of this study, although there are some non-significant results, seem to mostly support the general findings of previous SILL research. However, further research is needed to verify the results.

CHAPTER 6

CONCLUSION

6.1. Summary

The present study attempted to identify the language learning strategies used by the students studying English as a foreign language in the Intensive English Program at the Communication Sciences Faculty at Anadolu University. It also examined the learning strategies in relation to language proficiency and gender.

A total of 121 students participated in the study. At the time of the study, they all had completed a period of 26 weeks, 25 to 30 hours a week, of English instruction. Their language levels ranged between elementary and advanced. However, the numbers of students at elementary, high-intermediate, and advanced levels were very low. Therefore, these students were excluded from the study. In other words, the data gathered from 104 students (51 males and 53 females) at intermediate and low-intermediate levels were used in the study.

For the purposes of this study, the students at intermediate level were considered to be more successful language learners than their peers at low-intermediate level, on the basis of their scores on the placement exam. To be on the safe side, however, another criterion of success was also used in the study: the rate of progress the students showed in the Intensive Language Program, that is, the difference between their two placement scores, one from the first placement exam, administered before they started the Intensive English Program, and the other from the same placement exam

they took at the time of this study. While examining the relationship between LLSs and student progress, only 93 students were included in the study since 11 students (6 males and 5 females) had not taken the first placement exam.

Students' language levels were determined according to their scores on the Michigan Placement Examination. A Turkish translation of the Strategy Inventory for Language Learning (SILL), which is a self-report, paper and pencil survey was used to identify the type and frequency of the language learning strategies used by students. Students' responses (ranging from 1 to 5) to the SILL items were scored on the SILL Answer Sheets.

Significant differences in mean strategy use across the entire SILL and in the six SILL categories were determined by using one-tailed t-tests, employing the StatView 512+ statistical software. The results were considered significant if they reached the level .05 or below. The results which were close to significance ($p < .06 - .10$) were also reported. Before analysing the data, it was assumed that the results of the study would be consistent with the general trend of previous LLS research suggesting more strategy use by more successful language learners than less successful ones and by female students than males.

Frequencies of strategy use revealed that the students participated in the study used the language learning strategies in the medium use range. Students' overall means for individual SILL categories were in the medium use range, as well. Overall strategy use, according to the t-test results, did not vary significantly by language level, rate of progress, and gender.

The results indicated that the students at the intermediate level used cognitive strategies significantly more often than the students at low-intermediate level. No significant difference was found among Group A,

Group B, and Group C students in terms of individual SILL categories. Results indicated that females used social strategies significantly more often than males.

It was concluded that, although there were some non-significant results, findings of this study seem to mostly support the general findings of previous SILL research, keeping in mind the fact that further research is needed to verify the results.

6.2. Conclusion

Based on the findings of this research, it can be claimed that the students participated in the study did not use language learning strategies as frequently as they should and needed instruction in every strategy group. This implies the fact that it is necessary to establish a learning strategy instructional framework in the Intensive Language Program where this study was carried out. In order to establish such a framework, the teachers in the program may follow the strategy training model proposed by Oxford et al. (1990). The model includes the following stages:

1. Setting the scene and exploring attitudes, expectations, and current strategies: At this stage, teachers take stock of learners' beliefs about their role, their purpose for language learning, and their degree of willingness to accept additional responsibility for language learning. They encourage their students to discuss cultural expectations about language learning and about learning in general, and to explore their anxieties and fears toward language learning. It is at this stage that teachers assess students' current strategies and that they consider the amount of time available for strategy training, the range of relevant strategies, and ways to help students change negative feelings and attitudes.

2. Choosing strategies: At this stage, teachers identify pairs or clusters of relevant techniques that seem to fit together naturally (e.g., the social strategy of cooperating with peers and the memory strategy of structured reviewing). Then, they choose strategies based on the following criteria: relevance of strategies; the needs and cultural/personal characteristics of the learners; number and type of strategies to be taught; transferability of strategies to different kinds of learning tasks; usefulness of strategies across different cultural backgrounds.

3. Considering strategy training integration: This stage involves considering ways to integrate strategy training into regular language-learning activities.

4. Focusing directly on affective issues: In this step, it is necessary for teachers to focus again, and more intently, on the affective hindrances to language learning that they identified in Stage 1. Here, they list various ways to pinpoint and reduce such problems: for instance, relaxation exercises; emotional checklists; extensive use of laughter in the classroom; regular writing of language-learning diaries; diary-sharing, in which students read each others' diaries and give suggestions about how they can lessen their fears and increase their confidence; and games and simulations that are specifically designed to identify and reduce anxiety.

5. Preparing materials and activities: This stage involves preparing the materials and activities that will be used in strategy training. Activities must be interesting, varied, and meaningful, and they should deal not just with intellectual aspects of language learning, but with the affective side as well.

6. Conducting completely informed strategy training, if possible: At this stage, teachers explicitly talk with the learners about the need for greater self-direction and teach strategies explicitly. Completely informed strategy

training is generally preferred to covert training. It is helpful to provide plenty of practice involving meaningful language-learning tasks. Teachers can do this by:

- a) asking learners to do a language activity without any strategy training;
- b) having them discuss how they did it, and praising any useful strategies and self-directed attitudes that they mention;
- c) suggesting and demonstrating other helpful strategies, mentioning the need for greater self-direction and expected benefits, such as higher grades, faster progress, and greater self-confidence;
- d) allowing learners plenty of time to practice the new strategies with language tasks;
- e) showing how the strategies can be transferred to other tasks;
- f) providing practice using the techniques with the new tasks; and
- g) helping students understand how to evaluate the success of their strategy use and to their progress as more responsible and self-directed learners.

7. Evaluating strategy training: In this step, teachers evaluate the success of strategy training using varied procedures. They might check, for instance, whether:

- a) there is a general skill improvement;
- b) the students have improved on a given language task;
- c) they can transfer strategies to new tasks;
- d) they have developed better attitudes toward language learning, toward the target language and culture, and toward themselves as language learners;

- e) they have become more self-directed learners and accept greater responsibility;
- f) there are changes in their anxiety levels; and
- g) there is evidence of more positive emotions.

8. Revising: At this stage, the teachers revise the strategy training procedure based on the evaluation in Stage 7, and the cycle begins again.

By following such a strategy training model, the teachers in the program can “help their students recognise the power of consciously using language learning strategies to make learning quicker, easier, more effective, and more fun” (Oxford, 1992-1993, p. 21).

6.3. Suggestions for Further Research

Findings from this study suggest that further research on language learning strategy use by Turkish EFL students is warranted. Researchers, however, should, whenever possible, use multiple methods for gathering and validating LLS data. For example, they can use the SILL combined with interviews or think-aloud procedures.

The LLS field will be helped considerably if researchers investigate the relationships between LLS use and the factors that affect strategy choice, such as age, gender, language being learned, duration, affective variables (e.g., attitudes, motivation level/intensity, language learning goals, personality characteristics, and general personality type), learning style, aptitude, and language teaching methods. The knowledge about such factors can help teachers come to grips with the nature of individual differences in the classroom and “such knowledge is power - the power to plan lessons so

that students with many different characteristics, including varied strategies, can receive what they need.” (Green and Oxford, 1995, p. 292).

It also seems necessary for researchers to expand LLS studies to include an analysis of differences in the use of individual strategies on the SILL, which will provide a deeper understanding into the LLS field.

Finally, it should be stressed that both quantitative and qualitative methods of research are necessary in order to get a clearer picture of the processes of language teaching and learning, and of how these processes can be enhanced.

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APPENDIX A

DİL ÖĞRENME STRATEJİLERİ LİSTESİ

Yönergeler

Bu liste İngilizce öğrenme şekliniz hakkında bilgi toplamak amacı ile düzenlenmiştir ve dil öğrenme ile ilgili 80 cümleden oluşmaktadır. Lütfen her cümleyi okuyunuz ve **cümlenin size ne kadar uygun olduğunu gösteren rakamı** (1, 2, 3, 4, veya 5) size verilecek cevap kağıdı üzerine yazınız. Rakamların ne anlama geldiği aşağıda açıklanmaktadır:

1. Hiç yapmam	2. Genellikle yapmam	3. Az çok yaparım
4. Genellikle yaparım	5. Her zaman yaparım	

Cevaplarınızı **cümlelerin sizi ne kadar iyi tanımladığını göz önüne alarak** veriniz. Nasıl olmanız gerektiğini veya başkalarının yaptıklarını düşünerek, veya seçenekleri doğru yada yanlış şeklinde değerlendirerek **cevap vermeyiniz**. Cevaplarınızı mümkün olduğunca çabuk veriniz ve lütfen bu sayfalar üzerinde herhangi bir işaretleme yapmayınız. Sorularınız varsa, lütfen öğretmeninize sorunuz.

Bölüm A

İngilizcede yeni bir kelime öğrenirken...

1. Yeni kelime ile bildiklerim arasında ilişkiler kurarım.
2. Yeni kelimeyi hatırlayabilmek için, onu cümle içinde kullanırım.
3. Yeni kelimeyi, ona bir şekilde benzerlik gösteren başka kelimelerin oluşturduğu bir gruba (örneğin; eğitimle ilgili kelimeler grubuna) yerleştiririm.
4. Yeni kelime ile bildiğim bir kelime arasında bir ses ilişkisi kurarım.
5. Yeni kelimeyi hatırlamak için, içinde bu kelimenin geçtiği kafiyeler oluştururum.
6. Yeni kelimeyi, zihnimde görüntüsünü canlandırarak veya resmini çizerek hatırlarım.
7. Yeni kelimenin yazılışını zihnimde canlandırırım.
8. Yeni kelimeyi hatırlamak için, onun seslerinin ve görüntüsünün bir bileşimini kullanırım.
9. Yeni kelime ile onunla ilgili olan bildiğim diğer kelimeleri yazar ve aralarına birbirleri ile olan ilişkilerini gösteren çizgiler çizerim.

10. Yeni kelimenin sayfadaki yerini veya onu ilk gördüğüm yada duyduğum yeri hatırlarım.
11. Bir tarafına yeni kelimeyi, diğer tarafına o kelimenin tanımını veya benzeri bilgileri yazdığım küçük kartlar kullanırım.
12. Yeni kelimeyi hareketlerle ve davranışlarla canlandırırım.

İngilizcede yeni şeyler öğrenirken...

13. Öğrendiklerimi sık sık gözden geçiririm.
14. Bu gözden geçirme işlemi; başlangıçta daha sık, sonraları giderek azalan sıklıkta olacak şekilde düzenlerim.
15. Daha önce öğrendiğim bilgileri tazelemek için geriye dönerim.

Bölüm B

16. Yeni öğrendiğim İngilizce deyim yada ifadeleri, pratik yapmak amacı ile birkaç defa tekrar eder veya yazarım.
17. Anadili İngilizce olanların konuşma şeklini taklit ederim.
18. Bir hikayeyi veya diyalogu, bir kaç defa anlayıncaya kadar okurum.
19. İngilizcede yazma becerimi geliştirmek için; sınıfta öğretmenin yaptırdığı düzeltmelerle yetinmeyip, yazdıklarımı kendim tekrar okuyup düzeltirim.
20. İngilizcenin sesleri veya alfabesi ile ilgili alıştırmalar yaparım.
21. İngilizce konuşurken veya yazarken, deyimler veya başka kalıplaşmış yapılar kullanırım.
22. Yeni cümleler oluşturmak için bildiğim kelimeleri değişik kombinasyonlarda kullanırım.
23. Sınıf içinde yada dışında İngilizce konuşulduğunda konuşmayı ben başlatırım.
24. İngilizce TV programları veya filmler seyredirim yada radyo dinlerim.
25. İngilizce düşünmeye çalışırım.
26. İngilizcenin konuşulduğu sınıf dışı etkinliklere katılırım.
27. Eğlence amacı ile İngilizce kitap, dergi, vs. okurum.
28. İngilizce kişisel notlar, mesajlar, mektuplar, veya raporlar yazarım.
29. İngilizce bir şey okurken; ilk önce ana fikri anlamak için okuma metnini çabucak bir gözden geçiririm, daha sonra başa dönüp daha dikkatli bir şekilde okurum.
30. Okuduğum veya duyduğum şeylerde belirli ayrıntılar bulmaya çalışırım.
31. İngilizceyi kullanmama yardımcı olacak sözlük, kelime listeleri gibi başvuru kaynakları kullanırım.
32. Sınıfta İngilizce notlar tutarım.

33. Öğrendiğim yeni şeylerin özetlerini çıkarırım.
34. İngilizceyi kullanırken bildiğim genel kuralları yeni durumlara uygulayım.
35. Bilmediğim İngilizce bir kelimenin anlamını, kelimeyi bildiğim kök ve eklere ayırarak bulurum.
36. İngilizce ile Türkçe arasında benzerlikler ve zıtlıklar bulmaya çalışırım.
37. İngilizcede duyduğum veya okuduğum şeyleri kelime kelime aynen Türkçeye çevirmeden anlamaya çalışırım.
38. Kelime veya kavramları doğrudan Türkçeden İngilizceye aktarırken tedbirli davranırım.
39. İngilizcede kalıplar bulmaya çalışırım.
40. Bazen karşıma çıkan yeni bilgiler ışığında bildiklerimi gözden geçirip değiştirmek zorunda kalsam bile, İngilizcenin nasıl işlediğini konusunda kendi yorumlarımı geliştiririm.

Bölüm C

41. Okuduğum veya duyduğum kelimelerin bazılarını anlamazsam, bulabildiğim ipuçlarını (örneğin kelimenin kullanıldığı cümleyi yada ortamı) kullanarak bu kelimelerin genel anlamlarını tahmin ederim.
42. Karşılaştığım her yeni kelimeyi anlamak için sözlüğe bakmadan, İngilizce kitap, dergi, vs. okurum.
43. İngilizce konuşurken o ana kadar söylenilenlere bakarak karşımdaki kişinin ne söyleyeceğini önceden tahmin ederim.
44. İngilizce konuşurken söylemek istediğim tam ifadeyi hatırlayamazsam, söylemek istediğim şeyi anlatmak için el kol hareketleri kullanırım veya bir an için Türkçeye dönerim.
45. İngilizce konuşurken söylemek istediğim tam kelime aklıma gelmiyorsa, karşımdaki kişiden doğru kelimeyi bana söylemesini isterim.
46. Söylemem yada yazmam gereken doğru ifadeyi hatırlayamadığımda, ifadeyi anlatmak için farklı bir yol bulurum; örneğin aynı anlama gelen başka bir ifade kullanırım veya cümlelerle açıklarım.
47. Kullanmam gereken tam kelimeleri bilmiyorsam, aynı anlama gelebilecek yeni kelimeler (örneğin, 'torch' yerine 'hand-light') türetirim .
48. İngilizce konuşurken, konuşmayı kelimelerini bildiğim bir konuya yönlendiririm.

Bölüm D

49. İçeriği, nasıl düzenlendiği, ve bildiklerimle nasıl bir ilişkisi olduğu hakkında genel bir fikir edinmek için, yeni konuyu önceden gözden geçiririm.
50. Birisi İngilizce konuşurken, dikkatimi konuşan kişinin söylediklerine yoğunlaştırmaya ve ilgisiz şeyler düşünmemeye çalışırım.
51. İngilizcenin hangi özelliklerinin daha önemli olduğuna ve özel dikkat gerektirdiğine önceden karar veririm; örneğin, dikkatimi anadili İngilizce olanların belirli sesleri telaffuz etme şekline yoğunlaştırırım.
52. Kitaplar veya makaleler okuyarak yada öğrenme hakkında başkaları ile konuşarak, nasıl daha iyi İngilizce öğrenebileceğimi bulmaya çalışırım.
53. İngilizceyi, sadece sınav baskısı olduğunda değil, düzenli olarak çalışmak ve pratik yapmak için zamanımı planlarım.
54. Daha iyi öğrenmek için çevremde düzenlemeler yaparım; örneğin, notlarımı gözden geçirmek için sessiz, rahat bir yer bulurum.
55. İngilizce derslerinde kullandığım alıştırma defterinin veya fotokopilerin bir köşesini, İngilizce ile ilgili öğrendiğim önemli bilgileri not etmeye ayırırım.
56. İngilizce öğrenme hedeflerimi (örneğin, İngilizcede ne kadar yeterli olmak istediğimi veya uzun vadede İngilizceyi nasıl kullanmak isteyebileceğimi) belirlerim.
57. İngilizce öğrenirken, kendime ait bir çalışma programı yaparım ve her gün yada her hafta neler öğreneceğime önceden karar veririm.
58. İngilizce bir aktiviteye (örneğin İngilizce bir konuşma yapmaya); aktivitenin yapısını, aktivite hakkında bilmem gerekenleri, ve sahip olduğum dil becerilerini gözden geçirerek hazırlarım.
59. Sınıf içi bir aktivitenin amacını açık bir şekilde belirlerim; örneğin bir dinleme aktivitesinde, ana düşüncüyü mi yoksa belirli detayları mı dinlemem gerektiğine karar veririm.
60. İngilizcemi kullanmak için fırsatlar yaratmaya çalışırım.
61. Sürekli olarak, İngilizce konuşabileceğim insanlar ararım.
62. İngilizcede yaptığım hatalarımı bulmaya ve nedenlerini saptamaya çalışırım.
63. İngilizceyi kullanırken yaptığım hatalardan ders alırım.
64. İngilizce öğrenmede gösterdiğim genel gelişmeyi değerlendiririm.

Bölüm E

65. İngilizce kullanırken kendimi endişeli hissettiğimde rahatlamaya çalışırım.
66. İngilizce öğrenirken elimden gelenin en iyisini yapmaya devam edebilmek için kendime cesaret verici şeyler söylerim.

67. Bir kaç hata yapsam bile, İngilizce öğrenirken birtakım risklere (örneğin, İngilizce konuşmayı denemek veya kelimelerin anlamlarını tahmin etmeye çalışmak) girmek için sürekli olarak kendimi cesaretlendiririm.
68. İngilizce öğrenirken bir başarı gösterdiğimde, kendime elle tutulur bir ödül veririm.
69. İngilizce öğrenmemi etkileyebilecek fiziksel stress belirtilerini anlayıp onları gidermeye çalışırım.
70. İngilizce öğrenirken hissettiklerimi yazdığım kişisel bir günlük tutarım.
71. İngilizce öğrenme süreci ile ilgili duygu ve düşüncelerimi güvendiğim birisi ile paylaşıyorum.

Bölüm F

72. İngilizce konuşurken birşeyi anlamazsam, karşımdaki kişiden söylediği şeyi yavaşça söylemesini, tekrar etmesini, veya açıklamasını isterim.
73. Çevremdeki kişilerden bir şeyi doğru olarak anladığımı veya söylediğimi onaylamalarını isterim.
74. Çevremdeki kişilerden telaffuzumu düzeltmelerini isterim.
75. Alıştırma yapmak, öğrendiklerimizi gözden geçirmek, veya bilgi paylaşmak için diğer öğrencilerle birlikte çalışırım.
76. İngilizce öğrenirken düzenli olarak bir arkadaşım ile beraber çalışırım.
77. Anadili İngilizce olan biri ile konuşurken yardıma ihtiyaç duyduğumda, bunu ona söylemeye çalışırım.
78. Çevremdeki kişilerle İngilizce konuşurken, konuyla ilgilendiğimi göstermek ve konuşmaya mümkün olduğunca katılmak için sorular sorarım.
79. İngilizce konuşulan ülkelerin kültürlerini öğrenmeye çalışırım.
80. İngilizce aracılığı ile iletişimde bulunduğum kişilerin duygu ve düşüncelerini anlamaya çalışırım.

APPENDIX B

DİL ÖĞRENME STRATEJİLERİ LİSTESİ

Cevap ve Puanlama Cetveli

İsim: _____

Grup: _____

Bölüm A	Bölüm B	Bölüm C	Bölüm D	Bölüm E	Bölüm F	Tüm Liste
1. _____	16. _____	41. _____	49. _____	65. _____	72. _____	TOP Bölüm A _____
2. _____	17. _____	42. _____	50. _____	66. _____	73. _____	TOP Bölüm B _____
3. _____	18. _____	43. _____	51. _____	67. _____	74. _____	TOP Bölüm C _____
4. _____	19. _____	44. _____	52. _____	68. _____	75. _____	TOP Bölüm D _____
5. _____	20. _____	45. _____	53. _____	69. _____	76. _____	TOP Bölüm E _____
6. _____	21. _____	46. _____	54. _____	70. _____	77. _____	TOP Bölüm F _____
7. _____	22. _____	47. _____	55. _____	71. _____	78. _____	
8. _____	23. _____	48. _____	56. _____		79. _____	
9. _____	24. _____		57. _____		80. _____	
10. _____	25. _____		58. _____			
11. _____	26. _____		59. _____			
12. _____	27. _____		60. _____			
13. _____	28. _____		61. _____			
14. _____	29. _____		62. _____			
15. _____	30. _____		63. _____			
	31. _____		64. _____			
	32. _____					
	33. _____					
	34. _____					
	35. _____					
	36. _____					
	37. _____					
	38. _____					
	39. _____					
	40. _____					
TOP _____	TOP _____	TOP _____	TOP _____	TOP _____	TOP _____	TOP _____
÷15= _____	÷25= _____	÷8= _____	÷16= _____	÷7= _____	÷9= _____	÷ 80 = _____
						(Genel Ortalama)

APPENDIX C

KEY TO THE AVERAGES

High	Always or almost always used	4.5 to 5.0
	Generally used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
	Generally not used	1.5 to 2.4
Low	Never or almost never used	1.0 to 1.4

APPENDIX D

STUDENTS' GENERAL STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave
IF1*	3.47	3.40	3.75	3.88	3.71	4.00	3.64
IF2	2.87	3.40	3.25	3.25	2.71	3.11	3.16
IF3	3.07	3.56	3.50	3.56	3.00	3.56	3.41
IF4	3.53	2.58	3.00	2.44	1.86	2.67	2.69
IF5	2.80	3.12	2.88	2.69	2.00	3.22	2.86
IF6	2.27	2.92	3.88	3.44	2.71	3.00	2.99
IF7	2.40	3.40	4.63	3.75	3.86	3.00	3.40
IF8	2.47	3.08	3.75	3.38	2.57	2.67	3.00
IF9	2.93	2.68	3.25	3.25	2.57	4.11	3.05
IF10	2.40	3.28	4.38	3.88	3.14	3.67	3.38
IF11	2.20	2.68	3.75	3.13	2.86	3.44	2.89
IF12	3.00	3.28	3.63	2.81	2.71	2.78	3.26
IF13	2.47	2.76	3.38	2.75	2.00	2.89	2.71
IF14	2.93	3.28	3.50	3.31	4.00	3.44	3.33
IF15	2.33	3.88	3.38	3.94	3.86	4.00	3.56
IF16	1.80	2.36	2.88	2.69	3.00	3.22	2.53
IF17	2.67	3.08	3.25	3.00	2.86	2.89	2.96
IF18	2.67	2.92	3.00	3.25	2.43	3.22	2.94
IF19	1.87	3.08	3.50	3.00	2.00	3.22	2.80
IF20	3.07	3.84	3.75	3.44	3.14	3.33	3.49
IF21	2.47	3.44	3.25	2.69	1.86	3.22	2.93
IF22	1.93	2.68	3.63	2.94	2.71	2.67	2.69
IF23	2.60	2.96	3.13	3.25	2.29	3.44	2.96
IF24	2.47	2.92	3.88	3.38	3.14	4.00	3.16
IF25	3.27	3.48	3.63	3.19	2.29	3.00	3.24
IF26	2.33	2.56	4.13	3.31	3.00	3.33	2.95
IF27	2.00	2.80	3.25	2.75	3.00	2.11	2.63
IF28	3.07	3.28	3.25	4.00	3.00	3.67	3.40
IF29	2.27	2.28	2.25	2.69	1.86	2.11	2.30
IF30	1.60	2.56	2.88	2.75	2.14	2.22	2.38
IF31	2.80	3.72	3.63	3.69	1.86	2.89	3.28
IF32	2.67	3.36	4.38	3.88	2.14	4.22	3.43
LIF1	2.60	2.84	3.13	3.38	2.71	2.56	2.89
LIF2	2.80	3.52	4.00	3.44	2.43	3.44	3.31
LIF3	2.60	3.08	2.88	2.94	2.43	3.22	2.90
LIF4	2.67	3.00	3.25	3.50	3.43	3.33	3.14
LIF5	1.40	2.04	2.38	2.63	1.86	3.00	2.16
LIF6	2.67	2.84	3.38	3.69	3.14	3.44	3.13
LIF7	2.87	3.12	3.38	3.31	3.57	3.78	3.25
LIF8	2.07	1.96	2.63	1.94	2.57	2.56	2.16

LIF9	2.93	2.88	3.13	3.88	3.43	3.44	3.23
LIF10	1.87	2.76	2.88	2.31	2.57	3.11	2.54
LIF11	1.87	2.12	3.50	2.75	3.00	3.00	2.51
LIF12	1.47	2.24	3.88	2.88	2.57	3.00	2.50
LIF13	2.67	3.00	3.75	3.19	2.86	3.44	3.09
LIF14	2.00	2.60	2.63	2.56	2.57	3.22	2.55
LIF15	2.20	2.76	3.38	3.81	3.43	2.89	3.00
LIF16	2.40	2.92	3.25	2.94	2.71	2.44	2.79
LIF17	2.53	3.20	5.00	3.25	3.71	4.11	3.41
LIF18	2.67	3.24	3.25	3.94	3.14	3.44	3.29
LIF19	2.33	2.04	2.75	4.00	3.14	3.44	2.81
LIF20	2.47	2.92	2.75	3.25	3.71	2.89	2.95
LIF21	2.60	2.60	3.13	2.75	2.57	2.89	2.71
IM1	2.13	1.84	3.00	2.75	2.29	2.22	2.28
IM2	2.27	3.64	2.75	3.75	2.57	3.00	3.15
IM3	2.13	3.20	3.88	2.63	3.57	3.78	3.05
IM4	3.13	3.40	3.88	3.25	2.57	2.33	3.18
IM5	3.60	3.44	3.75	3.88	3.43	3.00	3.54
IM6	2.93	3.04	3.25	3.63	1.86	3.56	3.11
IM7	2.00	2.72	3.38	2.69	2.57	2.67	2.63
IM8	2.47	3.52	4.00	3.13	3.14	2.44	3.14
IM9	2.07	2.64	2.88	3.06	2.71	2.89	2.68
IM10	2.67	3.16	2.75	3.56	3.29	3.22	3.13
IM11	2.27	2.92	3.63	2.94	2.14	4.33	2.96
IM12	2.93	2.88	3.13	4.00	2.00	2.89	3.06
IM13	2.13	1.76	2.75	2.94	2.86	2.78	2.38
IM14	2.53	2.76	3.00	3.31	3.14	2.78	2.89
IM15	2.60	1.96	2.25	1.88	1.00	2.56	2.08
IM16	1.80	2.44	2.88	2.81	2.43	2.78	2.48
IM17	2.73	3.00	3.50	2.69	2.57	3.11	2.91
IM18	3.00	3.04	2.88	3.63	3.14	2.78	3.11
IM19	2.53	2.56	3.25	3.06	2.29	2.44	2.69
IM20	2.07	3.12	4.38	2.75	2.29	2.22	2.80
IM21	3.00	3.52	3.75	3.56	2.86	3.22	3.36
IM22	3.07	3.28	3.88	3.50	2.14	2.78	3.19
IM23	2.73	3.28	3.13	3.31	2.29	2.78	3.03
IM24	1.53	2.00	3.63	2.06	1.57	2.56	2.11
LIM1	2.40	2.48	2.88	2.56	1.86	2.67	2.49
LIM2	2.60	3.24	2.88	2.75	2.00	2.67	2.81
LIM3	3.27	3.24	3.50	4.00	3.00	1.89	3.25
LIM4	2.47	3.08	2.50	3.88	3.14	2.89	3.05
LIM5	1.73	2.72	3.38	3.56	2.71	2.78	2.78
LIM6	2.53	2.76	3.25	3.50	3.29	3.11	3.00
LIM7	2.27	2.68	3.00	2.81	2.43	2.33	2.60
LIM8	2.67	2.40	3.13	2.94	2.14	3.11	2.69
LIM9	1.87	2.96	3.38	2.81	2.86	2.67	2.73
LIM10	2.53	3.04	2.75	2.94	2.43	3.56	2.90

LIM11	2.53	2.84	3.50	2.06	2.00	2.44	2.58
LIM12	2.93	3.08	4.50	3.63	3.86	3.56	3.43
LIM13	3.53	3.48	4.00	4.50	4.29	4.22	3.90
LIM14	2.67	3.08	3.38	2.56	4.14	3.44	3.06
LIM15	1.67	3.32	3.75	2.50	2.43	1.78	2.64
LIM16	2.80	2.00	2.75	2.44	1.57	2.56	2.34
LIM17	2.20	1.80	2.50	2.25	2.29	2.67	2.18
LIM18	2.07	2.52	3.50	2.81	2.43	2.67	2.60
LIM19	1.27	2.04	3.50	2.19	2.14	2.78	2.16
LIM20	2.80	3.36	3.63	3.81	2.86	3.33	3.33
LIM21	3.93	4.12	3.88	4.50	3.14	4.33	4.08
LIM22	2.87	2.52	3.50	3.31	2.43	2.67	2.85
LIM23	3.67	2.92	2.38	2.69	2.29	2.33	2.84
LIM24	2.27	2.28	3.25	2.69	2.71	2.67	2.54
LIM25	3.13	2.84	2.75	2.56	2.43	1.78	2.68
LIM26	2.20	2.32	3.00	2.75	1.86	3.11	2.50
LIM27	2.00	1.96	3.63	2.38	2.71	3.33	2.44
Ave	2.52	2.89	3.34	3.13	2.69	3.03	2.91

- * IF1 = Intermediate Female subject 1
LIM10 = Low-Intermediate Male subject 10

APPENDIX E

INTERMEDIATE LEVEL STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave
IM1	2.13	1.84	3.00	2.75	2.29	2.22	2.28
IM2	2.27	3.64	2.75	3.75	2.57	3.00	3.15
IM3	2.13	3.20	3.88	2.63	3.57	3.78	3.05
IM4	3.13	3.40	3.88	3.25	2.57	2.33	3.18
IM5	3.60	3.44	3.75	3.88	3.43	3.00	3.54
IM6	2.93	3.04	3.25	3.63	1.86	3.56	3.11
IM7	2.00	2.72	3.38	2.69	2.57	2.67	2.63
IM8	2.47	3.52	4.00	3.13	3.14	2.44	3.14
IM9	2.07	2.64	2.88	3.06	2.71	2.89	2.68
IM10	2.67	3.16	2.75	3.56	3.29	3.22	3.13
IM11	2.27	2.92	3.63	2.94	2.14	4.33	2.96
IM12	2.93	2.88	3.13	4.00	2.00	2.89	3.06
IM13	2.13	1.76	2.75	2.94	2.86	2.78	2.38
IM14	2.53	2.76	3.00	3.31	3.14	2.78	2.89
IM15	2.60	1.96	2.25	1.88	1.00	2.56	2.08
IM16	1.80	2.44	2.88	2.81	2.43	2.78	2.48
IM17	2.73	3.00	3.50	2.69	2.57	3.11	2.91
IM18	3.00	3.04	2.88	3.63	3.14	2.78	3.11
IM19	2.53	2.56	3.25	3.06	2.29	2.44	2.69
IM20	2.07	3.12	4.38	2.75	2.29	2.22	2.80
IM21	3.00	3.52	3.75	3.56	2.86	3.22	3.36
IM22	3.07	3.28	3.88	3.50	2.14	2.78	3.19
IM23	2.73	3.28	3.13	3.31	2.29	2.78	3.03
IM24	1.53	2.00	3.63	2.06	1.57	2.56	2.11
IF1	3.47	3.40	3.75	3.88	3.71	4.00	3.64
IF2	2.87	3.40	3.25	3.25	2.71	3.11	3.16
IF3	3.07	3.56	3.50	3.56	3.00	3.56	3.41
IF4	3.53	2.58	3.00	2.44	1.86	2.67	2.69
IF5	2.80	3.12	2.88	2.69	2.00	3.22	2.86
IF6	2.27	2.92	3.88	3.44	2.71	3.00	2.99
IF7	2.40	3.40	4.63	3.75	3.86	3.00	3.40
IF8	2.47	3.08	3.75	3.38	2.57	2.67	3.00
IF9	2.93	2.68	3.25	3.25	2.57	4.11	3.05
IF10	2.40	3.28	4.38	3.88	3.14	3.67	3.38
IF11	2.20	2.68	3.75	3.13	2.86	3.44	2.89
IF12	3.00	3.28	3.63	2.81	2.71	2.78	3.26
IF13	2.47	2.76	3.38	2.75	2.00	2.89	2.71
IF14	2.93	3.28	3.50	3.31	4.00	3.44	3.33
IF15	2.33	3.88	3.38	3.94	3.86	4.00	3.56
IF16	1.80	2.36	2.88	2.69	3.00	3.22	2.53

IF17	2.67	3.08	3.25	3.00	2.86	2.89	2.96
IF18	2.67	2.92	3.00	3.25	2.43	3.22	2.94
IF19	1.87	3.08	3.50	3.00	2.00	3.22	2.80
IF20	3.07	3.84	3.75	3.44	3.14	3.33	3.49
IF21	2.47	3.44	3.25	2.69	1.86	3.22	2.93
IF22	1.93	2.68	3.63	2.94	2.71	2.67	2.69
IF23	2.60	2.96	3.13	3.25	2.29	3.44	2.96
IF24	2.47	2.92	3.88	3.38	3.14	4.00	3.16
IF25	3.27	3.48	3.63	3.19	2.29	3.00	3.24
IF26	2.33	2.56	4.13	3.31	3.00	3.33	2.95
IF27	2.00	2.80	3.25	2.75	3.00	2.11	2.63
IF28	3.07	3.28	3.25	4.00	3.00	3.67	3.40
IF29	2.27	2.28	2.25	2.69	1.86	2.11	2.30
IF30	1.60	2.56	2.88	2.75	2.14	2.22	2.38
IF31	2.80	3.72	3.63	3.69	1.86	2.89	3.28
IF32	2.67	3.36	4.38	3.88	2.14	4.22	3.43
Ave	2.55	3.00	3.41	3.18	2.63	3.06	2.97

APPENDIX F

LOW-INTERMEDIATE LEVEL STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave
LIM1	2.40	2.48	2.88	2.56	1.86	2.67	2.49
LIM2	2.60	3.24	2.88	2.75	2.00	2.67	2.81
LIM3	3.27	3.24	3.50	4.00	3.00	1.89	3.25
LIM4	2.47	3.08	2.50	3.88	3.14	2.89	3.05
LIM5	1.73	2.72	3.38	3.56	2.71	2.78	2.78
LIM6	2.53	2.76	3.25	3.50	3.29	3.11	3.00
LIM7	2.27	2.68	3.00	2.81	2.43	2.33	2.60
LIM8	2.67	2.40	3.13	2.94	2.14	3.11	2.69
LIM9	1.87	2.96	3.38	2.81	2.86	2.67	2.73
LIM10	2.53	3.04	2.75	2.94	2.43	3.56	2.90
LIM11	2.53	2.84	3.50	2.06	2.00	2.44	2.58
LIM12	2.93	3.08	4.50	3.63	3.86	3.56	3.43
LIM13	3.53	3.48	4.00	4.50	4.29	4.22	3.90
LIM14	2.67	3.08	3.38	2.56	4.14	3.44	3.06
LIM15	1.67	3.32	3.75	2.50	2.43	1.78	2.64
LIM16	2.80	2.00	2.75	2.44	1.57	2.56	2.34
LIM17	2.20	1.80	2.50	2.25	2.29	2.67	2.18
LIM18	2.07	2.52	3.50	2.81	2.43	2.67	2.60
LIM19	1.27	2.04	3.50	2.19	2.14	2.78	2.16
LIM20	2.80	3.36	3.63	3.81	2.86	3.33	3.33
LIM21	3.93	4.12	3.88	4.50	3.14	4.33	4.08
LIM22	2.87	2.52	3.50	3.31	2.43	2.67	2.85
LIM23	3.67	2.92	2.38	2.69	2.29	2.33	2.84
LIM24	2.27	2.28	3.25	2.69	2.71	2.67	2.54
LIM25	3.13	2.84	2.75	2.56	2.43	1.78	2.68
LIM26	2.20	2.32	3.00	2.75	1.86	3.11	2.50
LIM27	2.00	1.96	3.63	2.38	2.71	3.33	2.44
LIF1	2.60	2.84	3.13	3.38	2.71	2.56	2.89
LIF2	2.80	3.52	4.00	3.44	2.43	3.44	3.31
LIF3	2.60	3.08	2.88	2.94	2.43	3.22	2.90
LIF4	2.67	3.00	3.25	3.50	3.43	3.33	3.14
LIF5	1.40	2.04	2.38	2.63	1.86	3.00	2.16
LIF6	2.67	2.84	3.38	3.69	3.14	3.44	3.13
LIF7	2.87	3.12	3.38	3.31	3.57	3.78	3.25
LIF8	2.07	1.96	2.63	1.94	2.57	2.56	2.16
LIF9	2.93	2.88	3.13	3.88	3.43	3.44	3.23
LIF10	1.87	2.76	2.88	2.31	2.57	3.11	2.54
LIF11	1.87	2.12	3.50	2.75	3.00	3.00	2.51
LIF12	1.47	2.24	3.88	2.88	2.57	3.00	2.50
LIF13	2.67	3.00	3.75	3.19	2.86	3.44	3.09

LIF14	2.00	2.60	2.63	2.56	2.57	3.22	2.55
LIF15	2.20	2.76	3.38	3.81	3.43	2.89	3.00
LIF16	2.40	2.92	3.25	2.94	2.71	2.44	2.79
LIF17	2.53	3.20	5.00	3.25	3.71	4.11	3.41
LIF18	2.67	3.24	3.25	3.94	3.14	3.44	3.29
LIF19	2.33	2.04	2.75	4.00	3.14	3.44	2.81
LIF20	2.47	2.92	2.75	3.25	3.71	2.89	2.95
LIF21	2.60	2.60	3.13	2.75	2.57	2.89	2.71
Ave	2.47	2.77	3.26	3.08	2.77	3.00	2.85

APPENDIX G

GROUP A STUDENTS' STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave	P2*	P1*	RP*
IM5	3.60	3.44	3.75	3.88	3.43	3.00	3.54	58	0	58
IM10	2.67	3.16	2.75	3.56	3.29	3.22	3.13	55	0	55
IF16	1.80	2.36	2.88	2.69	3.00	3.22	2.53	52	1	51
IF24	2.47	2.92	3.88	3.38	3.14	4.00	3.16	49	0	49
IF12	3.00	3.28	3.63	2.81	2.71	2.78	3.26	53	9	44
IF15	2.33	3.88	3.38	3.94	3.86	4.00	3.56	52	10	42
LIF6	2.67	2.84	3.38	3.69	3.14	3.44	3.13	41	0	41
LIM12	2.93	3.08	4.50	3.63	3.86	3.56	3.43	41	0	41
LIM3	3.27	3.24	3.50	4.00	3.00	1.89	3.25	44	5	39
IF6	2.27	2.92	3.88	3.44	2.71	3.00	2.99	55	15	40
IF19	1.87	3.08	3.50	3.00	2.00	3.22	2.80	51	11	40
IF5	2.80	3.12	2.88	2.69	2.00	3.22	2.86	55	17	38
IF11	2.20	2.68	3.75	3.13	2.86	3.44	2.89	53	16	37
IF23	2.60	2.96	3.13	3.25	2.29	3.44	2.96	49	12	37
LIM8	2.67	2.40	3.13	2.94	2.14	3.11	2.69	42	5	37
LIM21	3.93	4.12	3.88	4.50	3.14	4.33	4.08	37	0	37
LIM19	1.27	2.04	3.50	2.19	2.14	2.78	2.16	37	1	36
IF20	3.07	3.84	3.75	3.44	3.14	3.33	3.49	50	15	35
LIF18	2.67	3.24	3.25	3.94	3.14	3.44	3.29	35	0	35
IM16	1.80	2.44	2.88	2.81	2.43	2.78	2.48	51	16	35
LIM20	2.80	3.36	3.63	3.81	2.86	3.33	3.33	37	2	35
LIM23	3.67	2.92	2.38	2.69	2.29	2.33	2.84	36	1	35
LIF20	2.47	2.92	2.75	3.25	3.71	2.89	2.95	33	0	33
IF32	2.67	3.36	4.38	3.88	2.14	4.22	3.43	46	14	32
LIF21	2.60	2.60	3.13	2.75	2.57	2.89	2.71	32	0	32
LIM18	2.07	2.52	3.50	2.81	2.43	2.67	2.60	38	6	32
IF29	2.27	2.28	2.25	2.69	1.86	2.11	2.30	47	16	31
LIM24	2.27	2.28	3.25	2.69	2.71	2.67	2.54	35	4	31
LIM26	2.20	2.32	3.00	2.75	1.86	3.11	2.50	32	1	31
Ave	2.58	2.95	3.36	3.25	2.75	3.15	3.00			

- * P1 = Placement Exam 1
 P2 = Placement Exam 2
 RP = Rate of Progress

APPENDIX H

GROUP B STUDENTS' STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave	P2	P1	RP
LIM25	3.13	2.84	2.75	2.56	2.43	1.78	2.68	33	3	30
IM4	3.13	3.40	3.88	3.25	2.57	2.33	3.18	58	29	29
IM9	2.07	2.64	2.88	3.06	2.71	2.89	2.68	55	26	29
IF31	2.80	3.72	3.63	3.69	1.86	2.89	3.28	46	18	28
LIM27	2.00	1.96	3.63	2.38	2.71	3.33	2.44	31	3	28
IF7	2.40	3.40	4.63	3.75	3.86	3.00	3.40	54	27	27
IM14	2.53	2.76	3.00	3.31	3.14	2.78	2.89	52	25	27
LIM16	2.80	2.00	2.75	2.44	1.57	2.56	2.34	40	14	26
IF26	2.33	2.56	4.13	3.31	3.00	3.33	2.95	47	22	25
LIM17	2.20	1.80	2.50	2.25	2.29	2.67	2.18	39	14	25
IM20	2.07	3.12	4.38	2.75	2.29	2.22	2.80	50	26	24
IF1	3.47	3.40	3.75	3.88	3.71	4.00	3.64	58	35	23
IF22	1.93	2.68	3.63	2.94	2.71	2.67	2.69	49	26	23
IF28	3.07	3.28	3.25	4.00	3.00	3.67	3.40	47	24	23
IF25	3.27	3.48	3.63	3.19	2.29	3.00	3.24	48	26	22
IF10	2.40	3.28	4.38	3.88	3.14	3.67	3.38	53	32	21
LIF16	2.40	2.92	3.25	2.94	2.71	2.44	2.79	36	15	21
IM7	2.00	2.72	3.38	2.69	2.57	2.67	2.63	56	35	21
IM22	3.07	3.28	3.88	3.50	2.14	2.78	3.19	47	27	20
LIM5	1.73	2.72	3.38	3.56	2.71	2.78	2.78	42	22	20
LIF2	2.80	3.52	4.00	3.44	2.43	3.44	3.31	44	24	20
LIF12	1.47	2.24	3.88	2.88	2.57	3.00	2.50	37	18	19
IF2	2.87	3.40	3.25	3.25	2.71	3.11	3.16	58	39	19
IF17	2.67	3.08	3.25	3.00	2.86	2.89	2.96	51	33	18
LIF11	1.87	2.12	3.50	2.75	3.00	3.00	2.51	37	19	18
IM24	1.53	2.00	3.63	2.06	1.57	2.56	2.11	46	28	18
LIM10	2.53	3.04	2.75	2.94	2.43	3.56	2.90	41	23	18
IM18	3.00	3.04	2.88	3.63	3.14	2.78	3.11	50	33	17
IM21	3.00	3.52	3.75	3.56	2.86	3.22	3.36	48	31	17
LIM2	2.60	3.24	2.88	2.75	2.00	2.67	2.81	44	27	17
LIM6	2.53	2.76	3.25	3.50	3.29	3.11	3.00	42	25	17
LIF1	2.60	2.84	3.13	3.38	2.71	2.56	2.89	44	27	17
IF4	3.53	2.58	3.00	2.44	1.86	2.67	2.69	57	41	16
IF18	2.67	2.92	3.00	3.25	2.43	3.22	2.94	51	35	16
LIF4	2.67	3.00	3.25	3.50	3.43	3.33	3.14	43	27	16
IM3	2.13	3.20	3.88	2.63	3.57	3.78	3.05	59	43	16
LIM22	2.87	2.52	3.50	3.31	2.43	2.67	2.85	36	20	16
Ave	2.54	2.89	3.45	3.12	2.67	2.95	2.91			

APPENDIX I

GROUP C STUDENTS' STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave	P2	P1	RP
LIM11	2.53	2.84	3.50	2.06	2.00	2.44	2.58	41	26	15
LIM15	1.67	3.32	3.75	2.50	2.43	1.78	2.64	40	25	15
LIF19	2.33	2.04	2.75	4.00	3.14	3.44	2.81	34	20	14
IM2	2.27	3.64	2.75	3.75	2.57	3.00	3.15	60	46	14
IF8	2.47	3.08	3.75	3.38	2.57	2.67	3.00	53	41	12
IF14	2.93	3.28	3.50	3.31	4.00	3.44	3.33	52	41	11
IF30	1.60	2.56	2.88	2.75	2.14	2.22	2.38	46	35	11
LIF9	2.93	2.88	3.13	3.88	3.43	3.44	3.23	39	28	11
IM11	2.27	2.92	3.63	2.94	2.14	4.33	2.96	54	43	11
IM15	2.60	1.96	2.25	1.88	1.00	2.56	2.08	51	41	10
IM23	2.73	3.28	3.13	3.31	2.29	2.78	3.03	46	36	10
LIM4	2.47	3.08	2.50	3.88	3.14	2.89	3.05	43	33	10
LIF5	1.40	2.04	2.38	2.63	1.86	3.00	2.16	41	31	10
LIF15	2.20	2.76	3.38	3.81	3.43	2.89	3.00	36	26	10
IF21	2.47	3.44	3.25	2.69	1.86	3.22	2.93	49	40	9
IM1	2.13	1.84	3.00	2.75	2.29	2.22	2.28	60	51	9
IM6	2.93	3.04	3.25	3.63	1.86	3.56	3.11	57	48	9
IM19	2.53	2.56	3.25	3.06	2.29	2.44	2.69	50	41	9
LIF13	2.67	3.00	3.75	3.19	2.86	3.44	3.09	37	29	8
LIF8	2.07	1.96	2.63	1.94	2.57	2.56	2.16	40	33	7
IF9	2.93	2.68	3.25	3.25	2.57	4.11	3.05	53	46	7
LIM1	2.40	2.48	2.88	2.56	1.86	2.67	2.49	44	38	6
LIM9	1.87	2.96	3.38	2.81	2.86	2.67	2.73	41	35	6
LIM13	3.53	3.48	4.00	4.50	4.29	4.22	3.90	40	36	4
LIF3	2.60	3.08	2.88	2.94	2.43	3.22	2.90	44	41	3
IF13	2.47	2.76	3.38	2.75	2.00	2.89	2.71	52	50	2
LIF17	2.53	3.20	5.00	3.25	3.71	4.11	3.41	35	34	1
Ave	2.43	2.82	3.23	3.09	2.58	3.04	2.85			

APPENDIX J

FEMALE STUDENTS' STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave
IF1	3.47	3.40	3.75	3.88	3.71	4.00	3.64
IF2	2.87	3.40	3.25	3.25	2.71	3.11	3.16
IF3	3.07	3.56	3.50	3.56	3.00	3.56	3.41
IF4	3.53	2.58	3.00	2.44	1.86	2.67	2.69
IF5	2.80	3.12	2.88	2.69	2.00	3.22	2.86
IF6	2.27	2.92	3.88	3.44	2.71	3.00	2.99
IF7	2.40	3.40	4.63	3.75	3.86	3.00	3.40
IF8	2.47	3.08	3.75	3.38	2.57	2.67	3.00
IF9	2.93	2.68	3.25	3.25	2.57	4.11	3.05
IF10	2.40	3.28	4.38	3.88	3.14	3.67	3.38
IF11	2.20	2.68	3.75	3.13	2.86	3.44	2.89
IF12	3.00	3.28	3.63	2.81	2.71	2.78	3.26
IF13	2.47	2.76	3.38	2.75	2.00	2.89	2.71
IF14	2.93	3.28	3.50	3.31	4.00	3.44	3.33
IF15	2.33	3.88	3.38	3.94	3.86	4.00	3.56
IF16	1.80	2.36	2.88	2.69	3.00	3.22	2.53
IF17	2.67	3.08	3.25	3.00	2.86	2.89	2.96
IF18	2.67	2.92	3.00	3.25	2.43	3.22	2.94
IF19	1.87	3.08	3.50	3.00	2.00	3.22	2.80
IF20	3.07	3.84	3.75	3.44	3.14	3.33	3.49
IF21	2.47	3.44	3.25	2.69	1.86	3.22	2.93
IF22	1.93	2.68	3.63	2.94	2.71	2.67	2.69
IF23	2.60	2.96	3.13	3.25	2.29	3.44	2.96
IF24	2.47	2.92	3.88	3.38	3.14	4.00	3.16
IF25	3.27	3.48	3.63	3.19	2.29	3.00	3.24
IF26	2.33	2.56	4.13	3.31	3.00	3.33	2.95
IF27	2.00	2.80	3.25	2.75	3.00	2.11	2.63
IF28	3.07	3.28	3.25	4.00	3.00	3.67	3.40
IF29	2.27	2.28	2.25	2.69	1.86	2.11	2.30
IF30	1.60	2.56	2.88	2.75	2.14	2.22	2.38
IF31	2.80	3.72	3.63	3.69	1.86	2.89	3.28
IF32	2.67	3.36	4.38	3.88	2.14	4.22	3.43
LIF1	2.60	2.84	3.13	3.38	2.71	2.56	2.89
LIF2	2.80	3.52	4.00	3.44	2.43	3.44	3.31
LIF3	2.60	3.08	2.88	2.94	2.43	3.22	2.90
LIF4	2.67	3.00	3.25	3.50	3.43	3.33	3.14
LIF5	1.40	2.04	2.38	2.63	1.86	3.00	2.16
LIF6	2.67	2.84	3.38	3.69	3.14	3.44	3.13
LIF7	2.87	3.12	3.38	3.31	3.57	3.78	3.25
LIF8	2.07	1.96	2.63	1.94	2.57	2.56	2.16

LIF9	2.93	2.88	3.13	3.88	3.43	3.44	3.23
LIF10	1.87	2.76	2.88	2.31	2.57	3.11	2.54
LIF11	1.87	2.12	3.50	2.75	3.00	3.00	2.51
LIF12	1.47	2.24	3.88	2.88	2.57	3.00	2.50
LIF13	2.67	3.00	3.75	3.19	2.86	3.44	3.09
LIF14	2.00	2.60	2.63	2.56	2.57	3.22	2.55
LIF15	2.20	2.76	3.38	3.81	3.43	2.89	3.00
LIF16	2.40	2.92	3.25	2.94	2.71	2.44	2.79
LIF17	2.53	3.20	5.00	3.25	3.71	4.11	3.41
LIF18	2.67	3.24	3.25	3.94	3.14	3.44	3.29
LIF19	2.33	2.04	2.75	4.00	3.14	3.44	2.81
LIF20	2.47	2.92	2.75	3.25	3.71	2.89	2.95
LIF21	2.60	2.60	3.13	2.75	2.57	2.89	2.71
Ave	2.50	2.95	3.39	3.20	2.79	3.19	2.98

APPENDIX K

MALE STUDENTS' STRATEGY FREQUENCIES

Code	Part A	Part B	Part C	Part D	Part E	Part F	Ave
IM1	2.13	1.84	3.00	2.75	2.29	2.22	2.28
IM2	2.27	3.64	2.75	3.75	2.57	3.00	3.15
IM3	2.13	3.20	3.88	2.63	3.57	3.78	3.05
IM4	3.13	3.40	3.88	3.25	2.57	2.33	3.18
IM5	3.60	3.44	3.75	3.88	3.43	3.00	3.54
IM6	2.93	3.04	3.25	3.63	1.86	3.56	3.11
IM7	2.00	2.72	3.38	2.69	2.57	2.67	2.63
IM8	2.47	3.52	4.00	3.13	3.14	2.44	3.14
IM9	2.07	2.64	2.88	3.06	2.71	2.89	2.68
IM10	2.67	3.16	2.75	3.56	3.29	3.22	3.13
IM11	2.27	2.92	3.63	2.94	2.14	4.33	2.96
IM12	2.93	2.88	3.13	4.00	2.00	2.89	3.06
IM13	2.13	1.76	2.75	2.94	2.86	2.78	2.38
IM14	2.53	2.76	3.00	3.31	3.14	2.78	2.89
IM15	2.60	1.96	2.25	1.88	1.00	2.56	2.08
IM16	1.80	2.44	2.88	2.81	2.43	2.78	2.48
IM17	2.73	3.00	3.50	2.69	2.57	3.11	2.91
IM18	3.00	3.04	2.88	3.63	3.14	2.78	3.11
IM19	2.53	2.56	3.25	3.06	2.29	2.44	2.69
IM20	2.07	3.12	4.38	2.75	2.29	2.22	2.80
IM21	3.00	3.52	3.75	3.56	2.86	3.22	3.36
IM22	3.07	3.28	3.88	3.50	2.14	2.78	3.19
IM23	2.73	3.28	3.13	3.31	2.29	2.78	3.03
IM24	1.53	2.00	3.63	2.06	1.57	2.56	2.11
LIM1	2.40	2.48	2.88	2.56	1.86	2.67	2.49
LIM2	2.60	3.24	2.88	2.75	2.00	2.67	2.81
LIM3	3.27	3.24	3.50	4.00	3.00	1.89	3.25
LIM4	2.47	3.08	2.50	3.88	3.14	2.89	3.05
LIM5	1.73	2.72	3.38	3.56	2.71	2.78	2.78
LIM6	2.53	2.76	3.25	3.50	3.29	3.11	3.00
LIM7	2.27	2.68	3.00	2.81	2.43	2.33	2.60
LIM8	2.67	2.40	3.13	2.94	2.14	3.11	2.69
LIM9	1.87	2.96	3.38	2.81	2.86	2.67	2.73
LIM10	2.53	3.04	2.75	2.94	2.43	3.56	2.90
LIM11	2.53	2.84	3.50	2.06	2.00	2.44	2.58
LIM12	2.93	3.08	4.50	3.63	3.86	3.56	3.43
LIM13	3.53	3.48	4.00	4.50	4.29	4.22	3.90
LIM14	2.67	3.08	3.38	2.56	4.14	3.44	3.06
LIM15	1.67	3.32	3.75	2.50	2.43	1.78	2.64
LIM16	2.80	2.00	2.75	2.44	1.57	2.56	2.34

LIM17	2.20	1.80	2.50	2.25	2.29	2.67	2.18
LIM18	2.07	2.52	3.50	2.81	2.43	2.67	2.60
LIM19	1.27	2.04	3.50	2.19	2.14	2.78	2.16
LIM20	2.80	3.36	3.63	3.81	2.86	3.33	3.33
LIM21	3.93	4.12	3.88	4.50	3.14	4.33	4.08
LIM22	2.87	2.52	3.50	3.31	2.43	2.67	2.85
LIM23	3.67	2.92	2.38	2.69	2.29	2.33	2.84
LIM24	2.27	2.28	3.25	2.69	2.71	2.67	2.54
LIM25	3.13	2.84	2.75	2.56	2.43	1.78	2.68
LIM26	2.20	2.32	3.00	2.75	1.86	3.11	2.50
LIM27	2.00	1.96	3.63	2.38	2.71	3.33	2.44
Ave	2.53	2.83	3.29	3.06	2.59	2.87	2.85