



The impact of metacognitive strategies on Iranian EFL learners on listening comprehension

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ABSTRACT

The aim of present study is to investigate the impact of metacognitive strategies on the improvement of Iranian EFL learners' listening comprehension skill. In order to achieve the goal of present study, a sample test of KET was administered to 70 students to check whether two groups are homogenous or not. Their ages varies between 12-15, after doing language test, participants were divided into two groups as experimental and control groups. The experimental group received listening tasks through metacognitive strategies in three phase (pre-listening, listening, and post-listening). The Metacognitive Awareness Listening Questionnaire (MALQ) was developed by Vangrft et al. (2006) is used for both groups. A pretest was chosen from Cambridge Practice Test was given to the participants that ensure there were no significant difference between experimental and control groups, and they belong to the same population.. The experimental group had 16 training sessions, two hours each sessions; twice a week .used same materials were used for both groups. The students were asked to answer 7 questions of self-report after listening and 16 questions of checklists. After the treatment all participants had Cambridge test as post-test to check possible differences between treatment group and control group.

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Introduction

The teachers and some researchers recognized teaching listening comprehension is very crucial in the second language classroom learning. There were only a few number of studies that have investigated the role of metacognitive strategies in 12 listening comprehension. According to Rubin(1994. p, 199) text, interlocutor, task, listener's personal, process characteristics were five factors that affect listening comprehension. Metacognition term was coined by American developmental psychologist Flavell (1976) who cited metacognitive literally means "big thinking". In the other words, it means thinking about thinking and the brain's processing are examined during listening process. Metacognition includes knowledge that explain when and how to use special strategies for learning, problem solving and evaluation the learning process and it is the study of monitoring the memory, self-regulation, find the reasoning, and awareness.

Teachers in Iran usual ask students to listen carefully to oral passages and answer to some questions from texts and sometimes discuss about them that these methods are not suitable enough. Metacognitive strategies on listening comprehension are new methods in Iran. Researchers and teachers create, recognize and increase strategies because many non native learners face with some problems like lack of facilities, native or expert teachers at schools, real environment, good books, anxiety, lack of motivation and many other factors.

The present study was attempt to consider the effect of metacognitive strategies on listening comprehension of EFL female learners at school and investigate the following question:

Does the use of the metacognitive strategies have any impact on Iranian EFL learner's listening comprehension?

Metacognition

The term "metacognition" defined include both knowledge and strategy was coined by Flavell (1979), who offered that

metacognition consist of both metacognitive knowledge and experiences of regulation. Livingstone (2003) cited that metacognition is one of the buzz word in educational psychology. Metacognition refers to high thinking that involves active control during the cognitive processes in learning because metacognition plays basic role in successful learning.

Gama (2004), designed metacognition instruction model, named the Reflection Assistant (RA), that focused on problem understanding and knowledge monitoring, selection of metacognitive strategies, and evaluation of the learning experience as metacognitive strategies and it was based on knowledge monitoring accuracy (KMA) which measured the accuracy of the student's knowledge monitoring and knowledge monitoring bias (KMB) that show knowledge monitoring, administering to categorize students as pessimistic, optimistic, realistic, or random. The RA model is useful for the students who understood a problem and can determine it and could monitor their problem solving time better, could find the best strategies during problem solving, could increase focus on their learning process, could increase awareness of themselves as learners and could evaluate themselves for using of resources, time, and strategies.

Koriat(2005)mentioned that metacognition is the memory processes (monitoring), and how the participants use their information processing and behavior (control). Paris and Winograd (2011) mentioned metacognition could change the personal views into their thinking and produced independent learning and confident problem solving. The students who face with difficulty and problems at school could understand how to manage their sources for learning. Teachers can adjust and combine these methods to teach students how to think as they read, write, and listen in classrooms. The teachers in educational and developmental psychology area want to help students that to be self-regulated, independent, and flexible learners. Self-

regulating help students to perform their plans and choose difficult tasks.

Metacognition on listening

Some researchers believe that listening comprehension is passive activity and others believe it is an active and conscious process (O'Malley, Chamot & Küpper, 1989). Goh (1997) cited during the learning process teachers and researchers want to help the students that become more active, self-regulated and self control their own language learning. Unfortunately, some of students do not have enough knowledge about how they can learn more effectively. When learners have knowledge and share their knowledge, they could use beneficial learning and make faster progress and they will become more autonomous and self-regulated listeners. Goh (2008) stated that teaching metacognitive strategies increase learners' confidence and reduce learners anxiety during the listening and these strategies facilitated comprehension and better communication.

Vandergrift (2003), believed skilled listeners used metacognitive strategies more than less-skilled students. When students face with new materials, monitor against world knowledge and create conceptual terms and developmental inputs of texts in listening, the role of metacognitive strategies are emerged (Vandergrift 2003: 487). According to Vandergrift (2005), that metacognitive strategies are skills such as planning, monitoring, evaluating, and problem solving are used by learners to manage, regulate, and guide their learning.

Birjandi (2012), believed that the students were aware of successful strategies that learn how to plan, monitor their comprehension, how to evaluate their performance and proficiency, they will be better motivated and can become more self-regulated learners that have responsibility for their learning and then know how to cope with the learning task. The students have a plan for different problems, monitor their plans and evaluate their performance which were in metacognitive strategies.

Psycho metacognition

Flavell (1979) proposed increasing the quantity and quality of children's metacognitive knowledge and monitoring skills through systematic learning might be feasible as well as pleasant. Flavell (1979) mentioned that children should distinguish between understanding and not understanding things; the inputs that sometimes emerge confused, unable to act, uncertain about what is intended or meant, and to a clear sense of what they should do next and also distinction between accuracy and incorrect or not real understanding were acquired after listening. Although, some person variables can decrease accuracy, such as personal factors, more affect, and mental or physical illness.

Listening

Thompson and Rubin (1996), believed that development in listening comprehension is a slow process and using the strategies in learning could facilitate the improvement of listening comprehension. Goh (2000) suggested two teaching strategies for helping learners become better listeners. The direct strategy and indirect strategy increase learners' metacognitive awareness about L2 listening.

Brown (2006), mentioned listening in another language is a hard but it become easier when the listener apply what learners know about activating previous knowledge, helping students to find out their purposes for listening and organize their learning and organize their learning, and increasing the speaking skill by recognize good tasks in classroom. Brown (2006), explained that the importance of supporting the students' learning and motivation are two themes through learning listening that

listening. The teachers have responsibilities through making self-regulated learners. They should have benefit syllabus for a listening class, warm-up stage to activate students' previous knowledge and completed the listening tasks during class- time, give practice in interpersonal (face-to-face) listening and each speaking task.

Field (2009), mentioned that cultural background, beliefs, learning style, motivation, and attitude are some factors that affect on language learning.

Ishler (2010), expressed that listening strategies are an integral part of cognitive and metacognitive comprehension process. He decided to combined theoretical model like cognitive models (Anderson, 1983, 1993) a working memory model (Baddeley, 2009), a comprehension model (Kintsch, 1998), and listening strategies (Oxford, 1990; Wenden, 1991; O'Malley and Chamot, 1990; & Vandergrift, 2003b) and he identified two metacognitive strategies that the reading the task and matching that were planning strategy for reading the tasks and monitoring strategy for matching.

Metacognition on reading comprehension and other skills

According to positive effect of metacognitive studies in L1 context, the researchers motivated to employ metacognitive strategies in L2 learning, especially in reading comprehension. (Barnett, 1988; Devine, 1984; Kern, 1989). Yanyan (2010), mentioned that metacognitive knowledge is knowledge about learning and metacognitive knowledge has an important role in cognitive activities and tasks specially in the English writing of Chinese EFL learners and elaborated metacognitive knowledge has three components, person knowledge, task knowledge and strategic knowledge.

Method

Research Design

In this study the method was used to determine the relationship metacognitive strategies and listening comprehension ability among female 12-15 students at middle schools. To gain this purpose, the KET listening tests and Metacognitive Awareness Listening Questionnaire (MALQ) were administered. In the current study the researcher selected participants from 110 students by KET listening test and divided them into two groups, experimental and control. According to the analysis of data, the researcher was resulted that the metacognitive strategies had positive effect on listening comprehension of female students.

Participants

The participants were 70 female students out of 110 were considered for the final sample from two female middle schools in Damavand who are between 12-15 who studied in first and second grade and their native language was Persian. The participants were divided into two groups, experimental and control groups. An experimental group (N= 35) received metacognitive strategies and the other group is control group (N=35) did not train by metacognitive strategies. Both groups received the same materials. To ensure the homogeneity of the groups regarding their listening comprehension ability, a listening test of KET was used that the reliability of the test was estimated to be 0.70 for this sample. The participants took Persian version of MALQ piloted by Vandergrift et al. (2006) in native environment. Reliability coefficient of 0.82 (Baleghizadeh & Rahimi, 2011) and 0.85 (Shirani Bidabadi & Yamat, 2011) and 0.76 (Katal & Rahimi, 2013) have reported with Iranian samples as cited in Katal and Rahimi (2013). In the current paper, the Persian version of MALQ had back translation to check validity of the questionnaire with some of teaching English students at Damavand Azad University.

Instrumentation

There are several materials, course book and tests for listening were designed by different authors. In this study, listening tests were selected which were listening test from KET (Cambridge ESOL Examination, 2003) as homogenized, pretest and post-test and some CDs, transcript, movies and some reports from TV and the MALQ developed by Vandergrift et al (2006). The reliability of whole tests were estimated by Cronbach's Alpha and the validity of tests were piloted first.

Language Test

The Listening Comprehension Test, KET, consisted of 25 items in 5 section which had been selected from Cambridge KET was tested as pretest. The reliability of the homogeneity test and pretest were estimated to be 0.70 and 0.73 for this sample of the study. The normality of tests was estimated by Shapiro-Wilk and independent sample test for checking better. After treatment, both experimental and control groups were tested regarding their improvement in listening comprehension by posttest similar to pretest.

Metacognitive Awareness Listening Questionnaire (MALQ)

In order to learn about the effectiveness of metacognitive strategies on the listening ability of the experimental group and to compare their improvement with the control group, Metacognitive Awareness Listening Questionnaire (MALQ) that was 21 items and developed by Vandergrift et al. (2006) was given to two groups. Each item was rated on six-point Likert scale from 1 (strongly agree) to 6 (strongly disagree) without neutral point. MALQ has piloted by 50 students at middle schools and the reliability was estimated to be 0.71 for this study. Reliability coefficient with Iranian samples have been reported by various researchers such as 0.76 by Rahimi and Katal, (2012); and 0.82 by Baleghizadeh and Rahimi, (2011); 0.85 by Shirani Bidabadi and Yamat, (2011). The validity of Persian version of MALQ by have been checked by back translation with some of teaching English students at Damavand Azad University. MALQ includes five parts such as planning-evaluation (5 items), person knowledge (3 items), direct attention (4 items), mental translation (3 items) and problem-solving (6 items). MALQ was administered 2 times as the pretest and posttest.

Self-report and Checklist

The students were asked to provide a self-report in which their responses to 7 questions that included all aspects of their learning and they were requested to completed 16 questions of check lists before and after the listening task into which metacognitive strategies were incorporated. Self-report and checklists were self-assessment instrument.

Procedure

Before carrying out the main study, the researcher piloted the tests by 50 female students at middle schools who had same proficiency level, as the participants of the main study. The reliability of tests were calculated. The questionnaire was translated into Persian version and the reliability of language tests and MALQ gave with Cronbach's Alpha. In each test the normality was measured by Shapiro-Wilk, and independent sample test. To ensure the homogeneity of participants used listening test from KET and selected 70 students among 110 participants. In this study, 35 students were assigned to experimental and 35 students were in control group. The researcher designed an experiment consisting of three main phases: a) pre-test, b) treatment that contained pre-listening, listening and post listening, and c) post-test. The experimental group received metacognitive strategies.

Phase one: Pre-test

The researcher had to ensure the homogeneity of participants by KET. The mean and standard deviation of the scores were calculated and among of all participants, only who scored were between one standard deviation above or below the mean were selected as a subjects. The subjected divided two groups experimental and control groups. The other listening test from KET was took as pre-test from both groups before the treatment

Phase two: Treatment

The researcher considered some factors such as planning, practicing, observing, and evaluating. So, the experimental group, which was practicing metacognitive listening strategies instruction based on Vandergrit and Tafaghodtari (2010). This instruction was adopted into three phase procedure of pre-listening, listening, and post-listening. The researcher trained students by emphasizing the use of strategies in different listening tasks.

The students should write about every things that they listened, at least one paragraph every session. They had a group discussions on their thoughts and beliefs. They reported their reactions and evaluation of their learning. On the other hand, the researcher used comprehension monitoring, close caption and directed attention strategies of part of metacognitive strategies.

In the listening phase, the students listened to the CDs for three times: listen for the gist, listen for the detail, and listen for checking comprehension. Like Vandergrift and Tafagotdari (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 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 but the students were asked to discuss about whatever they listened. The students were also asked to fill out the check lists and self report that are used in order to assess L2 learners' metacognitive awareness and perceived use of strategies while listening to oral texts.

Phase three: Post-test

After the treatment time, a listening comprehension post-test similar to pre-test was administered to two groups that determine whether there was any improvement in the listening ability of the participants. The post test and pre-test mean scores of the groups were compared. The mean of post test (mean = 17.0971) was more than pre-test (mean=13.7143).

Result and discussion

The main objective of the study was to find out whether the use of metacognitive strategies has any significant effect on the development of Iranian EFL learners' listening comprehension. The researcher's endeavor was to answer to the following question:

Does the use of the metacognitive strategies have any impact on Iranian EFL learner's listening comprehension?

In order to analyze and interpret the gathered data for testing the null hypothesis, certain procedures were utilized.

The descriptive statistics of pretest was computed. According to the results, the mean of pretest in experimental group is 13.71 and in the control group is 13.62 and total mean of pretest is 13.66. The Std. Deviation shows dispersal of scores test that number was 1.67 and in the experimental group is 1.64 and in control group is 1.72.

After the administration of the metacognitive strategies in experimental group, a post-test was administered form experimental and control groups. post-test as the same as pretest.

Table 1. Descriptive Statistics for the Listening Pretest

group	Mean	Std. Deviation	Minimum	Maximum	Kurtosis	Skewness	Std. Error of Mean
Expr	13.7143	1.64802	12.00	18.40	.916	1.124	.27857
Cont	13.6229	1.72986	12.00	17.60	.521	1.183	.29240
Total	13.6686	1.67778	12.00	18.40	.556	1.126	.20053

Table 2. Descriptive statistics for Listening Post-test

Group	Mean	Std. Deviation	Minimum	Maximum	Kurtosis	Skewness	Std. Error of Mean
Expr	17.0971	1.80024	13.60	20.00	-1.093	.031	.30430
Cont	14.8343	1.87459	12.00	19.20	.209	.852	.31686
Total	15.9657	2.15110	12.00	20.00	-.938	.231	.25711

Table 3. One Way ANOVA for the Post-test ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	57.270	9	6.363	3.006	.014
Within Groups	52.919	25	2.117		
Total	110.190	34			

Table 4. Descriptive Statistics on the Questionnaire for post-test

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
quexpos	35	6.44	10.19	8.0008	1.06334	.494	.398
Valid N (listwise)	35						

Table 5. correlation coefficient for comparing the results of the post-test and questionnaire, Self-report and checklist

Correlation	Post-test and questionnaire	Post-test and Self-report	Post-test and checklist
Pearson correlation	.635**	.342*	.353*
Sig.(2-tailed)	.000	.044	.038
N	35	35	35

According to the results of descriptive statistics of listening post-test, it is clearly the mean in experimental group (=17.09) was more than in pretest (=13.71). Although the mean in control group in pretest (=13.62) to post-test (=14.83) was increased but it is not very significant. The Std. Deviation shows scattering of scores post-test that in experimental is 1.80 and in the control is 1.87 and totally is 2.15.

A one way ANOVA was done to compare the mean scores of two groups on the post-test. The obtained significance value .014 that was lower than 0.05 level of significance. The findings display that there is difference between two groups. Therefore, the results indicate that metacognitive strategies could help learners improve the listening comprehension ability.

Following to learn the effectiveness of metacognitive strategy training instruction on the listening ability of learners and compare the improvement of experimental group to control group, a questionnaire was developed by Vandergrif et al (2006) was given to two groups. The students were asked to provide self-report and check lists.

According to the result of MALQ in table 4 post-test of experimental group the mean of experimental group is 8. The Std. Deviation shows dispersal of questionnaire scores that number was 1. Skewness is 0.4 that shows the data was significant normal because the Skewness should be close to zero.

According to results in table 4.18., the obtained sig value was .000 that was lower than 0.05 level of significance. The value of sig in post-test with questionnaire and others were <0.05. The obtained correlation coefficient comparing the results of the post-test and questionnaire (r= 0.63), post-test and

self-report (r =0.34) and post test and checklist (r =0.35) were significant. So, there was positive relationship between the post-test scores and metacognitive strategy use during the listening comprehension process.

Discussion of Findings

Metacognitive instruction research has a history of more than two decades in the ESL context. The findings of the present study indicated a significant difference between control and experimental groups' level of listening strategy awareness and help the students to use the most effective listening strategies. There are some studies in the second language acquisition that support this claim that the positive effect of metacognitive strategies on listening comprehension (O'Malley et al., 1985; O'Malley, 1987; Thompson & Rubin, 1996; Ozeki, 2000; Vandergrift & Tafaghodtari, 2010).

Metacognitive strategies make learners to be improved listener and raise their motivation and can recall information better. These strategies help learners to manage and control cognitive process and solve problems through listening process (Goh, 2002), they provide learners for listening by gain the concentrate, raise confident and motivation of listeners (Vandergrift, et al. 2006). these strategies involve factors like: the worth of students join to a task; how much students expect to succeed; whether they believe that to be succeed; and what they observe to be responsible for their success or failure at performance the task (Chamot et al. 1999). Teaching metacognition provides opportunities that language learners increase their knowledge and meaningful use of tools to transfer that they know how to listen and understand authentic texts outside of the classroom (Vandergrift 2002, p.573).

Many researches in ESL area revealed that less skilled students motivated more to listen in different and unfamiliar texts and the skillful students could use different categories of metacognitive strategies to organize their listening. This study approved Birjandi 's (2012) claim that while the students use metacognitive strategies in listening process, these strategies aid them to be better self-regulated learners that it means they know how to plan and monitor their competence, evaluate their performance and help them to raise their responsibility for the learning and they were satisfy themselves that improved their listening comprehension. These students know how to cope their problems and tasks because they knew what they do, listen and understand.

Finding in present study approved the argument made by Goh(1997, p. 15) that noted "every student possesses some knowledge about listening in another language. Sharing this valuable resource helps everyone to benefit, and may help the whole class to make faster progress. The listening class should therefore make this sharing possible. When students become fully aware of the various aspects of second language listening, they will be well placed to become more autonomous listeners."

Metacognitive knowledge was divided to person knowledge consists of general knowledge about what learners know about themselves as learners, how learning takes place and how different factors like age, aptitude, and learning styles can influence language learning. Task knowledge refers to what learners know about the purpose, demands, and nature of learning tasks. Strategic knowledge is what learners know about strategies, which ones are to be effective in achieving learning goals(Wenden,1991 quoted Flavell, 1979). Metacognitive strategies include five strategies that the mental process of learning are completed which are plan, direct attention, monitor, problem solving and evaluation.

Time is the important role in the study. Some studies suggested that 8 or 13 (Vandergrift & Tafaghodtari, 2010) sessions to employ metacognitive strategies and the other studies recommended that more than six months or longer duration of instruction could have more positive effect in increasing students' listening proficiency (Graham & Macaro, 2008; Veenman et al., 2006). It is important that length of instruction and students' skill and their proficiency are related(Vandergrift, 1997).

In the current paper, the researcher used three phase of listening as Vandergrift and Tafaghodtari(2010). The participants illustrated that they could manage their mental through the listening process because they could focus harder when they have problem or unfamiliar with texts in listening and came back to texts when they lose concentration. In addition, when participants understood texts, it made them more confident and motivated listeners and then they could speak about it better and their mistakes were less. The participants could regulate themselves and "become more successful communicators" as Katal (2013) cited but the teachers should guide and control the learners. In the other hand, they could manage their pervious knowledge and could add new information to pervious information in their mind when they know how and when use strategies. So, they could mix and cooperate pervious knowledge and new one. Skillful students used metacognitive strategies for unfamiliar and new texts and speak with correctly pronunciation and dialect because they could store new vocabulary with correct pronunciation when they listen carefully. Less skilled students used metacognitive strategies for storing words as listened, searching and connecting similar texts that listen before and tring to comprehend better the texts as hear. Li (2013) noted

"Metacognitive knowledge can be effective only if it is applied into practice"(p.505). Li stated "teachers are suggested to develop students' autonomous learning ability from this perspective and establish learner-centered listening teaching mode."(p.501)

In the current paper the role of teacher is important like students because teachers should try to improve learners' abilities to monitor and organize their mind in the discussion. So, the students could understand how the metacognitive factors that may help them to success in their listening process. Students should mixed metacognitive knowledge with listening practice and introduce listening comprehension strategies through the different tasks but most of the time, the teachers face with lack of time specially at schools. So, they do not use several tasks during treatment and learning. One of the basic problems of the most Iranian EFL learners is in listening. So, teachers may need to provide instruction and practice in using metacognitive strategies in planning, comprehension monitoring, and evaluation strategies, which have positive influence on their students' performance.

Therefore, the null hypothesis in this survey that claimed instruction of metacognitive strategies had no effect on listening comprehension of Iranian EFL learners was rejected. The correlation analyses and the analyses of mean in post-test and pretest conducted on the metacognitive strategies in this study effect on listening comprehension of participants strongly.

Conclusion

The metacognitive strategies are new concepts in EFL area that are about for two decade and there are a few studies worked on the effect of metacognitive strategies on listening comprehension. Some studies support metacognitive awareness instruction have a positive effect on listening comprehension (Vandergrift & Tafaghodtari, 2010; Rahimi & Katal, 2013); However, there are studies that have no immediate effect on listening comprehension as a result of such instruction (O'Malley et al., 1985; O'Malley, 1987; Thompson & Rubin, 1996; Ozeki, 2000; Chen & Haung, 2011).

The present study was investigated to explore the effectiveness of meatcognitive strategies on the listening comprehension ability of the EFL students. According to some researchers (O'Malley, Chamot & Küpper, 1989; Thompson, 2003; Vandergrift, 1999) listening comprehension is an active and conscious process that learners compound and interpret listening input. The other studies indicated the metacognitive strategies could improve listening comprehension (e.g., Birjandi, 2012; Bozorgian, 2014; Cross, 2009; Goh, 1997; Salarifar & Pakdaman, 2010; Salehi & Farzad, 2003; Vandergrift,2005; Yang, 2009).

The metacognitive strategies that were explored in this study include planning, monitoring, problem-solving, mental translation and evaluating. Through metacognitive strategies use, the students learned how to listen effectively, how to work out what listening, how to work well in cooperation with others, how to cope the accomplishment of tasks, how to use what they know in new and unpredictable situations, and so on. The design of the questionnaire, checklists, and self-reports were based on a theoretical model of metacognition, a construct that refer to thinking about one's thinking or human ability to be conscious of one's mental process (Flavell, 1979; Nelson, 1996). The results of the three instruments of metacognitive assessment displayed that experimental group corroborated a higher level of metacognitive strategies use in their listening comprehension comparing to the control group.

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