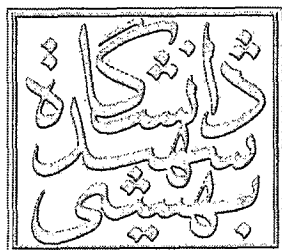


IN THE NAME OF GOD



SHADID BEHESHTI UNIVERSITY  
FACULTY OF LETTERS AND HUMANITIES  
DEPARTMENT OF ENGLISH

**THE RELATIONSHIP BETWEEN TEST-TAKERS'  
COGNITIVE AND METACOGNITIVE STRATEGY USE  
AND THEIR SECOND LANGUAGE TEST  
PERFORMANCE**

By  
Mahsa Seif Reihani

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Thesis Supervisor: Dr. Anani Sarab  
Thesis Reader: Dr. Fatemi Jahromi

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## Abstract

This thesis aimed at investigating the relationship between test takers' cognitive and metacognitive strategy use and their second language test performance. The researcher employed the following instruments in order to get introspective and retrospective data from the participants: 1) a multiple-choice test on two reading passages. 2) a checklist of specific strategies for immediate introspective use after each item. 3) a questionnaire on more general strategies for retrospective use at the end of the test. Of the two reading passages, the first one was intended to be easy and the second one difficult.

The tests and questionnaires were administered to 70 female students in Goldis Institute in Tabriz. The approximate proficiency level of the participants appeared to be intermediate. SPSS 16.0 was utilized for data analysis. Dealing with frequencies obtained regarding each variable, the researcher conducted Chi-Square tests to investigate the possible relationship between the variables. Findings of the research indicate that a) respondents employed cognitive and metacognitive strategies in the process of responding to reading comprehension questions, b) in both easy and difficult reading passages, there was use of contributory and noncontributory cognitive strategies; but the average use per respondent of contributory strategies on the two levels of difficulty was higher than the use of noncontributory ones, c) in the easy test there was a significant relationship between getting the correct answer and using contributory strategies, whereas in the difficult test no such relationship was found between those two variables, d) the findings of this study also revealed that in the easier test there was greater use of contributory strategies than in the difficult one.

*To my dear mother and father*

*And my husband*

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## Table of contents

Title page .....	i
Abstract .....	ii
Dedication .....	iii
Acknowledgements .....	iv
List of tables .....	x
Glossary of Abbreviations .....	xi
<b>1. Introduction</b>	
1.1. Introduction .....	1
1.2. Statement of the problem .....	6
1.3. Research questions .....	7
1.4. Research hypotheses .....	8
1.5. Rationale of the study .....	8
1.6. Limitations of the study .....	8
1.7. Definitions of the key terms .....	9
<b>2. Review of the literature</b>	
2.1. Introduction .....	11
2.1.1. Behaviorism .....	12
2.1.2. Cognitive psychology .....	13
2.1.3. Constructivism .....	13
2.1.4. Humanism .....	13

2.1.5. Social Interactionism .....	14
2.2. Language learning styles.....	16
2.3. Language learning strategies .....	16
2.3.1. Classification of language learning strategies .....	18
2.3.2. Learning styles and strategies.....	19
2.3.3. Learner strategy elicitation techniques.....	20
2.3.3.1. Oral interviews and written questionnaires .....	21
2.3.3.2. Observation .....	22
2.3.3.3. Verbal reports .....	23
2.3.3.4. Diaries .....	24
2.3.4. Variables affecting the choice of strategies .....	25
2.3.5. Effectiveness and orchestration of L2 learning strategies .....	26
2.3.6. Proficiency and language learning strategies .....	27
2.4. Criticisms of learner strategy research .....	28
2.4.1. Self-regulation vs. Metacognition .....	32
2.5. Developments in learner strategy research .....	33
2.6. Strategy training .....	34
2.6.1. Listening .....	38
2.6.2. Speaking .....	39
2.6.3. Writing .....	40
2.6.4. Reading .....	40

<b>2.7. Strategies in test taking</b> .....	<b>43</b>
<b>2.7.1. What is meant by test-taking strategies?</b> .....	<b>44</b>
<b>2.7.2. Early works on test-taking strategies.</b> .....	<b>46</b>
<b>2.7.3. Language proficiency related to test-taking strategies</b> .....	<b>51</b>

### **3. Methodology**

<b>3.1. Introduction</b> .....	<b>56</b>
<b>3.2. Design.</b> .....	<b>56</b>
<b>3.3. Participants</b> .....	<b>56</b>
<b>3.4. Instruments</b> .....	<b>57</b>
<b>3.5. Procedure</b> .....	<b>59</b>
<b>3.6. Data analysis.</b> .....	<b>61</b>

### **4. Results and discussion**

<b>4.1. Introduction.</b> .....	<b>63</b>
<b>4.2. Results</b> .....	<b>63</b>
<b>4.2.1. RQ#1: What are the types and frequency of strategies used by the test-takers while taking EFL reading comprehension tests?</b> .....	<b>63</b>
<b>4.2.2. RQ#2: How frequently do contributory and noncontributory strategies used in taking EFL tests contribute to correct responses as opposed to incorrect ones?</b> .....	<b>69</b>
<b>4.2.3. <math>H_0^1</math>: There is no relationship between the frequency of contributory and noncontributory strategies and the correct and incorrect responses.</b> .....	<b>70</b>

4.2.4. $H_0^2$ : There is no relationship between the type of strategy and difficulty of the passage. ....	72
4.3. Discussion .....	73
4.3.1. RQ#1: What are the types and frequency of strategies used by the test-takers while taking EFL reading comprehension tests? .....	73
4.3.2. RQ#2: How frequently do contributory and noncontributory strategies used in taking EFL tests contribute to correct responses as opposed to incorrect ones? .....	74
4.3.3. $H_0^1$ : There is no relationship between the frequency of contributory and noncontributory strategies and the correct and incorrect responses. ....	75
4.3.4. $H_0^2$ : There is no relationship between the type of strategy and difficulty of the passage. ....	75
<b>5. Conclusion</b>	
5.1. Introduction .....	76
5.2. Overview of the study .....	76
5.3. Method .....	77
5.4. Outcomes .....	78
5.5. Implications for pedagogical practice. ....	79
5.6. Suggestions for further research .....	80
5.7. Sum up .....	81



**References** ..... 82

**Appendixes**

**Appendix A (Multiple-choice test on two reading passages)** .....88

**Appendix B ( A checklist of strategies for immediate use after each item)** .... 91

**Appendix C ( A questionnaire on more general strategies)** ..... 93

## List of Tables

<b>Table 4.1.</b> Frequency and average use per respondent of primary contributory strategies across all test items .....	<b>64</b>
<b>Table 4.2.</b> Frequency and average use per respondent of primary noncontributory strategies across all test items .....	<b>65</b>
<b>Table 4.3.</b> Frequency and average use per respondent of secondary contributory strategies across all test items .....	<b>65</b>
<b>Table 4.4.</b> Frequency and average use per respondent of secondary noncontributory strategies across all test items .....	<b>66</b>
<b>Table 4.5.</b> Contribution of strategies to answers: Easy test .....	<b>69</b>
<b>Table 4.6.</b> Contribution of strategies to answers: Difficult test .....	<b>69</b>
<b>Table 4.7.</b> Use of strategies across all test items .....	<b>70</b>
<b>Table 4.8.</b> Chi-square test on the contribution of strategies to answers: Easy test .....	<b>71</b>
<b>Table 4.9.</b> Chi-square test on the contribution of strategies to answers: Difficult test ..	<b>71</b>
<b>Table 4.10.</b> Use of strategies with easy and difficult tests .....	<b>72</b>
<b>Table 4.11.</b> Chi-square test on the relationship between type of strategies and difficulty of the passage .....	<b>72</b>

## Glossary of abbreviations

<b>FLL</b>	Foreign language learning
<b>LT</b>	Language testing
<b>LTP</b>	Language test performance
<b>SL</b>	Second language
<b>SLA</b>	Second language acquisition
<b>SLTP</b>	Second language test performance
<b>TLU</b>	Target language use
<b>TW</b>	Test wiseness

# **1. Introduction**

## **1.1. Introduction**

Learners bring their own individual characteristics, beliefs, perceptions, and personalities to the learning situations. Research shows that learners draw upon their existing knowledge and use their personal attributes in the process of learning. What is clear from cognitive psychology is that learners are not passive in the process of learning; rather, they are actively involved (Williams & Burden, 1997).

Since the 1970s, research in second language (SL) education has shifted from examining the methods of teaching to investigating the processes of learning. This refocusing has made researchers aim at investigating learner characteristics, and this has stirred considerable interest in the learning process and the relationship between learner strategy use and the processes and products of SLA. L2 learning strategies, as one of the individual difference variables, have gained increasing popularity among researchers who are interested in understanding how languages are learned (Hsiao & Oxford, 2002).

Experiences in learning and/ or teaching a second or foreign language have shown that there is no single magic formula for successful language learning. One of the ways which has been repeatedly reported to help learners be successful, is the persistent use of a whole battery of strategies for language learning, irrespective of whether the learner is in a regular language learning classroom or working on a self-study program (Brown, 2001).

The notion of independent successful learners is closely related to the increasing importance now attached to the learner-centered approach to language teaching, which is based on the assumption that language learners who take greater control of their learning will become more

successful than those who do not. Accordingly, the strategies employed by successful or good language learners have become the focus of attention among teachers and researchers (Fan, 2003).

According to Abbott (2006), researching L2 strategies has proved to be a complex endeavor, as the concept of strategy is difficult to define, observe, measure, describe, and classify. Despite the lack of consensus regarding what constitutes a strategy, numerous

researchers use the term *strategies* to refer to the mental processes or behaviors that language learners employ in L2 acquisition, L2 use, or L2 testing situations.

An early definition by Rigney (1978) as cited in Griffiths (2003) of learning strategies as operations employed by the learner for acquiring, retaining, retrieving or performing has formed the basis of definitions since developed by several major writers in the field. Oxford (1990) expands this definition by saying: "Learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, more transferable to new situations" (p. 8). The fact that learners can choose strategies has been used by Cohen (1998) and Oxford (1990) to argue for the addition of a further dimension to a definition of language learning strategies: that of consciousness. Cohen asserts that the conscious choice factor is important to the language learning strategy concept because "the element of consciousness is what distinguishes strategies from those processes that are not strategic" (Cohen, 1998, p. 4).

In the 80s and early 90s, research mainly focused on categorizing the strategies found in the studies of the previous decade. As a result, several taxonomies were proposed to classify them. O'Malley and Chamot (1990), for instance, have divided the strategies into three main branches: cognitive, metacognitive, and socio-affective, each of which includes lots of sub-strategies. On

the other hand, Oxford (1990) has proposed a more comprehensive model in which six categories, classified into two groups of direct and indirect exist. The direct strategies include memory, cognitive, and compensation while indirect strategies include metacognitive, affective, and social.

These categories overlap and integrate a variety of phenomena. Also, it is unclear how they contribute to better proficiency in different skill areas in the long run and how they interact with other factors contributing to success in SLA and FLL. Therefore, it is not surprising that, recently, doubts have been voiced concerning the theoretical soundness of the concept of "learning strategy." As Do"myei and Skehan (2002, p. 610 as cited in Nikolov, 2006) pointed out, "definitions and conceptualizations offered in the L2 literature were rather inconsistent and elusive." They suggested that by merging and matching typologies and by excluding communication strategies as compensation strategies following Cohen (1998a), four main classes of learning strategy remain: cognitive, metacognitive, social, and affective. They also link strategy research in SLA to educational psychology research, in which the construct of self-regulation integrating motivational strategies has been recently introduced.

One of the major questions related to the use of strategies is whether using more strategies makes learners more successful, or, on the contrary, whether more proficient learners do not need to apply strategies. Finally, it has been widely accepted that strategies emerge naturally(Nikolov, 1990 as cited in Nikolov, 2006), are teachable, and contribute to learner autonomy both in language learning and language use(O'Malley & Chamot,1990; Oxford,1990).

Since the late 1970s, interest has slowly begun to grow in approaching L2 testing from the point of view of the strategies used by respondents while taking the tests (Cohen, 1998).The purpose of the research on how students go through the process of taking language tests, has

been to explore the tester's presumptions about what is being tested and the actual processes that the test-taker goes through. The findings are helpful, both for understanding about weaknesses in tests and about successful and unsuccessful test-taking strategies. "Thus, due to flaws in the test or due to certain test-taking strategies, respondents may not be displaying a representative performance of their language competence ", (Cohen, 1984, p.71).

As a new trend in language testing research, researchers have expressed increasing interest in investigating test-taker's cognitive characteristics that may have an effect on language test performance (LTP) (Purpura, 1997). This has paved the way for the researchers to focus on test-taking strategies. Test-taking strategies involve strategies learners apply while performing language test tasks. They can be "viewed simply as learner strategies applied to the area of assessment" (Cohen, 1994, p.119 as cited in Nikolov, 2006). Nikolov (2006) compared test-taking strategies with learning strategies and stated that test-taking strategies, similarly to learning strategies, are not inherently effective or ineffective; rather, their successful use depends on whether they are appropriate for a particular task and are appropriately used while doing it.

Although these advances are encouraging, researchers have just begun to investigate the interaction between cognitive and metacognitive processing and second language test performance (SLTP). In fact, only a handful of researchers have considered the extensive literature in learner strategies and cognitive psychology for inspiration in investigating the role of cognitive and metacognitive processing in LTP.

The current explosion of research in second language reading has begun to focus on readers' strategies. Relevant research has shown that novice readers, often focus on decoding single words, fail to adjust their reading for different texts or purposes, and seldom look ahead or back in texts to monitor comprehension. According to Carrell (1998), strategic reading is a prime

characteristic of expert readers as they are totally concerned with “reading for meaning” and the development of this cognitive ability. Crandall et al. (2002) stated, that because academic and cognitive demands increase with every grade level, the need for continued improvement in students' reading ability becomes especially urgent for students struggling to achieve at the same levels as their native-English-speaking peers. Teachers can use a variety of strategies to ensure that students are actively engaged in reading. They can explicitly teach what good readers do and give learners opportunities to interact with both teacher-selected and self-selected texts.

Koda (2007) states that L2 reading is crosslinguistic and, thus, inherently more complex than L1 reading. For this reason, helping L2 learners become strategic readers will be of paramount importance in SLA process. Cohen( 2003a) states that strategy training aims to provide learners with the tools to do the following:

1. Self-diagnose their strengths and weaknesses in language learning
2. Become aware of what helps them to learn the target language more efficiently
3. Develop a broad range of problem-solving skills
4. Experiment with familiar and unfamiliar learning strategies
5. Make decisions about how to approach a language task
6. Monitor and self-evaluate their performance
7. Transfer successful strategies to new learning contexts

Rivers (2001) argues that research has shown broad similarities among expert learners which include: more use than novices of cognitive and metacognitive strategies to organize input and knowledge, and a general tendency to reorganize learning tasks along deeper abstract and conceptual structures and schemata, rather than along surface structures.



Reading strategies are of interest for what they reveal about the way readers manage their interactions with written texts and how these strategies are related to text comprehension.

Learner strategies can be broadly divided into learning strategies and use strategies. Strategies that learners purposefully use to enhance their language learning are called learning strategies, whereas strategies they purposefully employ to enhance their performance are use strategies. Prior to testing situations, learning strategies help learners acquire knowledge and store it long-term memory. In a test or target language use (TLU) situation, strategies will help learners to retrieve necessary knowledge in the long-term memory to deal with task difficulty (Gagne et al., 1993 as cited in Phakiti, 2003).

LT researchers tend to look at use strategies rather than learning strategies when attempting to explain variation in specific language test performance (Phakiti, 2003).

Therefore, the concern in this study is to consider the processes in test taking so as to determine the processes that the test-takers use in order to produce acceptable answers to test items.

## **1.2. Statement of the problem**

It is noted that the use of verbal reports, oral interviews, and written questionnaires will be of great help in identifying test-taking strategies. The concern is to consider the processes in test taking so as to determine the effects of the test input upon test-takers- that is the processes that the test takers make use of to answer to test questions in an acceptable way. In recent years, there has been a growing concern among researchers about the role of test-taking strategy data in validating language tests. Tests may produce misleading results because of numerous test-wisness strategies that test-takers use for obtaining correct answers without fully understanding

the text.

Millman et al. (1965) cited in Slakter et al. (1970) defines test-wiseness(TW) as “a subject’s capacity to utilize the characteristics and formats of the test and/or test taking situation to receive a high score”.

Gibb(1994) defines TW as the test taker's ability to respond advantageously to multiple-choice items containing extraneous clues and therefore to obtain credit without knowledge of the subject matter being tested (Gibb, 1994 as cited in Diamond & Evans, 1972).

Various authors have conjectured that TW procedures are additional sources of variance in educational test scores in addition to item content or random error. So it is being increasingly recommended that language testing researchers consider validating the testing measures by not only using the traditional validity measures, but also by collecting test-taking strategy data on testing situations.

Clearly, the problem focused in the present research is to identify the types of strategies used by test-takers which in turn will be a possible source of insight concerning test validity.

### **1.3. Research questions**

The present study is supposed to provide answers to the following research questions.

1. What are the types and frequency of strategies used by the test-takers while taking the EFL reading tests?
2. How frequently do contributory and noncontributory strategies used in taking EFL reading tests contribute to correct responses as opposed to incorrect ones?
3. Is there a relationship between the frequency of contributory and noncontributory strategies and the correct and incorrect responses?
4. Is there a relationship between the type of strategies and difficulty of the passage?

#### **1.4. Research hypotheses**

1. There is no relationship between the frequency of contributory and noncontributory strategies and the correct and incorrect responses.
2. There is no relationship between the type of strategies and difficulty of the passage.

#### **1.5. Rationale of the study**

Language testing (LT) research has tended to concern itself with providing a model of language ability. Its primary aim has been not only to describe and assess the language ability of an individual, but also to construct an extensive theory of language test performance variation and the correspondence between test performance and nontest language use. In recent years, many LT researchers have been concerned with the identification of individual characteristics that may influence variation in performance on language tests (Bachman, 1991).

This study is concerned with the identification and characterization of individual characteristics (i.e., test-takers' cognitive and metacognitive strategy use) that may cause variation in performance on language test. This research holds an interest in the relationship between cognitive background variables and language use, in order to investigate the factors other than language ability that affect language test performance.

#### **1.6. Limitations of the study**

Due to the time limitation and the facility available to the researcher, the study has certain limitations which might restrict the generalizability of the results. First the sample was not selected randomly. Second, only female students were included in the study. The results of this study need to be interpreted cautiously. The researcher was allowed to use only half of the class

time and because of that she was able to use just two tests (one easy and one difficult).

### 1.7. Definitions of the key terms

**Language learning strategies:** Specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations (Oxford,1990,p.8).

**Test-taking strategies:** According to Cohen (1992) “test-taking strategies will be viewed as those test-taking processes which the respondents have selected and which they are conscious of, at least to some degree”(p.102).

Test-taking strategies consist of both language use strategies and test-wiseness strategies. Language use strategies include retrieval strategies, rehearsal strategies, cover strategies, and communication strategies. These various language use strategies constitute test-taking strategies when they are used to help produce responses to testing tasks(Cohen,1998a).

Test-wiseness strategies are defined by Millman et al.(1965) as “a subject’s capacity to utilize the characteristics and formats of the test and/or the test-taking situation to receive a high score.” (Millman et al.,(1965) cited in Sarnacki,1979).

**Cognitive strategies:** Cognitive strategies are mental processes directly concerned with the processing of information in order to learn, that is for obtaining , storage, retrieval, or use of information (Williams & Burden, 1997, p.148).