The Relationship between Metacognitive Awareness and EFL Listening Performance: Focusing on IELTS Higher and Lower Scorers

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Abstract

This study aims to investigate the relationship between language learners' metacognitive awareness (Planning and Evaluation, Problem Solving, Directed Attention, Mental Translation and Person Knowledge) and their performance on the listening section of IELTS. This study employs both quantitative and qualitative data analyses. Based on the participants' performance on the IELTS test, the participants were identified as less (N=34) or more-proficient (N=32) listeners. The listeners' perceived use of metacognitive strategies was measured using Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) Metacognitive Awareness Listening Questionnaire. Two less- and two more-proficient listeners were randomly selected from among the participants to participate in a stimulated recall session on their IELTS responses. The results suggested that (1) listeners' metacognitive awareness had a positive relationship with the listening test performance; (2) more-proficient listeners reported significantly higher use of problem solving and directed attention strategies than the less-proficient listeners; (3) less-proficient listeners tended to use mental translation strategy; and (4) there was no difference between the more-proficient and the less-proficient listeners in planning and evaluation and person knowledge.

Keywords: listening test performance, metacognitive awareness, metacognitive strategies, more-proficient and less-proficient listeners.

1. Introduction

In recent years, many language testing (LT) researchers have been concerned with the identification and characterization of factors that influence variation in performance on language tests. In comparison to the other language skills, the factors related to assessment of listening have received little attention, possibly reflecting the difficulties involved in identifying relevant features of what is essentially an invisible cognitive operation (Alderson & Banerjee, 2002; Buck, 2001).

An understanding of how different factors affect test performance is dependent on how language ability is viewed. Bachman (1991) brings forth the multi-componential view of language ability, acknowledging the influence of the test method facets and test taker characteristics on test performance. He describes what he calls an interactional model of language test performance that

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includes two major components, language ability and test method facets, where language ability consists of language knowledge and metacognitive strategies, and test method facets includes characteristics of the environment, rubric, input, expected response, and the relationship between input and expected response. This has become known as the 'Bachman Model', as described in Bachman (1990) and Bachman and Palmer (1996), and it has become an influential point of reference, being increasingly incorporated into views of the constructs of reading, listening, vocabulary, and so on. The Bachman model serves as a basic framework for the present study to examine two sets of factors, i.e., English listening comprehension ability as Communicative Language Ability (CLA) and metacognitive strategy use as part of test-taker characteristics.

An investigation into the factors involved in language performance can also shed insight and deepen our knowledge about the nature of second language ability, which in Bachman (1990) and Bachman and Palmer (1996) is rather abstract despite being complicated. In their model, Bachman and Palmer (1996) separate strategic competence (as a non-linguistic factor) from language competence. Strategic competence is a general ability that enables an individual to use available resources by regulating online cognitive processes in accomplishing a communicative goal. Although Bachman and Palmer (1996) do not refer to strategic competence as metacognition, it could be argued that the nature of the two constructs is similar, given that both concern self-regulation and hence, as McNamara (1996) points out, the need for Strategic Competence Model to be cross-referenced with the literature in the areas of metacognition. The concept of metacognition could be described as thinking about one's thinking, or the human ability to be conscious of one's mental processes (Flavall, 1979; Metcalfe & Shimamura, 1994; Nelson, 1996). According to research on metacognition (Baker & Brown, 1984; Flavell, 1985), metacognition involves both knowledge of cognitive processes and the capacity to monitor, regulate, and orchestrate these processes. Metacognitive knowledge consists primarily of knowledge and beliefs about three factors, i.e. task, person, and strategic knowledge, which interact during any cognitive activity (Flavell, 1979). Task knowledge is knowledge about the purpose, demands, and nature of learning tasks. These items enable an individual to take into account factors that might contribute to the difficulty of a task, including the characteristics of the oral text/message. Person knowledge consists of judgments about one's learning abilities and knowledge about internal and external factors that might affect the success or failure in one's learning. The last metacognitive factor is known as strategy knowledge, and is useful for achieving learning goals and appears to have the greatest impact on learning by helping learners to choose the strategies that they use (Nisbet & Shucksmith, 1986).

Although more than a decade of research has been done on Bachman and Palmer's theoretical model, much remains unclear in regards to the exact nature of strategic competence. The discussion of strategic competence in this model has been argued by McNamara (1996) to be extremely preliminary. Strategic competence can be understood via an examination of an individual's knowledge of how he or she perceives using a set of strategies in a variety of contexts, and his or her reported actual use of the strategies in a specific context. Furthermore, as Chapelle (1998) points out, observation of language performance and the degree of consistency in strategy use is fundamental to the study of L2 test performance. Given the importance of the influence of test takers' characteristics on test performance, the current research seeks to gain further insight into the role of test-takers' metacognitive awareness and their use of metacognitive strategies to the EFL listening test performance. In addition, the paper aims to fine-tune the nature of the relationship of the five factors of metacognitive knowledge (Planning and Evaluation, Problem Solving, Directed Attention, Mental Translation and Person Knowledge) to listening performance.

2. Review of Literature

Most of the research done so far on test taking-strategies focuses on the contribution of test-taking strategies to the validity of language tests (e.g., Abanomey, 2002; Cohen & Upton, 2006; Tsagari, 1994;

Storey, 1997), the evaluation the effectiveness of strategy instruction for improving respondents' performance on high stakes standardized tests (e.g., Forster & Karn, 1998; Tian, 2000), and the investigation of the relationship between respondents' language proficiencies and their test-taking strategies. A number of studies which focus on the relationship between the proficiency level of the respondents, their reported use of strategies in test taking, and their performance on the L2 tests are discussed here in order to shed more light on what the primary concern of this paper is. Taguchi (2001) compares proficiency level of respondents investigated L2 learners' test-taking strategies in taking a listening comprehension test. The results revealed a statistically significant difference between more-proficient and less-proficient listeners in their perceived use of top-down strategies and in their reported elements of listening difficulty but no difference in their reported use of bottom-up strategies, repair strategies, or affective strategies. Yoshida-Morise (1998) determined the kinds of communication strategies L2 learners used in oral interactional situations and the relationship between their use of communication strategies and proficiency levels. The results revealed that in general, the lower proficiency respondents used higher amount and a greater variety of strategies than the higher proficiency respondents to compensate for their insufficient knowledge of the target language. Nonetheless, the higher proficiency respondents were seen to use certain strategies more, such as paraphrasing, interlingual strategies, and repair strategies. Yoshizawa (2002) examined the nature of text-processing strategy use and the relationships among strategy use, levels of proficiency, and levels of foreign language aptitude of Japanese university students learning English as a foreign language. The factor analysis of the test-taking strategy data determined three factors: (a) comprehension and monitoring strategies, (b) compensatory strategies (translation and repair in reading and elaboration strategies in listening), and (c) strategies related to attention and task assessment. The findings also suggested that there were developmental stages of strategy use as learners' proficiency improved.

Other studies have related test-taking strategies to the respondents' proficiency levels, focusing on their use of cognitive and metacognitive strategies in test taking. For example, Purpura (1997, 1998) used structural equation modeling to examine the relationships between strategy use and L2 test performance with high- and low-proficiency test takers. Whereas the metacognitive strategy use and strategy use and L2 test performance models were found to produce almost identical factorial structures for the two proficiency groups, the use of monitoring, self-evaluating, and self-testing served as significantly stronger indicators of metacognitive strategy use for the low-proficiency group than they did for the high-proficiency group.

Moreover, regarding the relationship between the use of cognitive and metacognitive strategies and L2 test performance, a number of studies were conducted. For instance, Phakiti (2003) investigated the relationship between use of cognitive and metacognitive strategies on an EFL reading test and success on the test. Having employed both quantitative and qualitative data analyses, he concluded that the use of cognitive and metacognitive strategies had a weak but positive relationship to the reading test performance, with the metacognitive strategies reportedly playing a more significant role. In addition, the highly successful test takers reported significantly higher metacognitive strategy use than the moderately successful ones, who, in turn, reported higher use of these strategies than the unsuccessful test takers. Strategy patterns that were related to success on the reading test included reading a passage by translating it into Thai (learners' mother tongue) to see if it made sense and making efforts to summarize the passage as a check for comprehension. In a similar line of research, Song (2004) investigated the extent to which cognitive and metacognitive strategy use accounted for Chinese test-takers' performance in the College English Test Band 4. Having conducted the regression analyses, Song found that cognitive and metacognitive strategies accounted for 8.6% of the test score. In the context of the Michigan English Language Assessment Battery (MELAB), Song (2005), after examining the strategy structures by means of exploratory factor analyses and through regression analyses, found that the effects of strategy use on language performance were weak to moderate (explaining about 12.5–21.4% of the score variance).

Nonetheless, not all test-taking strategies have a positive impact on test results. There are some studies that have identified strategies that may be counterproductive. Strategies such as mechanically repeating or confirming information and full translation of reading passages are reported not to be positively related to performance (Cohen & Aphek, 1979; Song, 2004).

In sum, these studies show that more-proficient learners are better able to utilize test-taking strategies to their advantage than are the less-proficient students, and emphasize the importance of metacognitive strategies in test taking. However, Cohen (2006) reviewing the research done on test-taking strategies, claims that although there is a growing consensus on the importance of metacognitive strategies in test taking, there is the need for more fine-tuning of the nature of the metacognitive strategies. Moreover, most of the previous studies focused on the relationship between use of cognitive and metacognitive strategies on L2 reading test performance and on how good readers differ from poor readers due to the strategic ability. Since various aspects of language are processed and stored differently in the brain for different language skills (Van Patten, 1994), different domains of language need to be specifically researched (Schmidt, 1995). There is, however, extensive evidence that learners' metacognition can directly affect the process and the outcome of their learning, especially the listening skill (Goh, 2000, 2008; Zhang & Goh, 2006), and that it can help increase motivation and confidence (Goh & Taib, 2006; Vandergrift, 2002, 2003, 2005). Not many studies, so far, have looked at the relationship of metacognitive awareness and L2 listening test performance in an EFL context using both quantitative and qualitative data. This study, thus, used a mixed methods design that can enhance the depth and breadth of this body of research by elucidating dimensions that might have been obscured by the use of a solely quantitative method to answer the following research questions:

1. Is there a significant correlation between metacognitive awareness and EFL listening comprehension test performance?

2. What are the differences between more- and less-proficient listeners in terms of their reported use of metacognitive strategies?

3. Method

3.1. Participants

The participants of this study included intermediate and advanced-level students (N =66) who enrolled for the winter term, 2011 at a language institute in Isfahan, Iran. The participants were drawn from five intact classes (three intermediate classes and two advanced classes). Based on their performance on the Listening module of the IELTS test, 34 learners who scored below 20 (more than one SD above the mean) out of a possible 40 were identified as less-proficient, and 32 (less than one SD below the mean) who scored above 30 as more-proficient listeners and the rest were excluded from this study. In addition, two less- and two more-proficient listeners were selected using stratified random sampling to participate in a stimulated recall session on their IELTS responses.

3.2. Materials

Two research instruments were used for the purpose of this study: a listening comprehension test and a metacognition awareness questionnaire.

3.2.1. Listening module of the IELTS test

Listening ability was measured using Listening module of Test 4 of the IELTS practice tests, 2006 version. Subtests include (a) form and table completion task (the listeners have to complete a form or a table by writing words and numbers they hear on the recording) questions 1-10 and 31-37; (b) notes on completion questions (the listeners have to write answers that are pieces of information given in the recording) questions 11-16; (c) map labeling task (the listeners have to label a map with the correct places using the information they hear in the recording) questions 17-20; (d) classification (the listeners have to answer a series of questions with the same choice of answers in each case) questions 21-26; and (e) multiple-choice with single answer questions 27-30 and 38-40.

The types of listening tested involved (a) choosing contextually appropriate responses and (b) processing texts of realistic spoken language to understand linguistic information unequivocally included in the text and to make inferences implicated by the content of the text (Buck, 2001). The test took approximately 27 minutes to complete; and 10 minutes time was also given to them to transfer their responses to the answer sheet.

3.2.2. Metacognitive Awareness Listening Questionnaire (MALQ)

This questionnaire which is adapted from Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) has 21 items measuring five factors of metacognitive knowledge. The first factor is "Planning and Evaluation," which includes items about how listeners prepare themselves for listening and evaluate the results of their listening efforts (items 1, 10, 14, 20 and 21). Secondly, "Problem Solving" includes items on inferencing on what is not understood and monitoring those inferences (items 5, 7, 9, 13, 17 and 19). The third factor measured in this questionnaire is "Directed Attention" which includes items on how listeners concentrate, stay on task, and focus their listening efforts (items 2, 6, 12 and 16). The fourth factor, "Mental Translation," which is defined in this study as taking a bottom-up processing to listening comprehension, includes items about the ability to use mental translation parsimoniously (items 4, 11 and 18). Finally, "Person Knowledge", the fifth factor, are about items eliciting learner perceptions concerning how they learn best, the difficulty presented by L2 listening, and their self-efficacy in L2 listening (items 3, 8 and 15).

Students are asked to respond to items using a 6-point Likert scale ranging from "strongly agree" to "strongly disagree" (see the Appendix). According to Vandergrift *et al.* (2006), they chose a scale without a neutral point so that respondents could not hedge. In this questionnaire, items are grouped in sequences logically organized by content (strategies used before, during, and after listening to an oral text). It is important to note that, using Cronbach's alpha formula, the reliability of the listening test and the MALQ questionnaire used in this study was 0.79 and 0.81, respectively.

3.3. Procedure

This study uses a mixed method design, incorporating both quantitative and qualitative research methods and techniques into a single study. The triangulation of data has the potential to reduce the biases inherent in one method while enhancing the validity of inquiry (Greene, Caracelli, & Graham, 1989; Mackey & Gass, 2005). In order to collect the quantitative data, first the listening module of the IELTS test was administered and then immediately after that the MALQ questionnaire was given to the participants to fill out. The stimulated recall session (the means to collect the qualitative data) was conducted one day after the test. In the stimulated-recall session, the researcher presented the two more-proficient and the two less-proficient listeners, who were selected using stratified random sampling, with a film of them taking the listening test, and they were asked in their mother tongue to discuss the possible reasons for the answers that they provided for each item in the test. All stimulated-recall sessions were audio-recorded, transcribed and then translated into English.

The scoring method for the listening test used in this study is dichotomous, that is each correct answer was given 1, and an incorrect answer received 0. Thus, the maximum possible score for this test is 40 for the 40 items on the test. As it was mentioned before a six-point Likert scale was used to measure the five factors of the metacognitive awareness on the MALQ questionnaire, this means that the minimum score for each factor is 1 and the maximum 6.

3.4. Data analysis procedure

For the first research question, in order to find whether there is any significant correlation between listeners' metacognitive awareness and their performance on EFL listening comprehension test, Pearson product moment correlation was performed between the data obtained from the listening test and the questionnaire. To answer the second question with the help of quantitative data, a 2 (less proficient, more proficient) ×5 (Directed Attention, Problem Solving, Planning and Evaluation, Mental Translation, Person Knowledge) one-way between-groups MANOVA was used in which the learners level is the independent variable, and the metacognitive factors are the dependent variables. MANOVA compares the more- and less-proficient listeners in their reported use of metacognitive factors. The advantage of using MANOVA is that it reduces the risk of a Type 1 error (i.e., finding a significant result when there is not really one) by creating a new summary composite dependent variable. Moreover, to reduce the chance of a Type 1 error Bonferroni adjustment was done (see Section 4.1.2 below). Finally, as it will be illustrated in Section (4.2) below, data from participant stimulated-recall protocols on how they answered each part of the listening module of the IELTS test were analyzed using qualitative methodology.

4. Results

4.1. Quantitative data results

The quantitative phase of the study comprised the investigation of the role of learners' metacognitive awareness and strategy use in their listening test performance. In what follows, these results are put in a more concrete footing.

4.1.1 The relationship between metacognitive awareness and EFL listening performance

Before calculating the total scale scores of the MALQ questionnaire, the scores of all the negatively worded items (e.g. item 15) were reversed. The results showed that there was a positive and significant relationship (r = .398, p = .001). In order to fine-tune the nature of the relationship of the five factors of metacognitive knowledge to listening performance, each of these factors was correlated with the test takers' listening performance. From the five factors in the questionnaire, Directed Attention, Problem Solving, and Planning and Evaluation had a significant positive correlation with listening performance (r = .739, p < .001; r = .643, p < .001; and r = .268, p = .03 respectively). There was a significant negative correlation with Mental Translation (r = - .658, p < .001) and no significant correlation was seen between Person Knowledge and listening performance (r = .06, p = .597).

Table 1. *Correlation between listening performance and the five factors of metacognitive awareness*

	MALQ	DA	PS	PE	MT	PK
Listening performance	.398*	.739*	.643*	.268*	- .658*	.06
	$p = .001$	$p < .001$	$p < .001$	$p = .03$	$p < .001$	$p = .597$

MALQ=Metacognitive Awareness Listening Questionnaire, DA=Directed Attention, PS=Problem Solving, PE=Planning and Evaluation, MT=Mental Translation, and PK=Person Knowledge

4.1.2 Strategy use and EFL listening proficiency

The second research question in this study concerns with the difference between more-proficient and less-proficient listeners in their use of metacognitive strategies in answering the listening module of the IELTS test. Table 2 presents the descriptive statistics of the test-takers' test scores and strategy use categorized by proficiency. Box's M test of homogeneity of variance / covariance matrices (Box's M = 78.65, $p = .003$) and Levene's Test of equality of error variances (DA: $F = 2.29$, $p = .135$; PS: $F = 2.85$, $p = .096$; PE: $F = 3.01$, $p = .087$; MT: $F = 3.21$, $p = .067$; and PK: $F = .029$, $p = .866$) justified the use of the multivariate approach.

Table 2. *Descriptive statistics by proficiency*

	proficiency	N	Mean	SD
EFL Listening performance	less proficient	34	18.35	1.12
	more proficient	32	32.06	1.60
Directed Attention	less proficient	34	2.89	.34
	more proficient	32	4.12	.68
Problem Solving	less proficient	34	3.15	.51
	more proficient	32	4.26	.67
Planning and Evaluation	less proficient	34	3.93	.64
	more proficient	32	4.27	.60
Mental Translation	less proficient	34	4.06	.73
	more proficient	32	3.07	.43
Person Knowledge	less proficient	34	4.11	.65
	more proficient	32	4.23	.67

Using Wilk's lambda, a main effect for Level ($F = 30.20$, $p < .001$, $\eta^2 = .716$) was found. This implied that the metacognitive awareness and strategy use of the less-proficient and more-proficient listeners are not the same. In order to further explore these group differences in the metacognitive knowledge, the multivariate tests for each of the components of metacognitive knowledge were examined individually. Since there is one dependent variable with five layers to investigate in this study, a Bonferroni adjusted alpha level of .01 was set. Using the new Bonferroni adjusted alpha level, there was a significant difference between the less-proficient and more-proficient listeners in Directed Attention: $F (1, 64) = 87.50$, $p < .001$, $\eta^2 = .578$; Problem Solving: $F (1, 64) = 57.35$, $p < .001$, $\eta^2 = .473$; and Mental Translation: $F (1, 64) = 46.48$, $p < .001$, $\eta^2 = .421$ (See Table 3). No difference was observed for Planning and Evaluation and Person knowledge between the less-proficient and more-proficient listeners.

An inspection of the mean scores indicated that the more-proficient listeners used the strategies of Directed Attention ($M = 4.12$, $SD = .68$) and Problem Solving ($M = 4.26$, $SD = .67$) more than the less-proficient listeners (Directed Attention: $M = 2.89$, $SD = .34$; and Problem Solving: $M = 3.15$, $SD = .51$).

Table 3. *ANOVA for strategy use by proficiency*

Metacognitive Factor	df	SS	MS	F
Directed Attention	1	24.97	24.97	87.50*
Problem Solving	1	20.46	20.46	57.35*
Planning and Evaluation	1	1.89	1.89	4.88
Mental Translation	1	16.43	16.43	46.48*
Person Knowledge	1	.214	.214	.487

* $p < .01$

The less-proficient listeners tended to use the strategy of Mental Translation ($M = 4.06$, $SD = .73$) much more than the more-proficient ones ($M = 3.07$, $SD = .43$) and this might lead the less-proficient listeners not to have adequate attentional resources to construct meaning.

4.2. Qualitative data results

Data from participant stimulated-recall protocols on how participants answered each part of the listening module of the IELTS test, conducted with a random sample from the less-proficient and more-proficient listeners, provided further insights into the relationship between metacognitive awareness and listening performance, and the difference between the less-proficient and more-proficient listeners in metacognitive strategy use.

Concerning the strategy of Planning and Evaluation, from the interview data, it could be inferred that both the less-proficient and more-proficient listeners consider the listening comprehension process to be purposeful. For instance, they claimed to have a plan for listening, to think about similar texts as a guide for listening, and to have a goal in mind while listening. The first two excerpts (pseudonyms used) illustrate this:

Zahra (a more-proficient listener): "When I heard a man wanted to telephone a job agency and wanted to find a job, ... and after looking at the half-completed job application form, I told myself all this listening part will be about the personal information, education background, and previous job experience or other qualifications that this man might have had,... Like the other job application listening texts that I had heard before."

Maryam (a less-proficient listener): "The lady on the CD said the man wants to find a job, and I saw an application form in the answer sheet; I guessed, like other job interviews, now I am going to hear his name, surname, ... You know these kinds of specifications that they ask you when you want to find a job, and maybe he will be asked about his university degree and the date he can start to work."

Notable in the narratives was the use of the Problem Solving and Directed Attention strategies by more-proficient listeners, as illustrated in the following excerpts from the more-proficient listeners:

Zahra: "To answer this question, I didn't exactly hear what was in the art gallery but then the lady said you can't send any of them to your friends, but you can see what people used to send their friends in the past. I guessed maybe they are "postcards" because of the word "sending" and they are "tourists",... you know mostly tourists send postcards to their friends while they are on a trip as I have read in the English readings in our books."

This excerpt shows that this listener was using the strategy of Directed Attention and was focusing harder when she had difficulty understanding, she focused on the word "sending", and she also used her past experience and general knowledge to guess what tourists usually send their friends which represents a Problem Solving strategy. Another instance of using the Problem Solving and Directed Attention strategies by more-proficient listeners is apparent in the following data obtained from another more-proficient listener:

Marjan: "For this question, I wasn't very sure. But I heard the word "journal", he wants to be an MA student and as it is required in Iran and I think in other countries for MA students to publish

articles, I guessed the option that says he must publish articles is correct, and look the question asked "what he should *aim to* do in the *future*" and not now.

As it is illustrated in the above excerpt, Marjan (a more-proficient listener), now that has difficulty in understanding, is using her general knowledge to interpret the text (a Problem Solving strategy) and is focusing harder on the text, e.g. on the words "journal", "aim to" and "in the future", (a Directed Attention strategy) to find the answer.

Stimulated-recall data demonstrated that the less-proficient listeners in our study did not get help from the Problem Solving and Directed Attention strategies when faced with problems in understanding the flow of information they received. As it is illustrated in the following excerpts, they mostly complained that they spoke very fast on the CD. It may be argued that the less-proficient listeners had to translate word for word while listening, i.e. they tended to use the Mental Translation strategy.

Maryam: "I was thinking about the meaning of the word "lecturing", but when I recalled its meaning, a fell behind and this part was finished,... so I couldn't decide which answer to choose, I even missed the part about the "research record."

Zeinab: "I was thinking about the meaning of the three styles that she was saying, suddenly I heard "non-fiction", which meant the part about short stories was finished, so couldn't answer this part."

In the last part of the stimulated-recall session, in order to elicit information about the listeners' perceptions concerning the difficulty presented by L2 listening and their self-efficacy in L2 listening, both the more-proficient and less-proficient listeners were asked to give their opinions about the three statements related to the factor of Person Knowledge on the MALQ questionnaire. They all attested that listening in English compared with the three other language skills is harder for them, and whenever they want to take a listening test they feel mere anxious than taking other tests in English.

In sum, from a qualitative perspective, the following pattern emerges of differences between more-proficient and less-proficient listeners: First, both groups of listeners appear to have a plan for listening and before starting to listen, think about similar texts as a guide for listening. Second, when engaged in the act of listening, more-proficient listeners appear to gain more control of the listening process through the use of more metacognitive strategies, primarily Directed Attention, i.e. they do not give up when they experience difficulties understanding, and focus harder on the text they hear. Third, more-proficient listeners engage in more Problem Solving, in that they use known words to deduce the meaning of unknown words, make use of the general idea of a text to deduce unknown words, and get help from their experience and general knowledge in interpreting the text. Finally, less-proficient listeners engage in more Mental Translation, which impedes the development of a conceptual framework and efficient construction of meaning. As such, the stimulated-recall protocols illustrate and reinforce the results of the quantitative component of this study.

5. Discussion and Conclusion

The assumption that the variability in language test performance can be attributed to test-takers' characteristics, such as in Bachman's (1990) Model, motivated this study. The first research question aimed to investigate the relationship between metacognitive awareness and EFL listening comprehension test performance. The results of the quantitative data revealed a positive but weak relationship between this type of test takers' characteristic and listening performance. This finding corresponds to those of Phakiti (2003 & 2008) and Song (2004 & 2005). A plausible explanation for this weak relationship could be that strategies usually come into play only when test-takers are faced with difficulties or problems. That is, in situations when their routine or skillful behaviors are not enough to overcome that difficulty, their conscious, intentional and effortful processing takes over. The second possible explanation for this relationship might be that according to Bachman and Palmer's (1996) model, variation in language performance (or tests scores) is hypothesized to be mostly due to

language ability. Non-linguistic factors like test method facets, individual characteristics (e.g. metacognition) and random factors are weaker contributors to language performance. Given that many factors account for variation in language performance, it is not surprising that the amount of correlation between strategic competence and test performance is limited.

Another possible reason for the weak correlations between strategy use and test performance is that it is argued that success in language use also depends on factors such as the levels of linguistic thresholds in a particular context of language use (Bernhardt, 2000), individuals' working memory capacity (Robinson, 2001), and task difficulty demands and constraints (Skehan, 1998). Since factors other than strategic competence contribute to test performance, one should not expect it to account for language performance to a large extent.

This study also examined the relationship between the five factors of metacognitive knowledge (Directed Attention, Problem Solving, Planning and Evaluation, Person Knowledge, and Mental translation) and listening performance due to the need for more fine-tuning of metacognitive strategies (Cohen, 2006; Phakiti, 2008). The results showed that Directed Attention, Problem Solving, and Planning and Evaluation had a significant positive correlation with listening performance. These findings suggest that when listeners have a plan for listening (Richards, 1990), when they are able to maintain attention, concentrate on the incoming information (Rost, 2002), and draw on their general knowledge or get help from the context when facing difficulties in comprehension (Kintsch, 1998), they can have better achievements in L2 listening.

A significant negative correlation was found between Mental Translation and listening performance. This negative relationship can be explained by the possibility that exclusively using bottom-up processes (word-by-word translation) does not leave L2 listeners with adequate attentional resources to construct the whole meaning (Osada, 2001).

On the contrary, no significant correlation was seen between Person Knowledge and listening performance. This finding runs counter to some studies which have reported that learner perceptions, anxiety, and self-efficacy are significantly and directly related to academic expectations, approach to learning, and academic performance, including strategy use and task persistence (Chemers, Hu, & Garcia, 2001; Sparks & Ganschow, 2001; Zimmerman & Schunk, 2001). A possible explanation for this is that because this study is done in an EFL context and there is not much exposure to target language except for in EFL classrooms, less-proficient and more-proficient listeners always perceive listening to be more difficult than reading, speaking and writing. However, one might also argue that it is no surprising to find insignificant correlations between Person Knowledge and listening performance granted the fact that the IELTS is a standardized test where test takers' topical knowledge is a construct-irrelevant error variable, hence lack of a significant correlation.

The second research question examined the differences between more and less-proficient listeners in terms of their reported use of metacognitive strategies. Both the quantitative and qualitative data analyses revealed significant differences between more-proficient and less-proficient listeners in metacognitive strategy use. It was found that a more-proficient listener actively engages in planning for the task and monitoring incoming input for congruence with expectations to construct a mental representation of the text in memory. It seems that a more-proficient listener is involved in a greater depth of interaction with the text by employing different strategies (less translation, and more use of problem solving and directed attention strategies) that all work together to generate a cycle of strategies which in turn results in more successful comprehension (Vandergrift, 2003, 2006).

On the other hand, the less-proficient listeners seem to have the compulsion to mentally translate the incoming data. Particularly, they must overcome the compulsion to translate if they are to become more successful on test performance. When they process the linguistic input without activating top-down knowledge, listeners deprive themselves of access to contextual information that could facilitate the comprehension process (Liu, 2003) through the use of a cognitive strategy such as inferencing to compensate for unknown words. Comprehension breaks down unless listeners also activate top-down processes through the use of compensatory strategies and other relevant available information to inference what was not understood.

Finally, it is important to note that the substantive results of this study must be interpreted within particular study limitations. Given the nature of metacognitive knowledge, and the shortcomings of data gathering methods and analyses used in this study, it needs to be acknowledged that the relationship of metacognitive awareness to EFL listening performance could have been far more complicated than what has been found or implied. Therefore, even though the results of this study show positive effect of metacognitive awareness on EFL learners' listening test performance, more rigorous studies of this kind are needed. In this connection, other interested researchers are thus recommended to give us great purview into an aggregate view of strategic competence and EFL listening comprehension test performance. For instance, one might argue that the frequency and effect of strategy use can be moderated by some individual differences such as learners' motivation. Although the sample size was small for both qualitative and quantitative data, the results of this study can induce some insight concerning the nature of Bachman and Palmer's (1996) strategic competence and the more effective strategies for success on tests as well as the least effective ones. Understanding what strategies IELTS high scorers use to make sense of the listening input and answer the relevant questions can help teachers design strategy-based training materials and guide their students in working to increase their level of listening performance on high stake tests.

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Appendix

Metacognitive Awareness Listening Questionnaire (MALQ)

The statements below describe some strategies for listening comprehension and how you feel about listening in the language you are learning. Do you agree with them? This is not a test, so there are no "right" or "wrong" answers. By responding to these statements, you can help yourself and your teacher understand your progress in learning to listen. Please indicate your opinion after each statement. Circle the number which best shows your level of agreement with the statement. For example:

	Strongly Disagree	Disagree	Slightly Disagree	Partly Agree	Agree	Strongly Agree
I like learning another language	1	2	3	4	5	6

Please circle only **ONE** number for each statement

1. Before I start to listen, I have a plan in my head for how I am going to listen.	1	2	3	4	5	6
2. I focus harder on the text when I have trouble understanding.	1	2	3	4	5	6
3. I find that listening in English is more difficult than reading, speaking, or writing in English.	1	2	3	4	5	6
4. I translate in my head as I listen.	1	2	3	4	5	6
5. I use the words I understand to guess the meaning of the words I don't understand.	1	2	3	4	5	6
6. When my mind wanders, I recover my concentration right away.	1	2	3	4	5	6
7. As I listen, I compare what I understand with what I know about the topic.	1	2	3	4	5	6
8. I feel that listening comprehension in English is a challenge for me.	1	2	3	4	5	6
9. I use my experience and knowledge to help me understand.	1	2	3	4	5	6
10. Before listening, I think of similar texts that I may have listened to.	1	2	3	4	5	6
11. I translate key words as I listen.	1	2	3	4	5	6
12. I try to get back on track when I lose concentration.	1	2	3	4	5	6

13. As I listen, I quickly adjust my interpretation if I realize that it is not correct.   1   2   3   4   5   6

14. After listening, I think back to how I listened, And about what I might do differently next time.   1   2   3   4   5   6

15. I don't feel nervous when I listen to English.   1   2   3   4   5   6

16. When I have difficulty understanding what I hear, I give up and stop listening.   1   2   3   4   5   6

17. I use the general idea of the text to help me guess the meaning of the words that I don't understand.   1   2   3   4   5   6

18. I translate word by word, as I listen.   1   2   3   4   5   6

19. When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.   1   2   3   4   5   6

20. As I listen, I periodically ask myself if I am satisfied with my level of comprehension.   1   2   3   4   5   6

21. I have a goal in mind as I listen.   1   2   3   4   5   6