

T.C.

Mersin Üniversitesi

Eđitim Bilimleri Enstitüsü

İngiliz Dili Eğitimi Ana Bilim Dalı

**THE ADAPTATION AND DEVELOPMENT OF “METACOGNITIVE READING
STRATEGIES QUESTIONNAIRE” AND “READING STRATEGY USE SCALE” FOR
TURKISH LEARNERS LEARNING ENGLISH AS A FOREIGN LANGUAGE**

Ufuk TUNCER

YÜKSEK LİSANS TEZİ

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Mersin, 2011

We certify that this thesis entitled "The Adaptation and Development of 'Metacognitive Reading Strategies Questionnaire' and 'Reading Strategy Use Scale' for Turkish Learners Learning English As A Foreign Language" written by Ufuk TUNCER is satisfactory for the award of the Degree of Master of Arts.

Successful

Fail



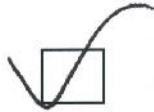
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Prof. Dr. Emel ULTANI
(Director of the Institute)

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ÖZET

İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRENEN TÜRK ÖĞRENCİLERİ İÇİN “ÜSTBİLİŞ OKUMA STRATEJİLERİ ÖLÇEĞİ” VE “OKUMA BECERİSİ STRATEJİLERİ KULLANIM ÖLÇEĞİNİN” UYARLAMASI VE GELİŞTİRMESİ

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Bu çalışmada, iki ölçek, daha önce geliştirilen ölçeklerin zayıf yönleri dikkate alınarak, okuyucuların yabancı dilde okurken kullandıkları okuma stratejilerini ortaya çıkarmak için adapte edilip, geliştirilmiştir. Bahsi geçen eksiklikler güvenilirlik/geçerlik, maddeler arası faktör yüklerinin birbirlerine yakınlığı ve yüksek güvenilirlik katsayıları ile ilişkilendirilebilir. Bu gibi araçlar, yeterliliklerine yönelik psikometrik dayanaklara sahip olmalarına rağmen, belirli envanterler öğrencilerin kültürlerine yönelik tasarlanmalı ve uyarlanmalıdır. Araştırmanın amacı, Deane and Pereira-Laird (1997) tarafından geliştirilen RSU (Reading Strategy Use) ile Taraban, Kerr ve Rynearson (2002) tarafından geliştirilen Metacognitive Reading Strategies Questionnaire (MRSQ) adlı ölçekleri uyarlamak ve geliştirmektir. Araçlar, yabancı dilde okurken Türk üniversite öğrencilerinin okuma stratejileri kullanımını incelemek için adapte edilmiş ve geliştirilmiştir. Ölçekler, Türkiye’de İngilizceyi yabancı dil olarak öğrenenlerden oluşan bir örnekleme uygulanmış ve istatistiki analizler ölçeklerden elde edilen veriler

üzerinde yapılmıştır. Verilerin analizi için, SPSS 11.5 kullanılmıştır. Araştırmanın sonuçlarına göre geliştirilen ölçeklerden ‘Okuma Becerisi Stratejileri Kullanım Ölçeği’ 28 maddeden oluşmakla birlikte 6 faktör yapısı (strateji grubu) içermekteyken, geliştirilen diğer ölçek olan ‘Üstbiliş Okuma Stratejileri Ölçeği’ de 25 maddeden oluşmaktadır ve 5 faktör yapısı (strateji grubu) içermektedir. Okuma Becerisi Stratejileri Kullanım Ölçeğinin güvenirlik katsayısı .89 olmakla birlikte, Üstbiliş Okuma Stratejileri Ölçeğinin güvenirlik katsayısı ise .82 dir. Bu da ölçeklerin alt faktörleriyle birlikte tamamen güvenilir olduklarını göstermektedir. Her iki ölçek de üniversite öğrencilerinin kullandıkları okuma stratejileri hakkında bilgi elde etmek amacıyla kullanılabilirler. Ölçeklerin kullanımı sonucu elde edilen veriler, öğrencilerin kullandıkları stratejilerin derinlemesine değerlendirilmesinde, planlanmasında ve öğretilmesinde kullanılabilir.

Anahtar Kelimeler: Strateji, okuma, okuma stratejileri, üstbilişsel okuma stratejileri, faktör analizi.

ABSTRACT

THE ADAPTATION AND DEVELOPMENT OF “METACOGNITIVE READING STRATEGIES QUESTIONNAIRE” AND “READING STRATEGY USE SCALE” FOR TURKISH LEARNERS LEARNING ENGLISH AS A FOREIGN LANGUAGE

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Master Thesis, Department of English Language Teaching

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In the present study, two scales were adapted and developed to invoke the reading strategies that learners use while reading in a foreign language regarding the weak features of the scales developed before. Such deficiencies can be linked to reliability/validity, proximity of factor loadings among items and high reliability values. Although such instruments may have psychometric support, specific inventories need to be designed or adapted according to the culture of the target group. The goal of the present research is to adapt and develop RSU (Reading Strategy Use) scale developed by Deane and Pereira-Laird (1997) and Metacognitive Reading Strategies Questionnaire (MRSQ) developed by Taraban, Kerr and Rynearson (2002). The tools were adapted and developed to assess Turkish college students' use of reading

strategies while reading in a foreign language. The scales were field-tested with a sample of students studying English as a foreign language at universities and high schools in Turkey. In order to analyze the data, SPSS 11.5 was used. The results of the RSU indicated that the scale is comprised of 28 Likert-type statements consisting six sub strategy groups, while MRSQ is comprised of 25 Likert-type statements with five sub strategy groups. Reliability for the RSU sample was .89. and .82 for MRSQ indicating that the scales as a whole including sub factors are reliable. Both scales can be utilized in colleges to obtain information about the use of reading strategies of the learners. The results obtained from the scales can be used for assessment, planning and instruction.

Keywords: Strategy, reading, reading strategies, metacognitive strategies, factor analysis.

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LIST OF ABBREVIATIONS (In Alphabetical order)

EFL: English as a Foreign Language

ESL: English as a Second Language

FL: Foreign Language

GLL: Good Language Learners

LLS: Language Learning Strategies

LS: Learning Strategies

L1: First Language

L2: Second Language

M: Mean

MRSQ: Metacognitive Reading Strategies Questionnaire

N: Number of the Students in the Sample

OBSKÖ: Okuma Becerisi Stratejileri Kullanım Ölçeği

RSU: Reading Strategy Use

SILL: Strategy Inventory for Language Learning

SD/S: Standard Deviation

p: Degree of Significance

T: t-value

ÜBOSÖ: Üstbiliş Okuma Stratejileri Ölçeği

X: Arithmetic Mean

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INTRODUCTION

Recent studies within the domain of learning strategies specifically regarding the strategies used with four language skills have led to an increasing emphasis on the studies carried out about such specific phenomenon. The studies conducted generally considered cognitive psychology as the starting point, which arose in the early 1960s as a union of distinct disciplines. Cognitivism, merged cognition with computation around a new vision of mind, and viewed the brain as the basis on which it runs (Goguen, 2009). As noted, cognitivism mainly views the individual as the core of thought and put an emphasis on the internal mental states of the human mind which can make the learner autonomous in his/her own learning process. In order to manage own learning, learners may need to have some specific skills, techniques or devices to overcome the difficulties or hindrances they face within their learning process. Therefore, learners need to be aware of the strategies in order to empower the management of their own learning.

Due to the initiatives of the forerunners within the last four decades (Rubin, 1975; Stern, 1975; O'Malley & Chamot, 1985; Oxford, 1990) there has been an intensive period creating awareness regarding the potential of the learning strategies in terms of being important and effective learning tools. In spite of the significant studies conducted in the last quarter of the century, the language learning strategy field seem to be ambiguous regarding the concept of learning strategy, its definition and classification (O'Malley et al, 1985). Prior to attempting to define the learning strategies, it is important to be aware of the definitions of the term 'strategy' on which no consensus has been observed.

Although the term has been used by researchers in many studies, various definitions have been proposed. Such a general accord have not been observed due to use of distinct definitions such as ‘tactics’ (Seliger, 1984) and ‘learning behaviours’ (Politzer & McGroarty, 1985).

The expanding awareness about the importance of the learning strategies has brought activity and intensity to the field in terms of the variety of the studies conducted. However, the definition and classification of the learning strategies remains as a difficult task. Related to that issue, O’Malley et al (1985) indicated that “Despite the promise evident in the use of learning strategies, definitional and tactical problems currently impede progress in applying research in the areas to second language acquisition. There is no consensus on what constitutes a learning strategy in second language learning or how these differ from other types of learner activities” (p. 22). As the confusion about the scope of the learning strategies continues, various attempts have been observed in order to define learning strategies. The earliest definition of learning strategies was proposed by Rubin (1975) who defined learning strategies as “The techniques or devices which a learner may use to acquire knowledge” (p. 43). Furthermore, there is an another attempt in classification of learning strategies as direct and indirect strategies (Rubin, 1981).

Similar definitions of learning strategies have been proposed by O’Malley et al (1985) and Oxford (1990). However, the classifications proposed by both researchers were totally different in terms of appellation and classification. While O’Malley and his colleagues (1985) divided learning strategies into three categories: cognitive, metacognitive and social mediation, Oxford (1990) classified learning strategies into six groups: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective (emotional,

motivation-related) strategies and social strategies. On the other hand, the six categories classified were later put into two categories as direct and indirect strategies. Although the latest three taxonomies are the most valid ones in the field, most of the researchers are aware of the fact that categories or classifications may overlap (Oxford, 1990). Surrounded by the confusion of overlapping information and contradictory ideas, definition and categorization of the language learning strategies may still be in great ambiguity. Therefore, it is important to note that without a consensus in the language learning strategies field, the definitions, classifications and terms can be far from straightforward.

Recent research and theories have generally indicated that successful learners make use of a variety of strategies to assist them in overcoming difficulties and gaining dominance over specific language skills. As literature has mainly focused on describing the strategies used by successful language learners, research focusing on the strategies used by “good language learners” (Rubin, 1975) indicated that learning strategies are important elements contributing to learning. Moreover, it was commented by researchers that learners also commonly make use of learning strategies while dealing with specific phenomenon regarding the language skills such as reading, speaking, listening and writing (Ghani, 2003). Studies of learning strategy applications regarding the reading skill has generally concentrated on basically reading and the awareness or knowledge of reading strategies of learners.

The current issues regarding reading strategies have been shaped by the understanding and examining what expert readers do (Taraban, Kerr & Ryneason, 2004). The main principles underlying such effective comprehension may stem from the cognitive effort referred as metacognitive processing which is comprised of the regulation and knowledge of cognitive processing. Besides metacognitive processing, it needs to be mentioned that

effective comprehension can be the result of some important aspects of skilled reading such as knowledge about comprehension and detecting own comprehension. Such awareness and monitoring processes are known as ‘metacognition’, defined as “The knowledge of the readers’ cognition about reading and the self-control mechanisms they exercise when monitoring and regulating text comprehension” (Mokhtari & Reichards, 2002, p. 49). The definition of metacognition can give clues about two definite features that emerged from the term such as metacognitive knowledge and metacognitive strategy.

Metacognitive knowledge involves knowledge about strategies and knowledge when and where to use strategies, while metacognitive strategy involves self-regulation, planning, monitoring and correcting one’s on-line performance (Deane & Pereira-Laird, 1997). Metacognitive strategies have been indicated to be functioning together with cognitive strategies in various empirical studies and it was indicated that the reader makes use of a mixture of both strategies to detect own understanding, learn, remember and understand the text. Regarding the interrelationship between strategies and comprehension, learners’ ultimate aim by employing reading strategies can be claimed as to comprehend and get the necessary information from the text.

Reading as a process is viewed as a cognitive system which enables students to get the intended meaning from a text. The readers make use of some clues, in other words, strategies that will enable them to understand what the writer is implying in the text. These clues referred as reading strategies reveal important facts about not only readers’ comprehension or understanding of a text but also the way they make use of reading strategies that will result in effective comprehension. In order to determine the reading strategies that readers use while or post reading, various instruments have been developed within the recent decades.

Problem Statement

Efforts to develop instruments have been basically concentrated on learning strategies or study skills (Deane & Pereira-Laird, 1997). Supporting such claim, Strategy Inventory for Language Learning (SILL) developed by Oxford (1990) has been the main inventory used in order to identify the learning strategies employed by the learners. In terms of reading skill, similar well intentioned efforts have also been observed in developing scales or inventories in order to identify the reading strategies employed by the learners (Deane & Pereira-Laird, 1997; Taraban et al, 2004; Mokhtari & Reichards, 2002; Saricoban, 2002; Mokhtari & Sheorey, 2002; Schmitt, 1990; Akyol & Ulusoy, 2009). When the mentioned inventories or scales specifically examined, various deficiencies have been observed within the scales in terms of reliability/validity, proximity of factor loadings among items and high reliability values. The high reliability values of the scales may indicate that the scale can have only one factor, however, it can be expected that the strategies need to be distinct and cannot be accumulated in one factor. Therefore, development of valid and reliable self-report instruments assessing learners' comprehension and study strategies for reading skill need to be the ultimate aim of the recent studies in this field.

Purpose and Importance of The Study

The purpose of this study is to adapt two widely used scales measuring reading strategies RSU (Reading Strategy Use) developed by Deane and Pereira-Laird (1997) and Metacognitive Reading Strategies Questionnaire (MRSQ) developed by Taraban, Kerr and Rynearson (2002) to Turkish culture. By making use of the adapted instruments, the reading strategies used by readers in Turkish culture will be invoked and whether they form groups or

act distinctively will be investigated. This study gains significance as with this study the gap in absence of reliable measurement tools in Turkish culture will be filled. Specifically, two core aims form the basis of the study: Adapting two widely used scales measuring reading strategies to Turkish culture and entitling both instruments to the country and academic area.

Research Questions

In the literature, in order to identify the reading strategies used by the learners, some specific instruments have been used widely. In this study, as a result of the adaptations of “Reading Strategy Use Scale” developed by Deane and Pereira-Laird (1997) and “Metacognitive Reading Strategies Questionnaire” developed by Taraban et al, (2004) it is aimed to find answers to the following research questions.

1. What are the factorial constructs of the scales adapted?
2. Are scales and subscales reliable and valid?

The questions above constitutes the main problem of the study. If the scales adjust with Turkish culture, the research questions will be examined in order to specify the validity of the scales in terms of different variables:

3. Do the reading strategies used by Mersin University ELT Department students differ in terms of sex?
4. Do the reading strategies used by Mersin University ELT Department students differ in terms of the level of proficiency of students in English?

Operational Definitions

Strategy: Tactics, learning behaviours, devices, actions, steps, routines, procedures, conscious enterprises, cognitive abilities and learning skills a learner may make use of to acquire knowledge (Rubin, 1975; Seliger, 1984; Politzer & Mc Groarty, 1985; Wenden, 1985; Oxford & Crookall, 1989).

Reading strategies: Deliberate, planful activities employed by readers to get the intended meaning from the text (MacLeish, 1968; Garner, 1987; O'Malley & Chamot, 1990).

Metacognition: Processes in which active monitoring and regulation of cognitive processes take place (Miller, 1956; Hyde & Bizar, 1994).

Cognitive strategies: Skills involving manipulation or transformation of the language directly regarding the integration of the new material with prior knowledge (Oxford & Crookall, 1989; Deane & Pereira-Laird, 1997).

Metacognitive strategies: Behaviours, skills used for planning, monitoring, self-directing, overseeing and evaluating one's own learning process (Oxford & Crookall, 1989; Deane & Pereira-Laird, 1997; Wenden, 1985; O'Malley & Chamot, 1990).

CHAPTER I: LITERATURE REVIEW

Studies on language learning strategies have been generally influenced by theories in language acquisition and cognitive psychology. The studies conducted around cognitive psychology mainly concentrated on determining the impact of strategy training for different kinds of tasks and learners (O'Malley et al, 1985). Such training has been assumed to result in an impact on the learners on the pathway of becoming good language learners, and advising them how to deal with language learning process.

Research and theory in language learning commonly indicate that good language learners or effective learners make use of specific techniques or strategies to help them overcome difficulties they face while learning a language or dealing with a specific language skill. Moreover, the studies conducted in learning strategies have been mainly based on strategies used by successful language learners (O' Malley & Chamot, 1985). Therefore, the term 'good language learner' (Rubin, 1975; Naiman, Frohlich, Stern & Todesco, 1978; Politzer & McGroarty, 1985) has been the core term on which the studies have been conducted in order to identify the strategies assumed to be contributing to learning. While the learner is struggling to improve his/her learning, the processes that the good language learner experiences, in terms of the strategies employed, can be revealed to less successful learners.

I. 1. Strategy

The term 'strategy' has been commonly used by researchers in various studies and naturally distinct definitions of this term have evolved. While the term strategy has been defined as 'tactics' (Seliger, 1984) and 'learning behaviours' (Poltizer & McGroarty, 1985),

Rubin (1975) defined the term 'strategy' as "The techniques or devices which a learner may use to acquire knowledge" (p. 43). However, Oxford and Crookall (1989) explained the term strategy as "Learning techniques, behaviors, or actions; or learning-to-learn, problem solving or study skills (p. 404). On the other hand, Wenden (1985) commented that "In the literature, strategies have been referred to as "language learning behaviors," "steps, routines, procedures," "conscious enterprises," "potentially conscious plans," "tactics," "cognitive abilities," and "learning skills." (p. 4). Although the term has been used by prominent researchers, as indicated in definitions, the term strategy is not without controversy, and no consensus has been observed in terms of definition. However, regarding the controversy about the definitions proposed, Oxford and Crookall (1989) indicated that "No matter what they are called, strategies can make learning more efficient and effective" (p. 403). The controversy is also available in the studies conducted about learning strategies in which various and distinct definitions of learning strategies are observed.

I. 2. Learning Strategies

Since the studies conducted by Rubin (1975), Stern (1975) and O'Malley and Chamot (1985) within the recent decades, learners and teachers have become aware of the importance of the learning strategies in the learning process. Although such awareness has grown gradually, defining and categorizing learning strategies is still far from straightforward. Regarding no consensus in definition and classification of learning strategies, O'Malley et al (1985) indicated that "Learning, teaching and communication strategies are often interlaced in discussions of language learning, and are often applied to the same behavior. Further, even within the group of activities most often referred to as learning strategies, there is considerable

confusion about definitions of specific strategies and about the hierarchic relationship among strategies” (p. 22). Although there is no consensus and non standard in defining learning strategies, attempts in defining them have been indicated in studies conducted in this field. Among the earliest researchers in learning strategies field, Rubin (1975) defined learning strategies as “The techniques or devices which a learner may use to acquire knowledge” (p. 43). O’Malley et al (1985) also indicated that learning strategies are “Any set of operations or steps used by a learner that will facilitate the acquisition, storage, retrieval, or use of information” (p. 23). Oxford (1990) on the other hand used similar definition like O’Malley et al (1985) and defined learning strategies as “Language learning strategies are steps taken by the learner to aid the acquisition, storage, and retrieval of information” (p. 404). Wenden (1985) also commented that “Learning strategies is a term that refers to the process of learning” (p. 4). As observed in the definitions of learning strategies stated by different researchers, conflicting opinions and distinct definitions are far from straightforward and consensus. Besides the conflicting opinions and no consensus in defining learning strategies, such a situation can also be observed in the classification of learning strategies as distinct classifications are available in the field.

I. 3. Classification and Definition of Learning Strategies

The classification of learning strategies have been carried out by researchers, however, the earliest classification was made by Rubin (1981) who categorized strategies as “direct and indirect strategies”. Direct strategies were divided into six types as clarification/verification, monitoring, memorization, guessing/inductive inferencing, deductive reasoning and practice and the indirect strategies were divided into two types as creating opportunities for practice

and production tricks. In 1985, O'Malley et al (1985) attempted to develop a taxonomy including classification of strategies which are interrelated with each other. The development of the taxonomy resulted in twenty-six strategies divided into three categories: metacognitive (advance organizers, directed attention, selective attention, self-management, advance preparation, self-monitoring, delayed production, self-evaluation, self-reinforcement), cognitive (repetition, resourcing, directed physical response, translation, grouping, note-taking, deduction, recombination, imagery, auditory representation, key word, contextualization, elaboration, transfer, inferencing, question for clarification) and social mediation (cooperation). The metacognitive and cognitive strategies are almost parallel with the direct and indirect strategies in Rubin's classification. The only distinct feature of this classification is that it includes social mediation category indicating that the strategies related with interaction are also taken into consideration within the process of developing the taxonomy.

Oxford (1990) classified the learning strategies adding new categories (affective and social strategies) to the classifications made before which were mainly based on cognitive and metacognitive strategies and putting less emphasis on strategies related with interaction. In her classification, Oxford categorized the strategies into six groups: *memory strategies* (grouping, imagery, rhyming and structured reviewing), *cognitive strategies* (reasoning, analyzing, summarizing), *compensation strategies* (guessing meanings from context, using synonyms and gestures to convey meaning), *metacognitive strategies* (paying attention, planning, self-evaluating and monitoring), *affective strategies* (anxiety reduction, self-encouragement, self-reward), *social strategies* (asking questions, cooperation, becoming culturally aware). The six categories, on the other hand, were divided into two categories as direct and indirect strategies.

The variety and distinction of classification of strategies indicate that the process of defining terminology, identifying and classifying strategies can be far from straightforward as there is no consensus, exuberance of overlapping ideas and conflicting opinions in the field. Regarding this issue, Oxford (1990) indicated that “There is no complete agreement on exactly what strategies are; how many strategies exist; how they should be defined, demarcated and categorized; and whether it is – or ever will be- possible to create a real, scientifically validated hierarchy of strategies. Classification conflicts are inevitable” (p. 17). In terms of finding remedies for such overlapping and confliction, O’Malley et al (1985) commented that “At least part of the solution to these problems will emerge from careful inspection of the ways in which learning strategies are use in specific language tasks” (p. 22). Regarding the conflictions and suggestions to find solutions to the problems in the learning strategies field, it can be stressed that through lack of consensus similar overlapping and conflicts with competing terms can become inevitable in the field. Such overlapping may have a strong impact on the efforts regarding the definition of learning strategies, however; such an impact in terms of overlapping and conflicts has not been observed in the definitions of reading strategies.

I. 4. Reading Strategies

The language skills have been the main concern of the researchers due to the difficulties learners face while dealing with such skills. In order to get rid of such hindrances, learners are assumed to make use of some cognitive principles based on the skill they are confronted with. Among the four language skills, reading has been the basic skill throughout teaching processes in history as the common method used in classes was mainly based on

reading and memorization and it has been the main instrument or skill for gaining access to several sources of information (Celce-Murcia, 2001). The readers or learners were assumed to be using some cognitive learning behavior in order to cope with the texts or written materials. Before attempting to define reading strategies, it needs to be mentioned about reading which is defined as an active cognitive system operating on printed material for comprehension (Chastain, 1988). Furthermore, MacLeish (1968) commented that “Readers of all languages get the sounds from the printed page” (p. 43). The process of reading comprehension is also described by Chun (1997) as “Readers comprehend a text when they construct a mental representation for incoming pieces of verbal information” (p. 61). To comprehend writer’s intended message, readers use different learning strategies, in other words, thoughts and behaviors to accelerate comprehension (O’Malley & Chamot, 1990). Readers follow complex cognitive processes to get the intended meaning from the text, however, to be able to carry out such a mission readers need to make use of some specific reading strategies (Paris, Wasik & Turner, 1991; Duffy, 2001).

In terms of definition, Garner (1987) defined reading strategies as “Generally deliberate, planful activities undertaken by active learners, many times to remedy perceived cognitive failure” (p. 50). Moreover, Carell (1998) stated that “Reading strategies are of interest not only for what they reveal about the ways readers manage interactions with written text but also for how the use of strategies is related to effective comprehension” (p. 97). Reading strategies have also been indicated to be used by skilled readers to solve comprehension problems, having better results on comprehension questions and tests (Ur, 1996; Anderson, 1991). Furthermore, skilled readers are required to be aware of their cognition, which is metacognition, and be able to detect their own comprehension.

I. 5. Metacognition

Metacognition is “the knowledge about cognitive states and abilities that can be shared among individuals while at the same time expanding the construct to include affective and motivational characteristics of thinking” (Paris & Winograd, 1990, p.15). Metacognition is also indicated to be operating mental processes. Similarly, Hyde and Bizar (as cited in Swicegood, 1994, p. 83) defined metacognition as “ Processes that in which the individual carefully considers thoughts in problem solving situations through the strategies, of self planning, self monitoring, self regulating, self questioning, self reflecting, and self-reviewing.” Metacognition not only promotes academic learning and motivation but also provides personal insights into one’s own thinking and fosters independent learning (Paris & Winograd, 1990). As metacognition may impact the development of the autonomy of the learner, it naturally fosters learners’ use of metacognitive strategies.

I. 6. Metacognitive and Cognitive Strategies

Metacognitive strategies have been placed in all the classifications of strategies proposed up to now, however, definitions and categorization may differ in each taxonomy. Prominent researchers Oxford and Crookall (1989) indicated that “Metacognitive strategies are behaviors used for centering, arranging, planning and evaluating one’s own learning. These “beyond-the-cognitive” strategies are used to provide “executive control” over the learning process” (p. 404). In terms of the activities metacognitive strategies include, the metacognitive strategies involve planning, monitoring, and regulation activities that take place before, during, and after any thinking act such as reading (Deane & Pereira-Laird, 1997). Regarding the use of metacognitive strategies by the learners, Wenden (1985) stated that

“Learners use metacognitive strategies to oversee, regulate or self-direct their own learning. Metacognitive strategies have three functions, planning, monitoring and checking outcomes” (p. 5). Furthermore, through metacognitive strategies, a reader allocates significant attention to controlling, monitoring, and evaluating the reading (Taraban et al, 2004). In short, Metacognitive strategies involve planning and thinking about learning and evaluating how beneficial a particular strategy is (O’Malley & Chamot, 1990). Regarding the scope of cognitive strategies it was commented by Oxford and Crookall (1989) that “Cognitive strategies are skills that involve manipulation or transformation of the language in some direct way, e.g., through reasoning, analysis, note taking, functional practice in naturalistic settings, formal practice with structures and sounds, etc.” (p. 404). In terms of cognitive strategies’ relation with materials and learning process, O’Malley and Chamot (1990) stated that “Cognitive strategies are more directly related to individual learning tasks and entail direct manipulation or transformation of the learning materials” (p. 561). Moreover, Deane and Pereira-Laird (1997) indicated that “cognitive strategies refer to integrating new material with prior knowledge. Cognitive strategies that students use to acquire, learn, remember, retrieve and understand the material while reading, include rehearsal, elaboration, and organizational strategies” (p. 190). On the other hand, metacognitive and cognitive strategies are assumed to act together, however, in various studies it was commented that both types of strategies act independently within the process of learning (Deane & Pereira-Laird, 1997).

I. 7. Assessment of Strategies

The studies on measuring learning strategies have resulted in intensive efforts of developing scales or inventories to measure learning strategies that learners use. Among the

instruments developed, SILL developed by Oxford (1990) has been the instrument used most extensively in various studies all over the world. Although the inventory has been used in many studies, it has some deficiencies in terms of internal constructs and conceptualization. There seems to be inconsistency in terms of classification and conceptualization of strategies. Because, when the factor analyses of all the empirical studies that SILL used were examined, it can be observed that all the strategies are loaded on one factor and can be accumulated. However, the definition of the term 'strategy' indicates that the strategy should be distinct because each learner has different way to follow. Therefore, there should be distinction and, in this manner, strategies should not be loading on one factor. Such deficiencies can also indicate that the inventory may not be measuring so called "strategies" totally, but it may only measure the "struggle" they experience while overcoming a difficulty or hindrance. On the other hand, the definition and classification of strategies may be wrong, the instrument may not be developed elaborately or the cognitive processes may not proceed distinctively.

Other than learning strategies field, there has been various studies conducted about development of instruments based on measuring the strategies learners use while dealing with the language skills. Among these skills, reading has been the common skill on which various instruments developed, specifically, measuring reading strategies. Efforts to develop reading strategies have been well attempted but generally not satisfactory in terms of measurement (Mokhtari & Sheorey, 2002). Few instruments available have been quite useful in determining reading strategies, however, most have shortcomings that limit their use (Mokhtari & Reichard, 2002). "Criticisms of existing measures in reading pertain mainly to the use of scales with a small number of items, limited psychometric properties, evidence of reliability and validity, or an uncertain characterization of the construct of metacognition in particular

and reading in general” (Mokhtari & Reichard, 2002, p. 250). In a study conducted by Sariçoban (2005) a reading inventory was adopted from Varaprasad (1997) and designed by the researcher. The instrument was used to determine the sort of reading strategies of both poor and good readers. The instrument, involves 39 ‘Yes’, ‘No’ items and measures the strategies in three reading stages such as pre-reading stage, during-reading stage and post-reading stage. However, no statistical calculations regarding reliability and validity have been observed in the study which constitutes the main limitation of the study.

Mokhtari and Reichard (2002) designed a self-report measure to assess early adolescents’ awareness and perceived use of reading strategies while reading. The internal consistency reliability coefficient of the instrument is .89 indicating that the strategies in the study are loaded on one factor. In the study, when the rotated factor analysis was examined, contradictory to the predictions of the researchers, the instrument measures on one factor not three. The factor loadings of the items in the study are relatively close to each other. Such closeness creates difficulty in identifying which strategy belong to which factor and indicates that the strategies are not distinct and separate from each other. Furthermore, the total scores are given in the results of the analysis can be viewed as an evidence indicating that strategies can be accumulated but not distinct.

Mokhtari and Sheorey (2002) developed an instrument (SORS) which was adapted from Mokhtari and Reichard (2002). The shortcomings and limitations observed in MARSII can also be valid for SORS. In SORS, adaptations such as target group, deletion and addition of some items were carried out. There is not any factor analysis in the study observed which constitutes the main limitation of the inventory. The internal consistency reliability

coefficient of the instrument is .89 which indicates that the instrument as a whole is not comprised of different factors.

Schmitt (1990) developed a 25-item multiple-choice questionnaire to measure learners' awareness of reading strategy use. The target group of the instrument is beginner and elementary level students. Reliability and validity analyses are not available in the study. The instrument is strictly aimed at metacognition, excluding measurement of other types of reading strategies that might be helpful to readers (Mokhtari & Reichard, 2002).

Ikeda and Takeuchi (2000) developed self-report Reading Strategy Questionnaire (RSQ) for EFL reading. The scale is comprised of 33 items and the reliability of the scale is indicated as .86. Such a value may indicate that the scale is comprised of one factor and the strategies may not operate distinctively. On the other hand, any factor analysis is not observed in the development process of the questionnaire which may limit the validity of the instrument. Furthermore, the strategies are not grouped under specific strategy groups and originally developed in Japanese language. Moreover, the items are written both in Japanese and English, however, any information about the translation or adaptation process of the items is not available in the study which constitutes a significant limitation of the study.

Oxford, Cho, Leung and Kim (2004) revised the questionnaire developed by Ikeda and Takeuchi (2000), in terms of rewording and restructuring the order of the items. The questionnaire was composed of 35 reading strategy items and responses were grouped using a Likert scale of 0 to 5. The rewording was employed in order to obtain specific information about the L1 backgrounds of the participants indicating that the target group of the questionnaire was converted from EFL readers to L1 readers. Such a process may need adaptation and development procedures of the questionnaire which is not available in the

study, constituting a significant limitation of the questionnaire in terms of utilization of the questionnaire in L1 areas. The questionnaire items were also grouped regarding the stage they operate in such as *before*, *while* and *after* reading. On the other hand, grouping of the items is generally employed according to the factor they belong to. However, as no factor analyses have been observed in this study which is an important limitation, grouping of the items was conducted according to the processes indicated. The reliability of the questionnaire was .78 and the reliability analysis is conducted according to the cumulative of the items in the study, however, in development and validation processes of strategy questionnaires, the reliability is calculated based on each factor but not the total cumulative of the items.

The questionnaire revised by Oxford, Cho, Leung and Kim (2004) was translated into Turkish through a back translation process by Uzunçakmak (2006). The back translation may be more reliable than the direct translation (Kim & Lim, 1999). However, regarding the scientific procedures, the scale needs to go under statistical calculations and procedures such as adaptation and development of the scale. Statistical calculations such as translation validity, factor analyses, reliability and validity studies are not observed in the study composing the main limitations of the study. The use of the scale with such limitations may not reflect certain information about the use of reading strategies of the sample involved in the study.

When the mentioned inventories or scales specifically examined, various deficiencies have been observed within the scales in terms of reliability/validity, proximity of factor loadings among items and high reliability values. The high reliability values of the scales may indicate that the scale can have only one factor, however, it can be expected that the strategies need to be distinct and cannot be accumulated in one factor. Although such instruments have

been well documented and may have psychometric support for their adequacy, the inventories need to be designed or adapted according to the culture or level of the target group.

Regarding the deficiencies of the scales developed up to now, considering the inventories developed for specific culture-oriented target groups especially countries where English is spoken as the native language or L2, the number of the scales developed for learners who are learning English as a foreign language are limited.

CHAPTER II: METHODOLOGY

The Methodology part is consisted of two stages: The adaptation studies of Reading Strategy Use (RSU) and Metacognitive Reading Strategies Questionnaire (MRSQ) into Turkish culture and the development of two likert-type Okuma Becerisi Stratejileri Kullanım Ölçeği (OBSKÖ) Üstbiliş Okuma Stratejileri Ölçeği (ÜBOSÖ).

II.1. The adaptation studies of RSU and MRSQ into Turkish Culture

The adaptation process of the two scales is comprised of phases such as translation validity, reliability and validity of the translated version of the scales and the pilot application of the translated scales on a specific sample.

II. 1.1. Translation Validity study of RSU and MRSQ

As the target group of this study were Turkish learners studying English as a foreign language, translating the items into Turkish was inevitable. Before the employment of the scales to large groups, the items were translated into Turkish. Within the process of translation, firstly the items were translated into Turkish by the researchers and were shown to university lecturers who are proficient in both languages to examine the translations of the scales. After the edition process of both scales, the scales were given to a group of 56 learners who are both proficient in English and Turkish to examine the translation validity of the scales. In this process, firstly the Turkish version of the scales were given to the group to answer. After a few days, the English version of the scales were given. The period of time between both procedures was kept long in order to prevent the possibility of the respondents to

remember the answers they gave to the preceding scale so that they would not be able to give the same answers to the same items. After the both processes mentioned, Pearson Correlation was employed. The aim of this employment was to find out whether there was a meaningful difference between both variables. The correlation coefficient between both scales (Turkish – English) regarding each item was specified over 0, 70. The items of which correlation coefficient was below 0, 70 were revised in terms of wording and structure. Subsequently, the items were placed in the scales constituting 22 item for each scale (OBSKÖ- ÜBOSÖ).

II. 1.2. The Reliability and Validity study of RSU and MRSQ

After the items of both scales were found to be valid in terms of translation , the pilot employment of these scales was carried out. Therefore, the scales were given to a large population intending to increase the variance. The sample of the first pilot study was consisted of three different universities (Mustafa Kemal University, Çağ University and Mersin University) and Anatolian high schools. The sample was mainly consisted of learners studying English as a foreign language at different levels. Moreover, the participants from Anatolian High Schools were the students of English Division studying English as a foreign language at different levels. The total number of the participants was 815 which is a sufficient number to keep the variance large. Following the distribution and collection of the scales, the statistical analysis was conducted to find out the number of factors that each scale include and see whether they match the original features of the scales.

The first analysis was conducted on the Reading Strategy Use Scale (RSU) translated into Turkish as Okuma Becerisi Stratejileri Kullanım Ölçeği (OBSKÖ). During the process of identifying the number of the factors of the scales, “Varimax with Kaiser Normalization” and

“Rotated Solution” methods were employed which are orthogonal rotation methods simplifying the interpretation of the components (Tabachnik & Fidell, 2001). In terms of the “Eigenvalues” of the factors, the each factor of which Eigenvalue score is over “1” was indicated as “meaningful” (Gorsuch, 2003; Thompson & Daniel, 1996). The results of the first factor analysis indicated that OBSKÖ is made of six factors and the first six components’ Eigenvalues are over “1” indicating that these factors are meaningful. Moreover, the cumulatives of the rotation sums of squared loadings indicated that the first factor explained the %10, 933 of the total variance. The first three factors together explained the %31, 029 of the total variance. Furthermore, six factors explained the %54, 398 of the total variance (See Table 1).

On the other hand, the data were rotated in order to obtain interpretable and meaningful factors. The matrix obtained is the final result of the factor analysis. Any item having a big number in terms of absolute value under a factor indicates that this item has a close relationship with this factor. Moreover, values over 0, 50 are accepted as fairly well (Tabachnik & Fidell, 2001). Table 2 indicated that the scale is consisted of six factors, and the factor loadings of each item under factors are also observed. Normally, each item need to find itself a place under only one factor, however; when the matrix is examined carefully it can be stated that items numbered as: 4, 12, 13 and 16 gives loadings to a number of factors which makes the grouping of the items under specific factors hard. Therefore, removing these items from the scale and revising the data by repeating the analysis without these items became inevitable.

After the removal of the specified four items (4, 12, 13, 16) an another factor analysis was conducted in order to see the groupings of the items under each factor clearly. The results of the factor analysis indicated that the number of factors decreased from six to five factors regarding the Eigenvalues of the components and the cumulative describing the total variance.

Table 3

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.850	21.391	21.391	3.850	21.391	21.391	2.148	11.932	11.932
2	2.123	11.793	33.183	2.123	11.793	33.183	2.090	11.610	23.542
3	1.487	8.261	41.444	1.487	8.261	41.444	1.845	10.248	33.789
4	1.122	6.234	47.679	1.122	6.234	47.679	1.839	10.218	44.007
5	1.051	5.840	53.519	1.051	5.840	53.519	1.712	9.512	53.519

Furthermore, the results of the varimax and rotated solution indicated that most of the items were grouped under specific factors in terms of their factor loadings. Although some of the items gave loadings to a few factors, the value between each factor is not over .30 indicating that the item belongs to the group in which its value is bigger than the others (Table 4). As 4 items were removed from the scale, the scale consists only 18 items.

Table 4

Factor loadings and communalities based on a principle components analysis with varimax with Kaiser normalization rotation for Reading Strategy Use (RSU)

Items	Components				
	1	2	3	4	5
22	.759				
9	.714				
21	.691				
15	.595		.317		
5		.704			
2		.637			
8		.634			
11		.625			
1			.618		
20			.617		
14			.610	.346	
3			.497		
6				.776	
7				.720	
10			.332	.579	
18					.837
19			.301		.637
17					.626

On the other hand, the reliability analysis of the items was also conducted and the alpha of the groups of items varied between .65 and .75 which are high values indicating that the items are structurally reliable.

The second analysis was conducted by examining the results of the “Metacognitive Reading Strategies Questionnaire” (MRSQ) translated into Turkish as “Üstbiliş Okuma Stratejileri Ölçeği” (ÜBOSÖ). During the process of identifying the factor numbers of the scales, “Varimax with Kaiser Normalization” and “Rotated Solution” methods were employed. In terms of the “Eigenvalues” of the factors, the each factor of which Eigenvalue score is over “1” was indicated as “meaningful”. The cumulatives of the rotation sums of squared loadings indicated that the scale is consisted of four factors as there are four

components of which Eigenvalues are over “1”. Moreover, these four factors explained %49, 280 of the total variance when looked at the rotation sums of squared loadings (Table 5).

The data were also rotated in order to obtain interpretable and meaningful factors. Within the analysis, the items having a high factor loading indicated that this item had a close relationship with this factor. Moreover, values over 0, 50 are accepted as fairly well. When the data Rotated through “Varimax with Kaiser Normalization” is examined, it can be stated that the scale is consisted of four factors, in other words, the items of the scales are grouped under specific four factors. However, items numbered as:7, 9 and 10 are giving factor loadings to a number of factors but not to one factor (see Table 6). Therefore these items were removed and an another factor analysis was conducted without these three items.

Following the removal of the items (7, 9, 10), an another factor analysis was conducted in order to see the groupings of the items under specific factors clearly. The results of the factor analysis indicated that the scale is again consisted of 4 factors, however, the four factors together explained %51, 936 of the total variance which is a higher loading when compared with the loading of the previous factor analysis.

Table 7
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.395	28.395	28.395	5.395	28.395	28.395	2.849	14.992	14.992
2	1.979	10.417	38.812	1.979	10.417	38.812	2.824	14.865	29.857
3	1.308	6.884	45.696	1.308	6.884	45.696	2.257	11.877	41.734
4	1.186	6.240	51.936	1.186	6.240	51.936	1.938	10.202	51.936

The results of the varimax and rotated solution indicated that items were mainly grouped under specific four factors in terms of their factor loadings. Although some of the items gave loadings to a few factors, the value between each factor is not over .30 indicating that the item belongs to the group in which its value is bigger than the others (Table 8). As three items (7, 9, 10) were removed from the scale, there are 19 items left in the scale. On the other hand the reliability analysis of each factor indicated that the reliability of each factor group is over .70 which is a high number indicating that the items within groups are structurally reliable and consistent.

Table 8

Factor loadings and communalities based on a principle components analysis with varimax with Kaiser normalization rotation for the Metacognitive Reading Strategies Questionnaire (MRSQ)

	Components			
	1	2	3	4
5	.733			
3	.714			
1	.661			
6	.599			
2	.584			
4	.460			
19		.825		
17		.795		
18		.791		
20		.767		
15			.638	
11			.586	
16			.569	
14	.320		.563	
13			.536	
8			.509	
22				.769
21				.722
12			.319	.525

II.2. The Development of two Likert type Inventories OBSKÖ and ÜBOSÖ

The adapted versions of both scales were need to be developed in order to get valid and reliable results from both scales. Therefore, the development procedure was conducted regarding phases such as addition of new items to the scales and reliability and validity analyses of both scales.

II.2.1. Selection of Items

The adaptation processes of both scales continued with addition of new items to the scales as each scale has almost 20 items which is a low number for obtaining interpretable and meaningful results from a scale (Pressley & Afflerbach, 1995; Tabachnik & Fidell, 2001). Therefore, new items were generated and some items were taken from a number of scales developed by some researchers (Akyol & Ulusoy, 2009; Mokhtari, 2002; Saricoban, 2002). The items were taken from the indicated studies without regarding whether these studies have reliable and valid elements in terms of their construct. The items taken from these studies were translated into Turkish by a group of university lecturers who are both proficient in English and Turkish. The items taken were put next to the items under different factors and these groups were named meaningfully regarding their concepts. Moreover, a new group of items were put under a group generated by the researchers named as “*Planning Strategies*” and this group was added to both scales. After the preparation phase, the new items were added to OBSKÖ regarding the groups in terms of meaning and concepts. The items taken from the scale developed by Akyol and Ulusoy (2009) were as follows: “*Okuma hızımı okuduğum metne bağlı olarak ayarlarım*”, “*Bağlamsal ipuçları kullanarak bilmediğim kelimelerin ve terimlerin anlamlarını tahmin edebilirim*”, “*Okumaya başlamadan önce hedeflerimi*

belirlerim”, “*Okumaya başlamadan önce okuma yöntemimi belirlerim*”. Moreover, some items were also taken from the scale developed by Mokhtari (2002) such as; “*Konsantrasyonumu kaybettiğimde okuduğum konuya geri dönmeye çalışırım*”, “*Okuduğum metin zorlaştığı zaman, metni anlamamı arttırması açısından metni tekrar okurum*”, “*Okuduğum metin zorlaştığı zaman, okuduğumu anlamama yardımcı olması bakımından metni yüksek sesle okurum*”, “*Okuduğum metin zorlaştığı zaman, metni daha dikkatli bir şekilde okurum*”, “*Okuma hızımı okuduğum metne bağlı olarak ayarlarım*”, “*Hatırlamama yardımcı olması açısından, gerekli bilgiyi metin içerisinde daire içine alırım veya o bilginin altını çizerim*”, “*Okuduğum metni anlamama yardımcı olması açısından metni okurken notlar alırım*”, “*Okuduğumu anlamama yardımcı olması bakımından sözlük gibi kaynaklar kullanırım*”, “*Bilmediğim kelimelerin ve sözcük gruplarının anlamlarını tahmin etmeye çalışırım*”, “*Okuduklarımı hatırlamama yardımcı olması bakımından, okuduklarımı betimlemeye ve hayalimde canlandırmaya çalışırım*”, “*Okuduğum metni aklımdaki belli amaçlar çerçevesinde okurum*”, “*Metni okumadan önce, ne hakkında olduğunu görmek için önizleme yaparım/önceden okurum*”, “*Uzunluk ve düzen gibi özelliklere dikkat ederek metne göz gezdiririm*”. One item was also taken by the adaptation made by Saricoban (2002). The item was “*Tüm metnin ana düşüncesini anlamaya çalışırken, metni baştan sona okumaya ve zor kelimelerin ve sözcük gruplarının altını çizmeye çalışırım*”. On the other hand, the researchers generated some items such as ; “*Okuduğum metni anlamam için işaretler ve figürler kullanırım*”, “*Metinde sunulan bilgiyi zihnimde var olan bilgiyle karşılaştırarak okurum*”, “*Okuyacağım metni inceleyip, göz gezdirdikten sonra okuyacağım metin türünü belirlemeye çalışırım*”. Furthermore, new items were also added to ÜBOSÖ taken from scales developed by some researchers (Akyol & Ulusoy, 2009; Mokhtari, 2002; Saricoban, 2002). Also, some

items were generated by the researchers and added to the scale. A new group of strategy named as “*Planning Strategies*” was also added to the scale. The items taken from the scale developed by Akyol and Ulusoy (2009) were as follows: “*Okuduğum metin ve önceden sahip olduğum bilgiler arasında bağlantı kurarım*” (This item was later converted into a negative statement), “*Metin hakkındaki tahminlerimin doğruluğunu kontrol ederim*”, “*Daha sonra hatırlamama yardımcı olması bakımından okuduğum metnin önemli bölümlerinin altını çizerim*”, “*Okurken önemli ifadeleri listeler ve ezberlemeye çalışırım*”, “*Okurken, sözlük ve imla kılavuzu kullanırım*” (This item was later converted into a negative statement), “*Okuduğum metin zorlaştığı zaman, metni daha dikkatli bir şekilde okurum*”. Some items were also taken from the scale developed by Mokhtari (2002). The items are as follows; “*Metnin içeriğinin hedefime uygun olup olmadığı hakkında düşünürüm*”, “*Okurken metnin ne hakkında olduğunu tahmin etmeye çalışırım*” (This item was later converted into a negative statement), “*Okuma hedeflerim ve metnin içeriği arasındaki tutarlılık hakkında düşünürüm*”, “*Okuduklarımı daha iyi anlamama yardımcı olması için bağlamsal ipuçları kullanırım*”, “*Metnin içerisindeki fikirler arasında bağlantı bulmak için metni ileri geri giderek okurum*”, “*Okuduklarımı anladığımdan emin olmak için daha yavaş ve daha dikkatli okurum*”. Following the addition of the items, the number of the items of the scales increased to the expected number. As a result, OBSKÖ was consisted of 43 items and ÜBOSÖ was comprised of 35 items in total.

II.2.2. The Reliability Studies of OBSKÖ and ÜBOSÖ

The final versions of the scales were distributed to the sample including learners from Mersin University and different Anatolian High Schools in Mersin and Antakya. The

participants of the study were studying English as a foreign language at different levels making a total number of 557. Following the distribution and collection procedures of the scales, the first statistical analysis was conducted on the data gathered from the scale named OBSKÖ. While identifying the number of the factors of the scales, “Varimax with Kaiser Normalization”, “Promax”, “Direct Oblimin” and “Rotated Solution” methods were employed. In terms of the “Eigenvalues” of the factors, the each factor of which Eigenvalue score is over “1” was indicated as “meaningful”. The results of the first factor analysis indicated that the scale included eight factors of which Eigenvalues are over “1”. Moreover, the eight factors together explain %51.199 of the total variance (see Table 9).

The data obtained from the scales were also examined as a result of the methods employed such as “Varimax with Kaiser Normalization” and “Rotated Solutions”. The results of the employment indicated that there are some items that give loading to a number of factors so that it becomes hard to identify which item belongs to which factor. Therefore, items (2, 4, 5, 7, 9, 10, 15, 17, 21, 27, 28, 33, 34, 38, 41) were removed after a number of factor analyses conducted (See Table 10). While removing these items, they were also checked whether there was a conceptual and meaningful consistency between specified item and the items left in the factor in terms of group (Garson, 2003).

Following the removal of the items specified above, an another factor analysis with “Promax with Kaiser Normalization” was conducted. The results of the analysis indicated that the number of factors decreased from eight to six when both analyses were compared. Moreover, the six factors together explained %53.871 of the total variance.

Table 11

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings(a)
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.687	27.454	27.454	7.687	27.454	27.454	5.005
2	2.088	7.457	34.911	2.088	7.457	34.911	4.545
3	1.617	5.774	40.685	1.617	5.774	40.685	3.871
4	1.370	4.893	45.578	1.370	4.893	45.578	3.796
5	1.188	4.242	49.820	1.188	4.242	49.820	4.582
6	1.134	4.051	53.871	1.134	4.051	53.871	4.103

The analysis continued with conducting methods such as “Promax with Kaiser Normalization” and “Rotated Solutions”. The results of the analysis indicated that the items were grouped under six factors clearly (Table 12). The items grouped under each factor were also consistent with each other in terms of meanings and concepts constituting a scale with 28 likert-type items (see Appendix A) consisting 6 strategy groups.

The first factor (*Constructing Strategies*) contained 5 items and represented a conceptual reflection of the construction of the strategies by the reader within specific cognitive processes. The second factor (*Planning Strategies*) contained 5 items that appeared to give specific information about readers’ use of strategies before they start reading. The third factor (*Management Strategies*) contained 5 items and represented a set of items indicating the strategies that the readers’ do not employ or ignore within the reading process. The fourth factor (*Assisting Strategies*) contained 5 items and primarily involved strategies the readers employ to help them overcome the difficulties they face while reading. The fifth factor (*Visualization Strategies*) is composed of 4 items representing readers’ use of strategies related with their imaginative abilities they make use of while reading. The last factor (*Self-*

Regulation Strategies) contained 3 items appeared to be oriented around strategies for controlling or modulating when text becomes difficult to read. The information gathered from the scales indicated that such scales may serve as an inventory of strategies students report while reading specific kinds of texts.

Table 12

Factor loadings and communalities based on a principle components analysis with promax with Kaiser normalization rotation for Reading Strategy Use (RSU) scale

	Components					
	1	2	3	4	5	6
1	.870					
7	.765					
13	.684					
19	.524					
24	.490					
2		.817				
8		.663				
14		.631				
20		.544				
25		.481				
28		.405				
3			.757			
9			.725			
15			.722		.316	
21			.666			
26			.647			
4				.783		
10				.655		
16				.496		
22				.495		
27				.492		
5					.764	
11					.699	
17					.658	
23					.405	
6						.814
12						.717
18						.697

The Cronbach's alpha reliabilities for each factor or subscale was also calculated (Table 13).

Table 13

Cronbach's Alpha Reliabilities by Factors

Factor	Cronbach's alpha
Constructing strategies	.77
Planning strategies	.73
Management strategies	.76
Assisting strategies	.73
Visualization strategies	.72
Self-regulation strategies	.70

Reliability for the total sample was .89, indicating that the scale as a whole including sub factors is reliable as an alpha of .70 is considered as satisfactory in terms of reliability (Vogt, 2007).

The second analysis was conducted on the data gathered from ÜBOSÖ. The analysis was conducted through the employments of methods such as “Varimax with Kaiser Normalization” and “Rotated Solutions”. The results of the analysis showed that the scale consisted of eight factors of which Eigenvalues are over “1”. Moreover, the eight factor together explained %56.691 of the total variance (see Table 14).

Furthermore, in order to obtain the interpretable and meaningful factors, ““Varimax with Kaiser Normalization” and “Rotated Solutions” were conducted on the data gathered from the participants. The results indicated the scale is consisted of eight factors in total and most of the items gave factor loadings to a number of factors preventing grouping the items under specific groups regarding meaning and concept (see Table 15).

Regarding the complexity and confusing results, a number of analyses were conducted in order to obtain certain results from the data gathered. Therefore, items that gave factor loadings to different factors were specified and removed. Items (2, 7, 17, 21, 26, 27, 28, 30,

31, 34) were removed and an another factor analysis was conducted without replacing these items.

Following the removal of the items specified above, an another factor analysis with “Promax with Kaiser Normalization” was conducted. The results of the analysis indicated that the number of factors decreased from eight to five. Furthermore, the five factors together explained %54.757 of the total variance (Table 16).

Table 16

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings(a)
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.248	28.991	28.991	7.248	28.991	28.991	4.778
2	2.569	10.277	39.269	2.569	10.277	39.269	5.121
3	1.647	6.588	45.857	1.647	6.588	45.857	3.430
4	1.142	4.568	50.425	1.142	4.568	50.425	5.012
5	1.083	4.333	54.757	1.083	4.333	54.757	4.283

The analysis continued with conducting methods such as “Promax with Kaiser Normalization” and “Rotated Solutions”. The results of the analysis indicated that the items were grouped under five factors clearly. The items grouped under each factor were also consistent in terms of meaning and concept. The results of the analyses indicated that the scale is comprised of 25 Likert-type statements (see Appendix B) consisting five sub strategy factors (strategy groups) such as *planning strategies, supplementary strategies, ignorance strategies, text-referenced strategies and fix-up strategies* (Table 17).

Table 17

Factor loadings and communalities based on a principle components analysis with promax with Kaiser normalization rotation for Metacognitive Reading Strategies Questionnaire (MRSQ)

	Components				
	1	2	3	4	5
1	.773				
6	.731				
11	.679				
16	.655				
21	.567				
25	.509				
2		.833			
7		.793			
12		.727			
17		.699			
22		.659			
3			.823		
8			.759		
13			.734		
18			.712		
23			.599		
4				.822	
9				.780	
14				.699	
19				.526	
24				.494	
5					.816
10					.616
15	.307				.605
20					.450

The first factor (*Planning Strategies*) contained 6 items that appeared to give specific information about readers' use of strategies before they start reading. The second factor (*Supplementary Strategies*) contained 5 items functioning as subsidiary or supporting incentives toward employment of reading strategies. The third factor (*Ignorance Strategies*) contained 5 items and represented a set of items indicating the strategies that the readers' do not employ or ignore within the reading process. The fourth factor (*Text-Referenced Strategies*) contained 5 items and primarily involved strategies the readers employ to help

them overcome the difficulties they face while reading specific kinds of texts. The fifth factor (*Fix-Up Strategies*) is composed of 4 items representing readers' use of strategies related with arranging strategies oriented around specific strategies for solving problems regarding the difficulty of the text . The information gathered from the scales indicated that such scales may serve as an inventory of strategies students report while reading specific kinds of texts.

The Cronbach's alpha reliabilities for each factor or subscale was also calculated (Table 18). Reliability for the total sample was .82 indicating that the scale as a whole including sub factors is reliable as an alpha of .70 is considered as satisfactory in terms of reliability (Vogt, 2007).

Table 18

Cronbach's Alpha Reliabilities by Factors

Factor	Cronbach's alpha
Planning strategies	.77
Supplementary strategies	.83
Ignorance strategies	.77
Text-referenced strategies	.77
Fix-up strategies	.70

II.2.3. The Validity of the Developed Scales, OBSKÖ and ÜBOSÖ

The validity of the developed scales was field-tested with a sample of university students regarding variables such as level and sex. The data obtained from the sample was analyzed through specific statistical analyses in order to obtain reliable and interpretable data validating the consistency of the scales developed.

II.2.3.1. Participants

The participants of the study were freshman, sophomore, junior and senior level students getting their BA degree at Mersin University ELT department. The number of the male participants was 76 and the number of the female participants was 216 both making a total number of 292. The participants completed the questionnaires voluntarily at their tables on their own. Most of the participants shared similar cultural, linguistic and socioeconomic backgrounds and none of them were identified as having any particular learning problems.

II.2.3.2. Data Collection Tools

In order to gather data on the use of reading strategies while reading two scales were utilized. Okuma Becerisi Stratejileri Kullanım Ölçeği (OBSKÖ) and ÜstBiliş Okuma Stratejileri Ölçeği (ÜBOSÖ) developed by Erkuş, Yaman and Tuncer (2010) were employed in the study in order to gather data from the participants. The first scale is (OBSKÖ) comprised of 28 Likert-type statements consisting six sub strategy factors (strategy groups) such as *constructing strategies, management strategies, assisting strategies, visualization strategies, self-regulation strategies and planning strategies*. The other scale employed in the study (ÜBOSÖ) is comprised of 25 Likert-type statements consisting five sub strategy factors (strategy groups) such as *planning strategies, supplementary strategies, ignorance strategies, text-referenced strategies and fix-up strategies*. The scales were distributed and collected by the researcher at different times and the data were entered into the Statistical Packages for Social Sciences (SPSS) program. The data gathered from both scales were analyzed by the researcher making use of the SPSS program.

II.2.3.3. Data Analysis Methods

This study employed statistical calculations (T-Test, one way ANOVA, Post Hoc Test) in measuring the rate of use of reading strategies of the participants. The T-Test is used to compare the differences between the two means, and ANOVA is used to compare three or more means regarding Post Hoc Test. In this present study, male and female participants' use of reading strategies was compared by making use of the independent samples T-Test. As there are participants belonging to different levels, one-way ANOVA was used to determine the significant differences between the groups indicated. Furthermore, Tukey's HSD post hoc test was used to determine the groups that are significantly different from each other regarding the levels of the participants.

CHAPTER III: RESULTS AND DISCUSSIONS

The data obtained from the participants were analyzed and the results were presented in this chapter regarding sex and level variables. The data were analyzed through specific statistical calculations regarding the variables indicated.

III.1. Independent Samples T-test for sex and reading strategy use

The analysis of the scales was conducted based on the premise that both male and female learners basically make use of reading strategies while reading. In order to verify the premise stated, the analysis results of the learners were taken into consideration. The results of the analysis are shown below in Table 1 and Table 2. T-Test results of independent groups in terms of use of reading strategies regarding the gender of the participants indicated that the arithmetic average of female participants (\bar{X}) is higher than the arithmetic average of male participants regarding each strategy group which may indicate that female participants make use of reading strategies more than male participants. The results of OBSKÖ scale (Table 19) indicated that the significance of the use of reading strategies in each group is below 0,05 except *constructing* and *assisting* strategy groups. The significance in the indicated strategy groups can be linked to females' overall engagement within processes such as construction of the strategies within specific cognitive processes and their struggle in employing specific strategies when overcoming difficulties they face while reading.

Table 19

T-Test test results of independent groups in terms of use of reading strategies regarding the gender difference (OBSKÖ)

Strategy Group	n	\bar{X}	S	t	p
Constructing Strategies	292	F 19,01	2,98	0,441	0,659
M		18,82	3,50		
Management Strategies	292	F 20,38	3,16	3,41	0,001*
M		18,89	3,59		
Assisting Strategies	292	F 20,92	2,87	0,579	0,563
M		20,71	2,67		
Visualization Strategies	292	F 15,57	2,80	4,51	0,000*
M		13,80	3,28		
Self-Regulation Strategies	292	F 11,62	2,09	0,895	0,372*
M		11,36	2,33		
Planning Strategies	292	F 26,21	4,17	1,92	0,056*
M		25,14	4,17		

* P < 0,05

On the other hand, the results of ÜBOSÖ scale (Table 20) indicated that the significance of the use of reading strategies in each group is over 0,05 except *supplementary* and *ignorance* strategy groups. Therefore, it can be stated that there is a meaningful difference in terms of the use of reading strategies between female and male participants regarding the strategy groups indicated. Such a significance can be linked to a difference between the participants in the use of subsidiary or supporting incentives and ignoring the use of reading strategies while reading in a foreign language. Such a contrast may stem from the typical

behaviour males and females reflect when they face a problem while dealing with some specific kinds of hindrances or difficulties in their academic life.

Table 20

T-Test test results of independent groups in terms of use of reading strategies regarding the gender difference (ÜBOSÖ)

Strategy Group	n	\bar{X}	S	t	p
Supplementary Strategies					
F	292	20,46	3,84		
M		17,98	4,95	4,47	0,000*
Ignorance Strategies					
F	292	20,74	4,70		
M		19,51	3,18	2,11	0,036*
Text-Referenced Strategies					
F	292	19,37	3,14		
M		19,23	2,99	0,342	0,732
Fix-Up Strategies					
F	292	15,91	2,56		
M		15,63	2,49	0,819	0,414
Planning Strategies					
F	292	18,66	3,39		
M		18,73	3,38	-162	0,871

* P < 0,05

Showing this study as evidence, it can be claimed that there is a positive correlation between the strategy use and gender. As inferred from the results, females show a greater overall use of language reading strategies when compared to male participants. Likewise, in most of the studies conducted regarding the gender difference, it has been observed that females generally make use of reading strategies more than male readers (Moss, 2000; Rudell,

2000; Rothman, 2002; Phakiti, 2003; Çöğmen, 2008). In terms of gender, females are supposed to outperform males in learning languages. Coleman (1997) supporting the idea that females can be more successful, stated the reasons of this success as “Females tend to show greater integrative motivation and more positive attitudes to use a wide range of strategies, have more positive aspect towards learning, are more willing risk-takers” (p. 17). In this study, the rate of males’ and females’ use of reading strategies shows a small difference in some strategy groups and this may be a kind of contradictory to the general belief and effects of gender in use of reading strategies. Wharton (2000) stated that “Gender-related differences generally are probably due to a combination of socialization and physiology” (p. 235). Furthermore, most of the results of the studies conducted indicated that females tend to show greater integration and more engagement in terms of making use of reading strategies.

III.2. Independent samples T-test for level and reading strategy use

Whether levels of the participants may make an impact on participants reading strategy use is an another significant question that needs to be answered. In order to find an answer to this question an analysis of participants’ scales is conducted by making use of the SPSS program. The results of the analysis is shown below in Table 21 and 22. T-Test test results of independent groups in terms of use of reading strategies regarding the level difference indicate that the all the strategies are used more frequently by advanced learners regarding OBSKÖ scale. The proportional overall use of strategy of advanced learners over intermediate learners can be inferred from the arithmetic average of the groups. The sig. level of the use of reading strategies in each group is over 0,05 indicating that there is not any significant

difference between intermediate and advanced learners regarding the strategy groups of the scale.

Table 21

T-Test test results of independent groups in terms of use of reading strategies regarding the levels of the participants (OBSKÖ)

Strategy Group		n	\bar{X}	S	t	p																																														
Constructing Strategies	I	292	18,79	3,31	-0,553	0,581																																														
	A		19,01	3,04			Management Strategies	I	292	19,83	3,66	-0,552	0,581	A	20,06	3,18	Assisting Strategies	I	292	21,23	2,98	0,521	0,145	A	20,71	2,74	Visualization Strategies	I	292	14,97	3,10	-0,475	0,635	A	15,16	3,03	Self-Regulation Strategies	I	292	11,66	2,18	0,585	0,559	A	11,50	2,15	Planning Strategies	I	292	25,55	4,36	-1,094
Management Strategies	I	292	19,83	3,66	-0,552	0,581																																														
	A		20,06	3,18			Assisting Strategies	I	292	21,23	2,98	0,521	0,145	A	20,71	2,74	Visualization Strategies	I	292	14,97	3,10	-0,475	0,635	A	15,16	3,03	Self-Regulation Strategies	I	292	11,66	2,18	0,585	0,559	A	11,50	2,15	Planning Strategies	I	292	25,55	4,36	-1,094	0,275	A	26,13	4,13						
Assisting Strategies	I	292	21,23	2,98	0,521	0,145																																														
	A		20,71	2,74			Visualization Strategies	I	292	14,97	3,10	-0,475	0,635	A	15,16	3,03	Self-Regulation Strategies	I	292	11,66	2,18	0,585	0,559	A	11,50	2,15	Planning Strategies	I	292	25,55	4,36	-1,094	0,275	A	26,13	4,13																
Visualization Strategies	I	292	14,97	3,10	-0,475	0,635																																														
	A		15,16	3,03			Self-Regulation Strategies	I	292	11,66	2,18	0,585	0,559	A	11,50	2,15	Planning Strategies	I	292	25,55	4,36	-1,094	0,275	A	26,13	4,13																										
Self-Regulation Strategies	I	292	11,66	2,18	0,585	0,559																																														
	A		11,50	2,15			Planning Strategies	I	292	25,55	4,36	-1,094	0,275	A	26,13	4,13																																				
Planning Strategies	I	292	25,55	4,36	-1,094	0,275																																														
	A		26,13	4,13																																																

T-Test test results of independent groups in terms of use of reading strategies regarding the level difference indicate that all the strategies are used more frequently by advanced learners regarding ÜBOSÖ scale. The proportional overall use of strategy of advanced learners over intermediate learners can be inferred from the arithmetic average of the groups.

The sig. level of the use of reading strategies in each group is over 0,05 indicating that there is not any significant difference between intermediate and advanced learners regarding the strategy groups of the scale.

Table 22

T-Test test results of independent groups in terms of use of reading strategies regarding the levels of the participants (ÜBOSÖ)

Strategy Group		n	\bar{X}	S	t	p																																				
Supplementary Strategies	I	292	19,24	4,69	-1,563	0, 119																																				
	A		20,08	4,06			Ignorance Strategies	I	292	20,37	3,51	-0,103	0, 918	A	20,43	4,74	Text-Referenced Strategies	I	292	19,15	3,50	-0,644	0, 520	A	19,40	2,90	Fix-Up Strategies	I	292	15,82	3,02	-0,015	0, 988	A	15,83	2,30	Planning Strategies	I	292	18,41	3,72	-.864
Ignorance Strategies	I	292	20,37	3,51	-0,103	0, 918																																				
	A		20,43	4,74			Text-Referenced Strategies	I	292	19,15	3,50	-0,644	0, 520	A	19,40	2,90	Fix-Up Strategies	I	292	15,82	3,02	-0,015	0, 988	A	15,83	2,30	Planning Strategies	I	292	18,41	3,72	-.864	0, 389	A	18,78	3,21						
Text-Referenced Strategies	I	292	19,15	3,50	-0,644	0, 520																																				
	A		19,40	2,90			Fix-Up Strategies	I	292	15,82	3,02	-0,015	0, 988	A	15,83	2,30	Planning Strategies	I	292	18,41	3,72	-.864	0, 389	A	18,78	3,21																
Fix-Up Strategies	I	292	15,82	3,02	-0,015	0, 988																																				
	A		15,83	2,30			Planning Strategies	I	292	18,41	3,72	-.864	0, 389	A	18,78	3,21																										
Planning Strategies	I	292	18,41	3,72	-.864	0, 389																																				
	A		18,78	3,21																																						

The difference observed in the results can be indicated to result from some specific reasons. First, the students enrolling to the first grade are new and undergoing a process related with getting used to academic ways of studying or reading such texts. However, the advanced learners are used to and aware of such processes resulting in proficiency in using strategies while dealing with reading texts. The more the students get acquainted with such

processes the more they make use of reading strategies (Oxford, 1994). On the other hand, most of the studies conducted regarding the level variable indicated that advanced level learners generally make use of more reading strategies than the other learners belonging to lower levels (Bang & Zhao, 2007; Takeuchi, 2003; Singhal, 2001; Justice & Donran, 2001).

To determine the impact of proficiency level variable on reading strategy use, one way ANOVA was used and the results of the analysis are shown in Tables 23 and 24 below. The results of the analysis indicated that there were no significant difference between the levels in terms of utilization of reading strategies (Table 23). Therefore, the utilization of reading strategies may not show any variation indicating that both beginner and advanced level learners may use the same amount of reading strategies.

Table 23

One Way-Anova and Post-hoc results (OBSKÖ)

Strategy Groups	SS	df	MS	F	p
Within					
Constructing Strategies					0,873
Between	12.180	4	3.045	0,308	*No mean difference
Within	2857.059	289	9.886		
Management Strategies					0,904
Between	11,706	4	2.927	0,260	*No mean difference
Within	3257.290	289	11.271		
Assisting Strategies					0,250
Between	43,142	4	10,785	1,355	*No mean difference
Within	2300,196	289	7,959		
Visualization Strategies					0,616
Between	24,951	4	6,238	0,666	*No mean difference
Within	2707,025	289	9,367		

Self-Regulation Strategies					
Between	25, 800	4	6, 450		0, 238
Within	1342.376	289	4, 645	1, 389	*No mean difference
Planning Strategies					
Between	58, 427	4	14, 607		0, 512
Within	5138, 231	289	17, 779	0, 822	*No mean difference

Table 24 also indicated the difference between the proficiency levels of the participants and their use of reading strategies. It can be inferred from the results that there were no significant differences on all strategy groups. The findings from ANOVA and post hoc test indicated that there may not be specific relationship between strategy use in general and proficiency. Moreover, all the strategy groups did not show a variation by proficiency level which may indicate that both advanced and intermediate learners used the same amount of reading strategies.

Table 24

One Way-Anova and Post-hoc results (ÜBOSÖ)

Strategy Groups	SS	df	MS	F	p
Within	104.515	4	26.129		0,057
Planning Strategies					*No mean difference
Between	2857.059	289	11.254	2.322	
Within					
Supplementary Strategies					
Between	74.123	4	18.531		0,402
Within	5299.323	289	18.337	1.011	*No mean difference
Ignorance Strategies					
Between	38,495	4	9,624		0, 738
Within	5598,879	289	19,373	0, 497	*No mean difference

Text-Referenced Strategies					
Between	46,225	4	11,556	1,201	0, 310
Within	2780,116	289	9,620		*No mean difference
Fix-Up Strategies					
Between	2,357	4	0,589	0,089	0, 986
	1907,788	289	6,601		*No mean difference

The results of the analysis indicated that there was no difference between the grades of the participants in terms of their utilization of reading strategies. However, it can be anticipated that the more experienced learners can make use of more reading strategies. Although there is no difference among the levels in terms of grades, in most of the studies conducted up to now, it was commented that senior learners possibly can make use of more reading strategies due to their background experiences (Oxford, 1994; Justice & Donran, 2001; Hamurcu, 2002). The results of the studies conducted up to now may contradict with the results of the present study, however, the case of not observing any difference in the results obtained from the data can be specific to the participants of this study.

CONCLUSION

The purpose of the study was to adapt two scales invoking reading strategies of learners while reading in English language. As the target sample of the scales was native speakers or L2 learners, the utilization of such scales in Turkey was not reasonable. Therefore, the adaptation and development of the scales to the Turkish culture was conducted so that the instruments could be used in revealing the reading strategies employed by Turkish students while reading in a foreign language. The study was primarily conducted through specific phases regarding the research questions of the study and the scale adaptation and development procedures.

1. What are the factorial constructs of the scales adapted?

The factorial constructs of the scales adapted were revealed through the adaptation process of both scales. Through the adaptation process regarding the translation validity and statistical analyses, the scales with their items were structurally reliable and consistent. The statistical evidence showed that the instrument is comprised of five factors and 18 items and the alpha of the specified strategy groups is over .70 indicating that the items are structurally reliable. The factor analysis results of MRSQ revealed that the scale is consisted of 18 items and 4 strategy groups and the alpha of each strategy group is over .70 showing that the items are structurally reliable and consistent (see Section II). The statistical analyses and translation procedures employed takes full account of the linguistic and cultural differences of the target group. Moreover, the language is appropriate for and familiar to all cultural and language sample for whom the instrument is intended.

2. Are scales and subscales reliable and valid?

In order to optimize the reliability and validity of the adapted scales, addition of new items and factor analyses were conducted. Through the results of the analyses OBSKÖ was comprised of 28 items with six strategy groups and ÜBOSÖ was consisted of 25 items with five strategy groups. The cronbach's alpha of the scales were .82 and .89 showing that the instruments are reliable as a whole (see Section II.1.2).

The results of the adaptation and development studies indicate that the reading strategies may not operate and be regarded similarly in different cultures and such changes can be linked to the linguistic and cultural differences in the country or culture they are utilized. Linguistic and cultural differences may have impact on self-reporting in terms of reflecting own responses on scales, invoking and identifying the strategies suggested in the items and revealing the strategies available in immediate reading environment.

3. Do the reading strategies used by Mersin University ELT Department students differ in terms of sex?

In order to analyze the validity of the scales developed, the sex variable was taken into consideration. The results of the analyses indicated that females made use of more reading strategies than males in both scales. In other words, females' overall use of more reading strategies when compared to males was observed (see Section III.1). Likewise, females' dominance in use of reading strategies was also indicated in several studies (Moss, 2000; Rudell, 2000; Rothman, 2002; Phakiti, 2003; Çöğmen, 2008). The results obtained from the study may serve as a sequence regarding such specific studies related to reading strategies as similar results were obtained in different studies in several countries. Although the results can

be regarded as similar, cultural factors and background experiences need to be taken into consideration while interpreting the results obtained from a specific sample.

4. Do the reading strategies used by Mersin University ELT Department students differ in terms of the level of proficiency of students in English?

Regarding the level variable, the analysis results of both instruments indicated that advanced learners used all reading strategies more frequently than intermediate learners. The grades of the participants were also taken into consideration and the results of the analysis showed that there was no difference between the grades of the participants in terms of their use of reading strategies while dealing with texts (see Section III.2). However, it can be stated that the more experienced learners can make use of more reading strategies as such a fact has been indicated specifically in some studies (Oxford, 1994; Justice & Donran, 2001). Such significance may be linked to the more acquaintance with texts and experience resulting in awareness of one's own cognitive processes.

No variation in the reading strategies used by intermediate and advanced level Turkish EFL students indicate that learners belonging to both levels may make use of the same amount of reading strategies which can be linked to their background experiences and the reading skill which has become the core skill of learning throughout learning process. Such a habitual procedure may have an impact on learners developing conscious tactics throughout their developmental reading process with no regards to their level and sex.

Implications

The developed scales are not without limitations and there are some major limitations regarding the utilization of the scales, self-awareness of readers' use of reading strategies and non use of a combination of methods in identifying the reading strategies of readers. First of all, it needs to be mentioned that it is challenging to identify the reading strategies as they are directly linked to mental processes. The difficulty in utilization of specific and appropriate instruments for invoking such mental processes can be one of the reasons underlying the indicated limitations. Although the administration of reliable and valid scales may give some specific, relevant information and can provide data easy to use in statistical analysis, the participants may not reflect their internal processes specifically or self-report their actual use of strategies evidently. Regarding the limitations of the questionnaires, a combination of some methods such as think-aloud protocols or semi-structured interviews can be used to elicit specific data from the participants in order to conceptualize some specific reading strategies. In terms of the target group of the developed scales, the students must be able to read and write in Turkish as the scale is written in Turkish language. Furthermore, the instrument can be administered to a sample including high school and university students but not to lower grades.

Suggestions for Further Research

The adapted scales can be used with Turkish learners learning English as a foreign language. As the scales were adapted for a specific target group, the results that can be obtained may give some clues about the use of strategies of that group. The data gathered from the scales can provide teachers with specific clues about assessment, inspection and

documentation of the the type and number of the reading strategies used by students. Furthermore, through the utilization of the scales, reliable and valid data can be obtained from the results leading to some studies of a particular group belonging to a specific culture. The students can also become aware of the reading strategies they use and evaluate themselves which may result in thoughtful reading and awareness of own cognitive processes.

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Appendix A:

OKUMA BECERİSİ STRATEJİLERİ KULLANIM ÖLÇEĞİ

Sayın Katılımcı,

Bu ölçek, insanların okurken ne yaptıklarını veya kullandıkları stratejileri içeren ifadelerden oluşmaktadır. Lütfen aşağıdaki 28 ifadeyi dikkatlice okuyup her ifadedeki davranışa **yabancı dilde okurken** ne kadar sıklıkta başvurduğunuzu dikkate alarak size uygun olanı işaretleyiniz.

İFADELER	Asla bana uymaz	Genellikle bana uymaz	Bana biraz uyar	Genellikle bana uyar	Kesinlikle bana uyar
1. Okuduklarımı hayalimde canlandırarak anlamaya çalışırım.					
2. Tüm metni okumadan önce, genel bir fikir edinmek için metni hızlı bir şekilde okurum.					
3. Okuma ortamımı düzenlemeye özen <u>göstermem</u> .					
4. Okurken koptuğum anda, koptuğum noktaya geri dönerim.					
5. Hatırlamama yardımcı olması açısından, gerekli bilgiyi metin içerisinde daire içine alırım veya o bilginin altını çizerim.					
6. Okuma hızımı okuduğum metnin türüne göre ayarlarım.					
7. Okuduklarımı hatırlamama yardımcı olması bakımından, okuduklarımı betimlemeye ve hayalimde canlandırmaya çalışırım.					
8. Metni okumadan önce, ne hakkında olduğunu görmek için önizleme yaparım.					
9. Okuduğum metni daha iyi anlayabilmek için farklı açılardan bakmaya gerek <u>duymam</u> .					
10. Konsantrasyonumu kaybettiğimde okuduğum konuya geri dönmeye çalışırım.					
11. Okuduğum metni anlamama yardımcı olması açısından metni okurken notlar alırım.					
12. Okuma hızımı okuduğum metne bağlı olarak ayarlarım.					
13. Öğrendiğim yeni kelimeleri bir durumun içinde resmederek öğrenirim.					
14. Okumaya başlamadan önce hedeflerimi belirlerim.					
15. Okurken önemli bilgilerin altını çizmekle <u>uğraşmam</u> .					
16. Okuduğum metin zorlaştığı zaman, metni daha iyi anlayabilmek açısından metni tekrar okurum.					
17. Tüm metnin ana düşüncesini anlamaya çalışırken, metni baştan sona okumaya ve zor kelimelerin ve sözcük gruplarının altını çizmeye çalışırım.					
18. Okuduğum metni anlamadığım zaman, okuma şeklimi değiştiririm.					
19. Metinde sunulan bilgiyi zihnimde var olan bilgiyle karşılaştırarak okurum					

İFADELER	Asla bana uymaz	Genellikle bana uymaz	Bana biraz uyar	Genellikle bana uyar	Kesinlikle bana uyar
20. Okuyacağım metni inceleyip, göz gezdirdikten sonra ne tür metin okuyacağımı belirlemeye çalışırım.					
21. Okuduğum konu ile önceki bilgilerim arasında bağlantı kurma ile uğraşmam.					
22. Okuduğumu anlamadığım zaman, metni tekrar okur ve anlamaya çalışırım.					
23. Metnin içerisindeki karmaşık yapıdaki cümleleri anlayabilmek için metni cümleciklere/parçalara ayırırım.					
24. Okurken ara sıra durur ve kendime metinle ilgili sorular sorarak metni ne derece anladığımı kontrol ederim.					
25. Uzunluk ve düzen gibi özelliklere dikkat ederek metne göz gezdiririm.					
26. Okuduğum parçanın ana hatlarını zihnimde tasarlamakla uğraşmam.					
27. Okurken, önemli olanla olmayan bilgiyi birbirinden ayırabilirim.					
28. Okuduğum metni zihnimde var olan belli amaçlar çerçevesinde okurum.					

Appendix B:

ÜSTBİLİŞ OKUMA STRATEJİLERİ ÖLÇEĞİ

Sayın Katılımcı,

Bu ölçek, insanların okurken ne yaptıklarını veya kullandıkları stratejileri içeren ifadelerden oluşmaktadır. Lütfen aşağıdaki 25 ifadeyi dikkatlice okuyup her ifadedeki davranışa **yabancı dilde okurken** ne kadar sıklıkta başvurduğunuzu dikkate alarak size uygun olanı işaretleyiniz.

İFADELER	Asla bana uymaz	Genellikle bana uymaz	Bana biraz uyar	Genellikle bana uyar	Kesinlikle bana uyar
1. Okumaya başlamadan önce hedeflerimi belirlerim.					
2. Okuduklarımı hatırlamak için notlar alırım.					
3. Okuduğum metin ve önceden sahip olduğum bilgim arasında bağlantı <u>kurmam</u> .					
4. Metni anlamam için gerekli olan önemli bilgi metin içinde doğrudan ifade edilmediği durumda, bu bilgiyi metinden çıkarmaya çalışırım.					
5. Okuduklarımı anladığımdan emin olmak için daha yavaş ve daha dikkatli okurum.					
6. Metnin içeriğinin hedefime uygun olup olmadığı hakkında düşünürüm.					
7. Okurken, metni daha iyi bir şekilde anlamak için sayfanın kenarına sorular ve notlar yazarım.					
8. Okuma amacıma yönelik bilgiyi metinde bulmaya <u>çalışmam</u> .					
9. Okuduğumu anlamama yardımcı olması bakımından o konuyla ilgili önceki bilgilerimden yararlanmaya çalışırım.					
10. Öğrendiklerimi hatırlamak için metni bir defadan fazla okurum.					
11. Okuduğum metnin amaçlarıma ne kadar hizmet ettiğine odaklanırım.					
12. Daha sonra kolay bir şekilde bulabilmem için metnin içerisinde önemli olduğunu düşündüğüm bilginin altını çizerim.					
13. Metni anlamakta zorlandığım zaman, metni yeniden <u>okumam</u> .					
14. Okuduğum metnin konuyla ilgili önceden sahip olduğum bilgilerime katkıda bulunup bulunmadığımı değerlendiririm.					

İFADELER	Asla bana uymaz	Genellikle bana uymaz	Bana biraz uyar	Genellikle bana uyar	Kesinlikle bana uyar
15. Metnin içerisindeki fikirler arasında bağlantı bulmak için metni ileri geri giderek okurum.					
16. Okuma hedeflerim ve metnin içeriği arasındaki tutarlılık hakkında düşünürüm.					
17. Daha sonra hatırlamak için önemli bilgilerin altlarını çizmeye çalışırım.					
18. Okurken, metni daha iyi anlayabilmek için anlatılanları hayalimde <u>canlandırmam</u> .					
19. Okurken, metnin içeriğine bakarak konuyla ilgili bilgilerimi tekrar düşünür ve gözden geçiririm.					
20. Okuduğum metin zorlaştığı zaman, metni daha dikkatli bir şekilde okurum.					
21. Uzunluk ve düzen gibi özelliklere dikkat ederek metne göz gezdiririm.					
22. Daha sonra hatırlamama yardımcı olması bakımından okuduğum metnin önemli bölümlerinin altını çizerim.					
23. Okurken, sözlük ve imla kılavuzu <u>kullanmam</u> .					
24. Okuduğum bir metinden öğrendiğim yeni bilgileri ne yönde kullanmam gerektiği hakkında düşünürüm.					
25. Metinde bahsedilecek bilgiyi önceden tahmin ederim.					

Appendix C : Tables

Table 1.

Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.922	22.371	22.371	4.922	22.371	22.371	2.405	10.933	10.933
2	2.229	10.131	32.502	2.229	10.131	32.502	2.240	10.183	21.116
3	1.577	7.169	39.672	1.577	7.169	39.672	2.181	9.913	31.029
4	1.155	5.252	44.924	1.155	5.252	44.924	2.083	9.467	40.496
5	1.083	4.924	49.848	1.083	4.924	49.848	1.578	7.173	47.669
6	1.001	4.550	54.398	1.001	4.550	54.398	1.480	6.729	54.398
7	.961	4.369	58.766						
8	.885	4.022	62.788						
9	.810	3.680	66.469						
10	.754	3.426	69.895						
11	.731	3.322	73.218						
12	.675	3.070	76.288						
13	.633	2.877	79.165						
14	.623	2.830	81.994						
15	.605	2.749	84.744						
16	.565	2.569	87.313						
17	.542	2.463	89.776						
18	.523	2.376	92.152						
19	.469	2.133	94.285						
20	.451	2.051	96.336						
21	.430	1.955	98.291						
22	.376	1.709	100.000						

Table 2.

Factor loadings and communalities based on a principle components analysis with varimax with Kaiser Normalization rotation for Reading Strategy Use

	Component					
	1	2	3	4	5	6
SMEAN(M5)	.700					
SMEAN(M2)	.653					
SMEAN(M8)	.614					
SMEAN(M11)	.572					
SMEAN(M22)		.754				
SMEAN(M9)		.715				
SMEAN(M21)		.689				
SMEAN(M15)		.569				.543
SMEAN(M18)	.332		.766			
SMEAN(M17)			.676			
SMEAN(M19)			.603			
SMEAN(M16)			.503	.332		
SMEAN(M13)			.430			.398
SMEAN(M6)				.780		
SMEAN(M7)				.669		
SMEAN(M10)				.503		.441
SMEAN(M4)	.382			.449	.358	
SMEAN(M20)					.761	
SMEAN(M14)					.644	
SMEAN(M3)						.470
SMEAN(M1)					.399	.442
SMEAN(M12)	.358			.379		.392

Table 5.
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	6.164	28.017	28.017	6.164	28.017	28.017	3.110	14.136
2	2.141	9.734	37.751	2.141	9.734	37.751	2.865	13.024	27.160
3	1.331	6.050	43.800	1.331	6.050	43.800	2.834	12.884	40.044
4	1.205	5.479	49.280	1.205	5.479	49.280	2.032	9.236	49.280
5	.968	4.401	53.681						
6	.953	4.331	58.011						
7	.895	4.068	62.079						
8	.818	3.719	65.799						
9	.803	3.648	69.447						
10	.779	3.540	72.987						
11	.726	3.302	76.289						
12	.688	3.127	79.416						
13	.625	2.839	82.256						
14	.579	2.630	84.885						
15	.547	2.487	87.373						
16	.528	2.400	89.772						
17	.465	2.114	91.886						
18	.436	1.982	93.869						
19	.410	1.863	95.732						
20	.396	1.799	97.531						
21	.334	1.520	99.050						
22	.209	.950	100.000						

Table 6.
Factor loadings and communalities based on a principle components analysis with varimax with Kaiser normalization rotation for the Metacognitive Reading Strategies Questionnaire (MRSQ)

	Components			
	1	2	3	4
SMEAN(M5)	.720			
SMEAN(M3)	.693			
SMEAN(M1)	.635			
SMEAN(M6)	.596			
SMEAN(M2)	.588			
SMEAN(M4)	.450			
SMEAN(M7)	.449		.364	
SMEAN(M19)		.826		
SMEAN(M17)		.794		
SMEAN(M18)		.789		
SMEAN(M20)		.764		.303
SMEAN(M11)			.594	
SMEAN(M15)			.583	.316
SMEAN(M9)	.380		.545	
SMEAN(M8)			.540	
SMEAN(M14)			.535	
SMEAN(M10)	.302		.523	
SMEAN(M13)			.518	.313
SMEAN(M16)			.515	
SMEAN(M22)				.771
SMEAN(M21)				.704
SMEAN(M12)			.300	.523

Table 9.
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	10.473	24.356	24.356	10.473	24.356	24.356	4.464	10.382
2	2.982	6.936	31.291	2.982	6.936	31.291	3.858	8.972	19.354
3	2.053	4.774	36.066	2.053	4.774	36.066	3.063	7.122	26.477
4	1.676	3.897	39.963	1.676	3.897	39.963	2.996	6.968	33.445
5	1.360	3.163	43.126	1.360	3.163	43.126	2.408	5.600	39.045
6	1.253	2.913	46.039	1.253	2.913	46.039	2.359	5.487	44.532
7	1.156	2.689	48.728	1.156	2.689	48.728	1.515	3.523	48.054
8	1.063	2.471	51.199	1.063	2.471	51.199	1.352	3.145	51.199
9	.988	2.297	53.496						
10	.966	2.247	55.743						
11	.935	2.174	57.917						
12	.913	2.124	60.041						
13	.908	2.111	62.152						
14	.873	2.029	64.182						
15	.841	1.957	66.138						
16	.796	1.851	67.989						
17	.788	1.831	69.820						
18	.750		71.565						
19	.736	1.711	73.276						
20	.729	1.695	74.972						
21	.682	1.586	76.558						
22	.653	1.520	78.078						
23	.633	1.473	79.551						
24	.618	1.437	80.988						
25	.613	1.427	82.414						
26	.584	1.359	83.773						
27	.565	1.313	85.086						
28	.538	1.252	86.338						
29	.493	1.148	87.486						
30	.491	1.143	88.629						
31	.466	1.084	89.713						
32	.460	1.071	90.784						
33	.448	1.041	91.825						
34	.437	1.016	92.842						
35	.434	1.010	93.851						
36	.407	.947	94.799						
37	.377	.878	95.676						
38	.362	.841	96.518						
39	.335	.780	97.298						
40	.325	.756	98.054						
41	.304	.708	98.762						
42	.282	.656	99.418						
43	.250	.582	100.000						

Table 10.

Factor loadings and communalities based on a principle components analysis with varimax with Kaiser normalization rotation for Reading Strategy Use (RSU).

Components	1	2	3	4	5	6	7	8
SMEAN(M13)	.671							
SMEAN(M25)	.611							
SMEAN(M19)	.585							
SMEAN(M30)	.578							
SMEAN(M38)	.548					.357		
SMEAN(M21)	.533	.426						
SMEAN(M2)	.473						-.387	
SMEAN(M8)	.461						.385	
SMEAN(M27)	.438	.408						
SMEAN(M28)	.417	.319						
SMEAN(M5)	.361	.349						
SMEAN(M37)		.722						
SMEAN(M29)		.597						
SMEAN(M3)		.490					.398	
SMEAN(M12)		.466					.354	
SMEAN(M36)		.464	.395					
SMEAN(M33)		.457				.447		
SMEAN(M18)		.453						
SMEAN(M1)		.440						
SMEAN(M20)		.423			.418			
SMEAN(M10)		.364						
SMEAN(M22)			.727					
SMEAN(M16)			.703					
SMEAN(M11)	.326		.696					
SMEAN(M17)		.376	.489		.348			
SMEAN(M23)		.328	.479					
SMEAN(M26)				.718	.301			
SMEAN(M24)				.715				
SMEAN(M32)				.685				
SMEAN(M14)				.622				
SMEAN(M6)				.523				.320
SMEAN(M9)	-.325			-.455				
SMEAN(M31)					.663			
SMEAN(M39)					.554			
SMEAN(M35)		.373			.539			
SMEAN(M41)					.448			.383
SMEAN(M43)						.651		
SMEAN(M42)	.363					.646		
SMEAN(M40)	.499					.547		
SMEAN(M34)						.480		
SMEAN(M7)							.633	
SMEAN(M4)								-.713
SMEAN(M15)	.351		.354					.419

Table 14.
Total Variance Explained

1	9.312	26.605	26.605	9.312	26.605	26.605	3.731	10.660	10.660
2	3.022	8.635	35.240	3.022	8.635	35.240	3.404	9.726	20.386
3	1.778	5.081	40.321	1.778	5.081	40.321	3.175	9.070	29.457
4	1.318	3.765	44.086	1.318	3.765	44.086	3.145	8.985	38.441
5	1.190	3.400	47.486	1.190	3.400	47.486	2.087	5.964	44.405
6	1.137	3.247	50.733	1.137	3.247	50.733	1.769	5.054	49.460
7	1.083	3.095	53.828	1.083	3.095	53.828	1.361	3.888	53.347
8	1.002	2.863	56.691	1.002	2.863	56.691	1.170	3.344	56.691
9	.914	2.612	59.302						
10	.903	2.579	61.882						
11	.846	2.418	64.300						
12	.802	2.291	66.591						
13	.783	2.238	68.829						
14	.759	2.167	70.996						
15	.746	2.131	73.127						
16	.717	2.049	75.177						
17	.646	1.846	77.023						
18	.645	1.844	78.866						
19	.622	1.777	80.643						
20	.605	1.728	82.371						
21	.559	1.598	83.968						
22	.534	1.526	85.494						
23	.513	1.465	86.959						
24	.502	1.434	88.393						
25	.473	1.353	89.745						
26	.456	1.303	91.048						
27	.427	1.219	92.268						
28	.406	1.160	93.428						
29	.391	1.117	94.545						
30	.367	1.049	95.594						
31	.360	1.029	96.623						
32	.325	.929	97.553						
33	.316	.904	98.457						
34	.287	.821	99.278						
35	.253	.722	100.000						

Table 15.

Factor loadings and communalities based on a principle components analysis with promax with Kaiser normalization rotation for Metacognitive Reading Strategies Questionnaire (MRSQ)

	Component							
	1	2	3	4	5	6	7	8
SMEAN(M22)	.717							
SMEAN(M8)	.696							
SMEAN(M35)	.615							.303
SMEAN(M32)	.608							
SMEAN(M12)	.542							
SMEAN(M21)	.425	.304	.341		.331			
SMEAN(M4)		.720						
SMEAN(M19)		.719						
SMEAN(M9)		.699						
SMEAN(M24)		.696			.324			
SMEAN(M14)		.663						
SMEAN(M1)			.720					
SMEAN(M3)			.705					
SMEAN(M11)			.630					
SMEAN(M16)			.535					
SMEAN(M2)	.451		.521					
SMEAN(M6)	.319		.511					
SMEAN(M13)				.744				
SMEAN(M29)				.740				
SMEAN(M10)				.728				
SMEAN(M23)				.685				
SMEAN(M33)				.547				
SMEAN(M17)				.517				
SMEAN(M25)					.746			
SMEAN(M20)		.330	.343		.551			
SMEAN(M27)	.397				.527			
SMEAN(M26)	.386				.441			
SMEAN(M31)						.665		
SMEAN(M30)						.528		
SMEAN(M18)	.393					.478		-.362
SMEAN(M5)							.738	
SMEAN(M7)	.418	.317					.454	
SMEAN(M15)						.328	.431	
SMEAN(M28)								.604
SMEAN(M34)				.428				.569

