IN THE NAME OF GOD
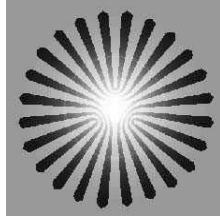
THE MOST MERCIFUL, THE MOST

COMPASSIONATE

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The Relationship between Cognitive and Metacognitive Strategy Use and

EFL Listening Test Performance

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TO MY DEAR FAMILY

FOR THEIR LOVE, SUPPORT, AND UNDERSTANDING

Abstract

This study aimed to investigate the relationship between cognitive and metacognitive strategy use and Iranian EFL learners' listening test performance. More specifically, this study tried to examine Iranian EFL students' use of different cognitive and metacognitive test-taking strategies and the most and the least frequently used cognitive or metacognitive strategies by the students while performing listening comprehension tests. The further concern of this study was investigating the relationship between the cognitive and metacognitive strategy use and Iranian EFL learners' listening comprehension test performance. This study also aimed to investigate whether advanced, upper intermediate and intermediate Iranian EFL learners differ in the use of cognitive and metacognitive test-taking strategies. A total of 96 male and female EFL students studying ICT, Computer Engineering, and Electrical Engineering at Shahab Danesh Institute of Higher Education in Qom, Iran participated in this study. The collected data included listening comprehension achievement scores and responses to a 25-item five-point likert-scale cognitive and metacognitive questionnaire. Transcripts of retrospective interviews with 4 advanced, and 4 intermediate test-takers were also used to further clarify the quantitative analyses. Results of the analyses indicated that (1) Iranian EFL students participating in this study resorted more to metacognitive strategies than cognitive strategies, (2) the use of cognitive and metacognitive test-taking strategies had a positive correlation with the listening test performance, (3) the cognitive and metacognitive strategy use differed across the proficiency level of the students, in which the students at higher levels of listening ability used cognitive and metacognitive strategies more often than less successful listeners. The findings of the study suggest that the use of cognitive and metacognitive strategies can account for variation in EFL listening achievement and need to be promoted by EFL teachers.

Key Words: Cognitive strategies; Metacognitive strategies, Listening tests

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE

Introduction

1.1   Overview

Since the late 1970s, research and theory in second language education have shifted from examining the methods of teaching to investigating the process of learning. This refocusing has created an explosion of research aimed at investigating learner characteristics and second language acquisition. It has also stirred considerable interest in the learning process itself and much research has investigated the relationship between learner strategy use and the processes and products of second language acquisition. Many of these studies have examined the cognitive factors underlying the differential behaviors of successful and unsuccessful language learners (e.g., O'Malley, Chamot, Kupper, & Russo, 1985; Politzer & McGroaty, 1985). They have also analyzed the type, variety and frequency of the students' strategy use and have devised taxonomies.

A similar trend has occurred in language testing research as researchers have expressed increasing interest in investigating test takers' cognitive characteristics that may influence language test performance. Testing researchers wanted to investigate the relationship between cognitive background variables and language use, as well as investigating the factors other than language ability that affect second language test performance to attempting to describe the nature of language proficiency. Since 1970s, language testers have slowly begun to approach foreign/second language test performance considering the strategies used by test-takers through the process of taking the test. As of the 1990s, foreign/second language testing textbooks have acknowledged test-taking strategies as a possible source of insights concerning test validity (Bachman, 1990; Cohen, 1994; Bachman & Palmer, 1996). While part of language test performance is dependent on the knowledge that test-takers have about the given language and on their ability to use that language knowledge, another part is

dependent on their test-taking strategies (Cohen, 1998). Thus Bachman and Pulmer (1996) introduced the concept of strategic competence that affects test performance. They conceive of strategic competence as a set of metacognitive components or strategies, which can be thought of as higher order executive processes that provide a cognitive management function in language use.

The past decade has seen a flourishing of research into factors that may affect performance and scores on language tests. This research primarily addresses the characteristics of the testing procedure including raters, the processes and the strategies used by test-takers in responding to test tasks, and the characteristics of the test-takers themselves. Accordingly, language-testing researchers began discussing processes of test taking in terms of test takers' action to different items. Cohen was one of the first who reported on the examination of perceived strategies employed by examinees. Apart from studies reported by Cohen, other studies were also conducted to investigate the interaction of the test takers to various tasks in terms of strategy processing and findings relevant to this issue.

The current study sought to examine cognitive and metacognitive strategy use as a part of test-taker characteristics in listening test performance. This study also tried to examine the relationships between these strategies and English listening test scores and proficiency level of the test takers.

1.2   Statement of the problem

Advances made in foreign language teaching and testing, cognitive psychology, and information processing systems have allowed studies to be conducted to categorize test taking strategies utilized by EFL learners when they are performing different language tasks, including reading, listening, writing, and speaking. However, few studies in the EFL

language testing literature have looked at the use of cognitive and metacognitive strategies and its relationship to proficiency level in *listening* comprehension tests. Moreover, there seems to be no consensus regarding the relationships between strategy use and language performance. Thus, the current study tried to contribute to the field of test taking strategies with information about Iranian EFL test takers' reported strategy use in a listening test, the relationships between their English proficiency levels and their reported cognitive and metacognitive strategies and their effect on their listening test performance.

1.3   Purpose of the Study

Since the 1980s, there has been a call for the development of language tests that provide a better fit between the tester's presumptions about what is being tested and the actual processes that the test taker goes through. The purpose of this study was to describe cognitive and metacognitive test-taking strategies that test takers use to complete listening tasks in the 'Listening' section of the IELTS. This study sought to investigate the relationship between cognitive and metacognitive strategy use and EFL listening test performance. More specifically, this study was an attempt to examine whether Iranian EFL learners use different cognitive and metacognitive test-taking strategies while doing listening comprehension test tasks. This study also tended to investigate whether more or less proficient EFL learners differ in the use of cognitive and metacognitive strategies.

As it is highly agreed that performance on language tests can be improved if both language teachers and test designers have a better insight into the different strategies that students apply, in this study, the aim was to assess students' cognitive and metacognitive strategies in listening tasks in order to provide the insight for further research on training how

to improve those strategies and consequently to improve students' performance in response to listening comprehension test tasks.

1.4   Significance of the Study

According to Bachman (1996), understanding factors affecting language test scores is crucial because we need to be able to describe and explain variations in language test performance and the correspondence between test performance and non-test language use. Bachman also states that it is significant to language assessment theory to know that strategy use is a source of good performance and hence it suggests the importance of strategic competence in L2 use, learning or testing. This study aimed to highlight this fact that succeeding in tests does not require only content knowledge. Test-taking strategies are other factors which help students to achieve a high score in tests. Iranian EFL test-takers need to get familiar with test-taking strategies more systematically either in their language classes or in special strategy training courses.

Strategies are a series of events and might not be fully reportable in the listening process due to the heavy cognitive demand of the task (Anderson, 1991; O'Malley & Chamot, 1990; Oxford, 1993), but difficulty in fully reporting on listening strategies does not exclude the feasibility of using verbal reports as data (Ericsson & Simon, 1993). Danks and End (1987) also argue that listeners and readers have to use whatever strategies available to complete their comprehension tasks. These strategies cannot be directly observable, but can be inferred from different patterns of results. Verbal reports as a format for data collection have already been adopted by many researchers in language education (Buck, 1990, 1991, 1994; Cohen & Olshtain, 1993; Feldmann & Stemmer, 1987; Rubb, Ferne, & Choi, 2006; Hudson and Park, 2002; Sasaki, 2000; Stoery, 1997; Swain, 2001; Yamashita, 2003; Yi'an, 1998). In fact,

psychologists have already used this well-established method for at least two decades. All this suggests that listening strategies, even if they are not directly observable, can be consciously deployed and inferred through other means. A strategy questionnaire and retrospective interviews are utilized in this study together to provide such a means for defining cognitive and metacognitive strategies among subjects.

1.5   Research Questions

The following questions were posed for the researcher to answer:

1.   What cognitive or metacognitive strategies are the most and the least frequently used by the students when taking a listening test?

2.   How does the use of cognitive or metacognitive test-taking strategies correlate with students' listening test performance?

3.   How do students of varying listening proficiencies differ in their cognitive and metacognitive strategy use?

1.6   Research Hypotheses

Ho.1: The use of cognitive and metacognitive strategy use does not have a significant relationship with the EFL learners' listening comprehension test performance.

Ho.2: The use of cognitive and metacognitive strategies does not differ across different proficiency levels.

1.7   Definition of the Key Terms

1.7.1 Test-Taking Strategies

Language testers have begun to approach second language test performance in relation to strategies used by test-takers through the process of taking the test. The major attempt of early

second language studies in test-taking strategies was to identify and describe test taking strategies.

Cohen and Upton (2007) define test-taking strategies as "those test-taking processes which the respondents have selected and which they are conscious of, at least to some degree". Cohen (2006) argues that there are largely distinct types of strategies that respondents use as they complete language tests: 1) language learner strategies (the ways learners operationalize their basic skills of listening, reading, speaking and writing including the related skills of grammar, vocabulary, and translation), 2) test management strategies (i.e., "strategies for responding meaningfully to the test items and tasks", and 3) test wiseness strategies i.e., "strategies for using knowledge of test formats and other peripheral information to answer test items without going through the expected linguistic and cognitive processes". Language use strategies constitute test-taking strategies when they are activated for tasks in language tests (Cohen, 1998b).

1.7.2 Cognitive and Metacognitive Strategies

In the literature, cognitive and metacognitive strategies have been regarded as closely related, postulating that metacognitive strategies have a direct impact on cognitive strategies in L2 learning, use or performance (e.g., Anderson, 2005; Bachman, 1990; Bachman & Palmer, 1996; Brown et al., 1983, Chamot, 2005; Faerch & Kasper, 1983; O'Malley & Chamot, 1990; Oxford, 1990; Wenden, 1991). Cognitive strategies in turn have a direct impact on L2 performance because they are involved directly in the target language use. Cognitive strategies differ from metacognitive strategies in that they are likely to be encapsulated within a subject area (e.g., EFL), whereas metacognitive strategies span multiple subject areas (Schraw, 1998). Some evidence of the hypothetical relationship between metacognitive strategies and cognitive strategies has also been documented.

1.7.2.1 Cognitive Strategies

Cognitive strategies are the test-takers' ongoing mental activities to use their language and world knowledge to solve the given tasks. Two broad categories of language knowledge are organizational knowledge and pragmatic knowledge (Bachman, 1990). World knowledge is general knowledge such as knowledge about economy, business, politics, environment and science that may be related to the tasks. All this knowledge is located in domains of information in memory available for use by metacognitive strategies (Bachman & Palmer, 1996). Cognitive test taking strategies are, for example, inferencing, making prediction, translating, summarizing, and linking with prior knowledge or experience, memory strategies, retrieval, and guessing meaning from contexts (O'Malley and Chamot, 1990; Oxford, 1990). Inferencing involves using information within the conversational context to guess the meaning of unfamiliar language items associated with the listening task, or to fill in missing information. Inferencing subcategories are linguistic, voice, extralinguistic and between parts inferencing. Elaboration involves using prior knowledge from outside the text or conversational context and relating it to knowledge gained from the text or conversation in order to fill in missing information. Elaboration subcategories involve personal, world, academic, creative, and questioning elaborations. Imagery involves using mental pictures or visuals to represent information. Summarization involves making mental or written summary of language and information presented in a listening task. Translation involves rendering ideas from one language in another in a relatively verbatim manner. According to Phakiti (2006) memory strategies involve note taking, underlining main ideas or highlighting important information, recognizing previous read words or information, and paraphrasing or simplifying information to remember. Retrieval strategies involve applying

knowledge of word stems, prefixes or suffixes to guess meaning of unknown words and recalling purposes or task obligations.

1.7.2.2 Metacognitive Strategies

Metacognitive strategies are the test-takers' deliberate mental behaviors for directing and controlling their cognitive strategy processing for successful performance. They are conceived as higher order executive processing that provides a cognitive management function in language use and other cognitive activities. Based on information processing theory and procedural and declarative knowledge, O'Malley and Chamot (1990) classified metacognitive strategies into three categories: (1) planning, (2) monitoring, (3) evaluation.

Planning strategies refer to test-takers' action of previewing tasks to complete in order to develop directions of what needs to be done, how and when to do it. Metacognitive planning strategies are those directed at the regulations of the course of their own thinking. They help to allocate resources to the current task, determine the order of steps to be taken to complete the task, and set the intensity or the speed at which one should work on the task. Planning subcategories are advance organization, directed attention, selective attention, and self management.

Monitoring involves checking, verifying, or correcting one's comprehension or performance in the course of a listening task, so that verifications can be made if needed in order to perform the given tasks successfully.

Evaluation involves checking the outcomes of one's listening comprehension against an internal measure of completeness and accuracy.

Metacognitive monitoring strategies help to identify the task on which one is currently working, check on the current progress of that work, evaluate that progress, and predict what the outcome of that progress will be (Kluwe, 1982).