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The Impact of Metacognitive Instruction on EFL Learners' Listening Comprehension and Oral Language Proficiency

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Abstract

The aim of the current study was to examine the effect of metacognitive instruction, in comparison to the effect of conventional teaching of listening (pre-listening, listening, post-listening), on EFL learners' metacognitive awareness of listening strategies, listening comprehension, and oral language proficiency. Fifty students of two upper-intermediate English courses participated in the study and were sampled as the experimental and control groups. For sixteen weeks the experimental group participated in metacognitive instruction of listening with the aim of promoting their metacognitive awareness of listening strategies while listening to oral texts. Meanwhile, the control group received listening instruction without any focus on strategies. The result revealed that, while controlling for students' entry-level metacognitive awareness and English listening and speaking proficiency, the instruction heightened the experimental group's metacognitive awareness significantly at the end of the experiment. Although a difference between the listening ability of the experimental and control groups was found, this difference did not reach the level of statistical significance. As hypothesized, a significant difference between the experimental and control groups' speaking ability was found in favor of the experimental group.

Keywords: metacognition, instruction, speaking, listening, strategies

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1. Introduction

Recent views toward interactive listening and its role in communication have called attention to listeners' cognitive and metacognitive abilities and comprehension processes that occur during listening (Goh, 2002).

One line of research in this regard has focused on the role metacognitive strategies play in listening comprehension in order to enhance the efficiency of L2 listening instruction. Early studies on this issue focused on the development of a framework for classifying listening strategies (e.g. Vandergrift, 1997a) and the type of strategies successful listeners use (O'Malley et al., 1989) to do different listening tasks (Vandergrift, 1996).

With a deeper understanding of metacognitive listening strategies, the rationale for integrating metacognitive instruction into teaching listening comprehension and principles for carrying out metacognitive listening instruction evolved (e.g. Vandergrift, 1999; Vandergrift, 2003a). Experimental studies followed to scrutinize the causal relationship between metacognitive instruction and improvement in strategy use (Graham & Macaro, 2008) and listening performance (Vandergrift, 2007; Zeng, 2007). However, the findings of these studies yielded mixed results regarding the effectiveness of metacognitive instruction in enhancing both strategy use and listening ability (e.g. Seo, 2002) and thus replication of the experiments has been recommended (Vandergrift & Tafaghodtari, 2010).

Moreover, what seems to be taken for granted in metacognitive listening instruction research is the interconnection between listening and speaking skills. While from a theoretical standpoint within the framework of psycholinguistics (Levelt, 1989), speech act (Austin, 1962), and language pedagogy (Krashen & Terrell, 1983) speaking and listening are closely intertwined (Brown, 2001), none of the preceding studies on metacognitive instruction of listening strategies has examined the impact of listening strategy training on learners' speaking ability. As interlocutors interact reciprocally by having the dual role of speaker-listener to proceed with communication, it is reasonable to argue that applying listening strategies helps the listeners to understand the message better and negotiate meaning more successfully and thus respond more appropriately when they talk to others (Rost, 2002b). The present study thus has a threefold purpose to examine the possible effect of metacognitive listening instruction on EFL learners' metacognitive awareness of listening strategies and their listening and speaking ability.

1.1 Teaching listening comprehension

The status of teaching listening in language curriculum has changed dramatically under the influence of how language teaching and learning are viewed.

It was first in the late 19th century that reformist argued for the primacy of oral skills in language classes. This argument was later supported both theoretically and pedagogically by the emergence of behaviorism and audio-lingual method of language teaching. The emphasis of teaching listening in this framework was laid on improving hearing habits (Rost, 2002a) by “engaging learners in a series of exercises that focused on pronunciation drills, memorization of prefabricated patterns and imitation of dialogues” (Martínez-Flor & Usó-Juan, 2006, p. 30).

The simplistic view of language acquisition as a mechanical process was challenged by cognitive psychology that focused on mental and cognitive processes involved in language acquisition and thus gave precedence to listening over speaking in instruction with an assumed key role for listening as the comprehensible input (e.g. Krashen & Terrell, 1983). Recent social-cognitive models of comprehension added another dimension to the construct listening comprehension and emphasized the role of social context in listening. According to this proposition, listening instruction should focus on interactive or participatory listening that “requires the listener to take a more active role by interacting with an interlocutor, requesting clarification or providing feedback in order to ensure successful communication” (Vandergrift, 1997b, p. 494). This gave a meteoric rise to the role of strategies listeners use in the process of listening comprehension and generated a particular interest to lay a more solid theoretical base for strategy-based classroom practices.

1.2 Listening strategies

Pioneering research on listening strategies focused on the extent to which more successful or proficient language learners were aware of their listening strategies and how they could regulate the process of L2 listening comprehension by applying appropriate strategies (e.g. Murphy, 1985; Chamot & Kupper, 1989; Bacon, 1992).

Meanwhile the theoretical basis of listening strategies was evolving. Based on O'Malley and Chamot's (1990) three way distinction of language learning strategies, a framework of strategies specific to listening comprehension was proposed (Vandergrift, 1997a). The taxonomy entailed three main types of strategies including metacognitive strategies (mental activities for directing language learning), cognitive strategies (mental activities for manipulating the language to accomplish a task), and socio-

affective strategies (activities involving interaction or affective control in language learning). Empirical studies that followed showed that the choice and degree of listening strategies are related to listening task type (Chang, 2008) and perceived usefulness of strategies (Zhang & Goh, 2006) as well as learners' attributes such as their learning style (Liu, 2008), listening ability (Shirani Bidabadi & Tamat, 2011), level of English language proficiency (Fewell, 2010), and listening anxiety (Golchi, 2012). The findings also yielded illuminating insights into the powerful role of metacognition in learning and "the potential role of metacognitive strategies for enhancing success in second language listening" (Vandergrift, 1999, p. 170).

1.3 Metacognitive awareness of listening strategies

Metacognition refers to thinking about one's thinking or the human ability to be conscious of one's mental processes (Metcalf & Shimamura, 1994; Nelson, 1996). According to Flavell (1976), metacognitive knowledge is "the knowledge concerning one's own cognitive processes and products or anything related to them, e.g. the learning-relevant properties of information or data" (p. 232). It is suggested that metacognition plays an important role in many cognitive activities related to language use such as oral communication of information, oral persuasion, oral comprehension, reading comprehension, and writing (Flavell, 1976).

Metacognitive knowledge consists of three types of knowledge including person knowledge, task knowledge, and strategy knowledge. It is believed that "development in these three aspects of metacognitive knowledge will enable learners to appraise themselves and to select appropriate strategies for improving their performance" (Goh & Taib, 2006, p. 223).

In this framework, metacognitive strategies have been defined as "higher order executive skills that may entail of planning for, monitoring, or evaluating the success of activity" (O'Malley & Chamot, 1990, p. 44) by the help of which learners manage, direct, regulate, and guide their learning (Wenden, 1998). Metacognitive awareness of listening strategies has been rigorously defined and measured recently by considering five factors including problem solving, planning-evaluation, mental translation, person knowledge, and directed attention (Vandergrift et al., 2006). The awareness of listening strategies has been found to be related to language learners' motivation (Vandergrift, 2005), learners' level of education (Rahimi, & Katal, 2011), technology use for EFL listening (Rahimi & Katal, 2012), and listening test performance (Zhang & Liu, 2008).

Based on these promising findings, some language educationists have discussed the rationale for integrating metacognitive instruction into

teaching listening comprehension (e.g. Vandergrift, 2004; Goh, 2008). It is assumed that “metacognitive instruction can potentially heighten learners’ awareness of their listening and learning processes and develops learners’ ability to use appropriate strategies” (Goh, 2008, p. 195). However, mixed findings of the experimental studies on the effectiveness of metacognitive listening instruction on listening performance have challenged the accuracy of this assumption.

A group of studies on implementing metacognitive instruction in teaching listening has shown that the experience raises learners’ metacognitive knowledge about listening (Liu & Goh 2006; Mareschal, 2007; Vandergrift 2004) and increases learners’ understanding of the nature and the demands of listening and their confidence in completing listening tasks (Goh & Taib, 2006). It also has a positive impact on learners’ listening performance and achievement (Vandergrift 2007; Zeng, 2007; Vandergrift & Tafaghodtari, 2010), although this effect is more observable among less skilled listeners (Cross, 2010).

A few studies have reported non-significant changes in listening performance (Seo, 2002) or strategy use and awareness (Chen & Haung, 2011) after strategy instruction. Non-significant results have been attributed to both listeners’ characteristics and contextual factors (Chen & Haung, 2012). As research into metacognitive awareness about listening is still relatively new (Goh, 2008), more studies with learners of other languages and different ages in different learning contexts seem necessary to settle controversies (Vandergrift & Tafaghodtari, 2010).

Further, although exploring the effect of metacognitive listening instruction on speaking proficiency of language learners is quite justifiable if recent views toward listening and speaking as interrelated skills are being considered, to date no research has addressed this issue. It is evident that listening comprehension is a requisite skill for communication and accuracy in listening is crucial for being a communicative participant (Green, 2004). This makes the listener play an active role in cooperation with the interlocutor to fulfill the goals of interaction (Vandergrift, 1997b) because if he/she understands the message and the communication intention, he/she talks back more appropriately, fluently, and accurately. Further, as “the amount of time a learner has to plan the different processing stages is likely to affect output” (Ellis, 2008, p. 125), it can be hypothesized that more strategic listeners can create meaning faster and respond more appropriately because they can efficiently process what is heard in a conversation.

In this study, it is hypothesized that metacognitive listening instruction would heighten listening strategies’ awareness and perceived use and as a result of that both listening and speaking abilities are going to be impacted

and improved. The following questions would be answered in the present study:

1. Does metacognitive listening instruction have a significant effect on raising EFL learners' metacognitive awareness and perceived use of listening strategies?
2. Does metacognitive listening instruction have a significant effect on improving EFL learners' listening comprehension and oral language proficiency?

2. Method

2.1 Participants

Fifty students of two upper-intermediate English courses participated in the study. The students were all adult with an age range of 19 to 24. The total sample consisted of 35 female and 15 male students. The control group included 17 female and 8 male students and the experimental group included 18 female and 7 male students. The sample comprised both undergraduate students ($n=42$) and those who had a first university degree ($n=8$). Prior to the study, the classes were assigned to be the control ($n=25$) and the experimental groups ($n=25$) randomly.

2.2 Instruments

2.2.1 Metacognitive awareness listening questionnaire

Metacognitive Awareness Listening Questionnaire (MALQ) was used to assess the participants' metacognitive awareness and perceived use of listening strategies (Vandergrift et al., 2006). The questionnaire contains 21 items. Each item is rated on a six-point Likert scale from 1 (strongly disagree) to 6 (strongly agree) without a neutral point so that respondents cannot hedge.

MALQ consists of five factors including problem-solving (6 items), planning-evaluation (5 items), mental translation (3 items), person knowledge (3 items), and directed attention (4 items). In order to explore the factor structure of the questionnaire, the developers have used both exploratory and confirmatory factor analyses using samples of different foreign language learners including Iranians. The reliability coefficient of the subscales was estimated by internal consistency method and the Cronbach's alphas were found to be 0.74 for problem solving, 0.75 for planning-evaluation, 0.78 for mental translation, 0.74 for person knowledge, and 0.68 for directed attention respectively (Vandergrift et al., 2006).

MALQ has been validated using an Iranian sample (Rahimi & Katal, 2012) and the result of both exploratory and confirmatory factor analyses supports a five-factor model. Reliability coefficients of 0.82 (Baleghizadeh

& Rahimi, 2011) and 0.85 (Shirani Bidabadi & Yamat, 2011) with Iranian samples have been reported. The reliability coefficient of MALQ in this study was estimated to be 0.76.

MALQ was administered 2 times as the pretest and posttest.

2.2.2 Language proficiency test

Listening and speaking sections of ibt TOEFL test were utilized to assess students' listening comprehension and oral proficiency before and after the study.

The listening section comprised 6 listening tasks with different naturalistic settings and topics (e.g. listening to an academic lecture, a conversation between a university professor and a student, conversation between two classmates, and listening to a talk). The reliability of the test was estimated to be 0.74 for this sample.

The speaking section contained 6 speaking tasks with different styles (e.g. listen and talk about a topic; read and listen and then talk; and listen to a talk and answer a question based on that). For each speaking task students had 15 seconds to prepare and 45-60 seconds to talk. All answers were recorded and then scored according to TOEFL speaking scoring rubric by two EFL instructors. The inter-rater reliability was estimated to be 0.91.

2.3 Procedure

Vandergrift and Tafaghodtari's (2010) cycle of teaching listening was adopted and used to teach listening strategies. The cycle was adapted into a three-phase procedure of pre-listening, listening and post-listening. This was done in order to have a comparatively clear lesson plan to teach listening to the control group, as reviewing articles on metacognitive instruction does not reveal much about what procedures they followed to teach listening to the control group. Most of them have reported that teaching listening strategies has been avoided; however, the exact procedure of instruction is left unsaid or vague.

The instructor, the first author who is an applied linguist and a researcher, trained students of the experimental group to apply listening strategies during a 16-session semester by emphasizing the use of strategies in different listening tasks (Appendix 1). Sixteen listening tasks of Open Forum (Duncan & Parker, 2007) were used to teach listening. Each session lasted 100 minutes and 35 to 40 minutes of each session (35% to 40%) were spent on the listening task.

Meanwhile the control group received instruction based on a three-phase pre-listening, listening, post-listening procedure using the same teaching material; however, they did not receive instruction on strategy use while doing listening tasks.

In the pre-listening phase, the students were familiarized with the topic and the type of listening task.

In the listening phase, the students listened to the task for three times: listen for the gist, listen for the detail, and listen for checking comprehension. Like Vandergrift and Tafagodtari (2010) “the students did not engage in any formal prediction activity, nor were they given an opportunity to discuss, predict, or monitor their comprehension with a classmate “(p. 479) in this phase.

In the post-listening phase, the students answered comprehension questions based on the task they listened to without discussing how they processed the listening task or what type of strategies they used.

3. Results

3.1 Metacognitive awareness of listening strategies

Table 1 summarizes the mean scores of both groups' MALQ pretests and posttests.

Table 1. Descriptive Statistics for MALQ

Groups	Administration	Mean	SD
Control group (n=25)	Pretest	3.636	.617
	Posttest	3.727	.559
Experimental group (n=25)	Pretest	3.760	.762
	Posttest	4.209	.452

As Table 1 shows, the experimental group had higher mean score on MALQ after the experiment (Mean=4.209) in comparison to the control group (Mean=3.636). In order to test whether this difference was statistically significant, a one-way between-groups analysis of covariance (ANCOVA) was conducted. Participants' scores on MALQ pretest were used as the covariate in this analysis.

As shown in Table 2, the result of ANCOVA revealed that there was a significant difference between the two groups in MALQ posttest [$F(1, 47) = 12.194$; $p = .001$; partial eta squared = .206] in favor of the experimental group. Accordingly, the conclusion can be drawn that metacognitive instruction has caused a higher level of metacognitive awareness of listening strategies in comparison to listening instruction that does not focus on teaching listening strategies.

Table 2. The result of ANCOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
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Corrected Model	2783.947	2	1391.974	16.457	.000	.412
Intercept	4676.816	1	4676.816	55.294	.000	.541
MALQ pretest	1503.767	1	1503.767	17.779	.000	.274
Group	1031.363	1	1031.363	12.194	.001	.206
Error	3975.273	47	84.580			
Total	354037.000	50				
Corrected Total	6759.220	49				

3.2 Listening comprehension and oral language proficiency

Table 3 presents the mean scores of both groups' listening and speaking pretests and posttests. As shown in this Table, the mean scores of the experimental group's listening and speaking posttests (22.44 and 14.08 respectively) are higher than those of the control group (20.64 and 12.40 respectively).

Table 3. Descriptive statistics for listening and speaking tests

Variables	Groups	Mean	SD
Listening posttest	control group	20.64	4.281
	experimental group	22.44	4.104
Speaking posttest	control group	12.40	2.582
	experimental group	14.08	3.290

To compare the means of both groups' listening and speaking posttests and to test whether their difference was statistically significant due to metacognitive instruction, multivariate analysis of covariance (MANCOVA) was used. The scores on the pretests were treated as covariates to control for preexisting differences between the groups (Pallant, 2010).

Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable covariate. The result showed that there was a statistically significant difference between control and experimental groups' performance on the combined dependent variables (listening and speaking posttests) [$F(2, 55) = 4.89, p = .012$; Wilks' Lambda = .821; partial eta squared = .179].

In order to examine the results for the dependent variables separately, the results of Tests of Between-Subjects Effects were checked (Table 4). Using a Bonferroni adjusted alpha level of .025, (Tabachnick & Fidell, 2007), the only difference to reach statistical significance was speaking

($p=.016<.025$). Therefore, it can be concluded that metacognitive instruction caused improvement in the experimental groups' oral proficiency but did not improve their listening comprehension significantly.

Table 4. Tests of between-subjects effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	377.310	3	125.770	11.409	.000
	136.930	3	45.643	6.599	.001
Intercept	183.690	1	183.690	16.663	.000
	80.307	1	80.307	11.610	.001
Listening pretest	236.828	1	236.828	21.483	.000
	21.629	1	21.629	3.127	.084
Speaking pretest	24.908	1	24.908	2.259	.140
	51.350	1	51.350	7.424	.009
Group	45.510	1	45.510	4.128	.048
	43.249	1	43.249	6.252	.016
Error	507.110	46	11.024		
	318.190	46	6.917		
Total	24083.000	50			
	9220.000	50			
Corrected Total	884.420	49			
	455.120	49			

4. Discussion

The findings of the present study indicated a significant difference between control and experimental groups' level of listening strategy awareness and perceived use, implying that giving guidance on the mental activities learners engage in to construct meaning when they listen "elicits and enhances learners' knowledge about learning to listen" (Goh, 2008, p. 192) and helps them to use the most effective listening strategies.

This suggests that specific metacognitive activities, explicit intervention in the classroom (Veenma & Spaans, 2005) and categorization of the manner in which strategy use is orchestrated while listening (Cross, 2009) sensitize language learners to the process underlying listening (Vandergrift & Tafaghodtari, 2010), help them to uncover the mental process that happens inside their head when they listen (Goh, 2008) and guide them on how to approach the task of listening (O'Bryan & Hegelheimer, 2009; Coskun, 2010).

This finding corroborates theoretical postulations and empirical evidence about the effectiveness of metacognitive instruction on strategy

awareness and use. It is specifically documented in the literature that metacognitive awareness training makes listeners better at processing and storing information (Vandergrift, et al. 2006), helps them to manage cognitive process and difficulties during listening strategy (Goh, 2002), makes them more confident and motivated listeners (Vandergrift, 2003b), and directs them to self-appraise and self-regulate their learning (Wenden, 1998). In this way, learners understand the active nature of listening process and the need for particular effort from their part (Goh & Taib, 2006) to use certain strategies to enhance their understanding and become more successful communicators.

It was also revealed that making students familiar with listening strategies through precise categorization and explanations of how and where to use them can lead to better listening comprehension, although this improvement does not reach a level of statistical significance.

A few studies available in the area of strategy instruction have revealed mixed findings about the impact of metacognitive instruction on listening performance. A string of research supports a positive effect on listening comprehension as a result of metacognitive awareness instruction (Bolitho et al., 2003; Mareschal, 2007; O'Bryan & Hegelheimer, 2009; Coskun, 2010; Vandergrift & Tafaghodtari, 2010); however, there are studies that found no immediate effect on enhancement of listening comprehension as a result of such instruction (O'Malley et al., 1985; O'Malley, 1987; Thompson & Rubin, 1996; Ozeki, 2000; Chen & Haung, 2011).

This non-significant difference can be attributed to the students' proficiency in listening comprehension prior to the study, length of instruction, and role of EFL/ESL context.

There is strong evidence in metacognitive listening instruction literature in the ESL setting that less skilled listeners benefit more of teaching listening strategies than skilled listeners do (Goh & Taib, 2006; Mareschal, 2007; Cross, 2010; Vandergrift & Tafaghodtari, 2010). It is believed that there is a threshold level for skilled listeners "beyond which effects of metacognitive instruction are minimal" (Cross, 2010, p.1) because skilled listeners "had already reached a comparatively solid level of understanding and orchestration of bottom-up and top-down skills and strategies, so that the impact of participating in the pedagogical cycle of teaching metacognitive listening strategies made little difference to their comprehension" (Cross, 2010, p. 7). However, this issue is open to further research especially in EFL settings as the relationship between strategy use and language proficiency is very complicated (McDonough, 1999).

While some studies have recommended 8 (Mareschal, 2007) and 13 (Vandergrift & Tafaghodtari, 2010) sessions to implement metacognitive

instruction, short duration of instruction can be the cause of non-significant effect of metacognitive instruction on listening proficiency, even if metacognitive awareness is raised after the instruction. Some researchers have suggested that a prolonged metacognitive instruction (more than six months) yields more positive results in increasing students' listening proficiency (Graham & Macaro, 2008; Veenman et al., 2006). It is also evident that the length of instruction and students' level of language proficiency are related and prolonged training is required if advanced learners are going to be affected by strategy training instruction (Vandergrift, 1997b).

Considering the context of metacognitive instruction, inconclusive results have also been reached. While metacognitive instruction research has a history of more than two decades in the ESL context with abundant evidence (e.g. Murphy, 1985; O'Malley et al., 1989; Bacon, 1992; Mareschal, 2002, 2007; Cross, 2009, 2010), it has only been recently that a few scholars started to undertake empirical studies in this regard in the EFL setting (e.g. Coskun, 2010; Chen & Huang, 2011). The findings of some of these studies show a positive effect of metacognitive listening strategies instruction on listening proficiency and comprehending oral texts (Coskun 2010; Ross & Rost, 1991 cited in Chen & Huang, 2011) while in some of them non-significant improvement of students' listening performance after instruction is reported (Ozeki, 2000; Seo, 2000; Chen & Huang, 2011). This result can be attributed to factors such as text and task type, the listener characteristics (e.g. background schemata, learning styles) (Brown, 2001; Macaro et al., 2007, cited in Chen & Huang, 2011), the amount of exposure to oral text, and the nature of the input (Vandergrift & Tafaghodtari, 2010).

While inferential statistics revealed a non-significant difference between the two groups' listening comprehension after the treatment, we cannot overlook the fact that metacognitive instruction has actually improved participants' listening comprehension ability from pretest (Mean=19.76, SD=6.22) to posttest (Mean=22.44, SD=4.10). What can be concluded from this is that controlling the factors discussed earlier may guarantee a significant impact of strategy instruction on listening comprehension and therefore, replication of this study in other EFL contexts is recommended.

The findings of the study also revealed that metacognitive awareness of listening strategies can have a significant positive effect on students' oral proficiency. The finding that metacognitive instruction has increased the awareness of listening strategies and impacted speaking proficiency with no significant change of listening proficiency seems odd at first glance. According to interactive listening models of listening, listening and speaking

are intertwined and higher listening ability can guarantee better speaking performance (e.g. Green, 2004; Rost, 2002a, 2002b). Therefore, how is it possible that metacognitive instruction has affected speaking without a significant change in listening ability?

Although this finding was not predictable from the beginning, there seems to be a rationale behind it. First, it should be noted that the instruction has actually improved listening comprehension, although marginally and not to a level of statistical significance. Therefore, it is logical to assume that a proportion of better speaking ability after the instruction can be attributed to this improvement. Second, it can be suggested that oral proficiency has improved as a result of a significant change in the level of strategy awareness and perceived use after metacognitive instruction. In other words, metacognitive listening strategies awareness has affected speaking both indirectly (through listening) and directly (through strategy use) (Figure 1). This is in agreement with the interactive model of listening based on which listening comprehension is not a one-dimensional construct and is composed of comprehension processes and cognitive and metacognitive traits (Goh, 2008) that are all interrelated with speaking (Clark & Clark, 1977). Thus, activating listening strategy use in the process of communication helps listeners-speakers to regulate both input processing and output production. This can be related to 'speech presence condition' based on which "speech is prototypically used in the presence of an interlocutor" (Bygate, 2009, p. 417). According to this proposition, "speakers construct their speech output so as to cater for listeners' needs" (Cutler, 1987, p. 23) by adjusting their talk to the interlocutor's knowledge, interests, and expectations and facilitate their interlocutor's understanding and participation so that the interlocutor is able to use his/her speaking rights (Clark & Kyrch, 2004). While this adjustment is mostly made by utilizing communication strategies (Zhang & Goh, 2006), the use of metacognitive listening strategies in tackling listening problems and facilitating listening comprehension throughout the process of interaction can help speakers to perform their role more successfully (Vandergrift et al., 2006).

This finding corroborates the psycholinguistic model of speech production (Levelt, 1989) that divides speech into four stages of conceptualization, formulation, articulation, and self-monitoring, if one pays attention to the fact that conceptualization of the message content is the first step that allows the message to be processed and understood and only after that the other processes may proceed. This justifies the indirect effect of metacognitive awareness of listening strategies on speaking because "listening is an intention to complete a communication" (Rost, 2002b, p. 40) and "high-level inferences during listening require listeners to make

assumptions about speakers' intention" (Vandergrift & Goh, 2009, p. 396). Applying listening strategies helps listeners to arrive at a reasonable interpretation of utterances, negotiate meaning (Mareschal, 2002) and consequently respond appropriately in the process of communication through problem solving, predicting, planning and evaluation, avoiding ineffective tactics, and finding ways to stay on listening task when they experience difficulty understanding (Vandergrift et al., 2006).

Another factor that should be considered here is the effect of planning time (Ellis, 2008) and time pressure (Bygate, 2008) on speech production that may account for the direct impact of listening strategies on speaking proficiency. Planning speech is related to lack or presence of forethought and organizational preparation (Ochs, 1979, cited in Ellis, 2008) or the actions a speaker may take to plan the content or linguistic forms of a message before or while production (Ellis, 2005). Planning time can impact fluency, complexity, and accuracy of speech production (Yuan & Ellis, 2003) and has been reported to be a crucial factor in the development of appropriate speech production skills (Bygate, 2008).

As metacognitive listening strategies help listeners to monitor, regulate and evaluate their listening, it is suggested -according to the findings of this study- that strategy use and awareness have helped the listeners to minimize speech production planning time by going through the four stages more quickly and automatically and thus improvement in speaking ability is resulted.

5. Conclusion

The findings of the study provide evidence that metacognitive instruction can be an alternative to traditional teaching listening as metacognitive awareness of listening strategies brings about accomplishments in listening comprehension and oral language proficiency. However, the degree of this accomplishment depends on the context of teaching, learners' level of language proficiency, and duration of the instruction. The findings also highlight the interrelatedness of speaking and listening skills in the process of communication and underscore the key role of input processing in output production.

While some studies have doubted the impact of awareness raising and perception training on speech production (Bygate, 2009), the findings of this study support implementing the input-focused approach and input-processing activities in the development of oral proficiency and underline the need to heighten students' strategy awareness and use especially in listening and speaking classes.

One way to promote students' awareness of listening strategies and involvement in using them is considering principles of strategy-based instruction in designing EFL instructional materials and activities. As most teaching materials and course books, especially in the context of EFL, do not contain enough activities related to learning strategies (Rasekh & Ranjbary, 2003), particular attention to implementing fundamental changes in designing EFL syllabuses and teaching materials is called for.

Further, EFL teachers are required to broaden their strategy repertoire and their understanding of strategy-based instruction to be able to incorporate metacognitive listening strategy instruction into their teaching procedure (Vandergrift, 1999) and equip their students with applicable knowledge of strategies to be used in different tasks and situations.

Successful implementation of listening strategy instruction in EFL classes highlights the issue of how teachers should be trained in pre-service and in-service teacher education programs to become aware of underlying theories of strategy-based instruction and the way language learning strategies should be practiced. Teacher educators can familiarize prospective teachers with theoretical issues and empirical findings of strategy-based instruction in pre-service courses. Further, offices of education can promote this understanding by holding scientific workshops, preparing different types of resources and guidelines, and encouraging in-service language teachers to do action research on the topic.

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Appendix 1. Metacognitive listening strategies instruction (based on Vandergrift and Tafaghodtari, 2010)

Phase	Pedagogical stages	Metacognitive processes
I. Pre-Listening	<p>Planning/predicting stage</p> <p>1. Students were informed about the topic (e.g., Optimism and Pessimism) and the type of the text they were going to hear (a college lecture). Then the students were asked to predict the types of information they were going to hear. This was done by providing students with texts, pictures, or discussions. They were also asked to predict and write down what words and phrases they might hear. This step was done through brainstorming and students' collaborative interaction.</p>	1. Planning and directed attention
	II. Listening	<p>First listen: First verifications stage</p> <p>2. After completing their predictions, students listened to the oral text for the first time. As they listened, they were asked to check their prediction and verify the initial hypotheses they made with respect to the information and words and do corrections if required. They did this by highlighting the predicted words, phrases, and information if they were mentioned in the text. Then they added further information they understood from the listening task by taking notes.</p>
<p>3. Students discussed and compared their predictions and identified their comprehension problems to concentrate more on during the second listen.</p>		3. Monitoring, evaluation, planning and, selective attention
<p>Second listen: Second verification stage</p>		4. Selective attention, monitoring,
<p>4. Students listened to the text for the second time. This time they focused on details and what they did not succeed to</p>		Evaluating, and problem solving

understand during the first listening phase. They were asked to write down more detailed information and answer questions to the exercises based on the listening task.

5. All students contributed to class discussions by expressing the main points of the text they heard. They also talked about the ways they used in arriving at the meaning of certain words or understanding some parts of the text.

Third listen: Final verification stage

6. Students listened to the text for the third time to verify their understanding of the text and also to get the information they might have missed based on the discussions of the previous listening.

Reflection stage

7. Students reflected on their experience in listening activity and shared their ideas about the task and the strategies that helped them to comprehend better. They listed goals for the next listening activity.

5. Monitoring,
evaluation, and
problem solving

6. Selective attention,
monitoring,
and problem solving

7. Evaluation, planning