THE RELATIONSHIP BETWEEN CRITICAL THINKING ABILITY AND METACOGNITIVE LISTENING STRATEGIES OF EFL LEARNERS

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Abstract. The present study was conducted to identify the relationship between critical thinking and metacognitive awareness listening strategies of Intermediate EFL learners. It also, investigated difference between the learners with high and low critical thinking ability on their performance in metacognitive listening strategies use. The participants of this study were 120 first year university students from the Faculty of Information and Communication Technologies, Bitola, Macedonia. Watson-Glaser Critical Thinking Questionnaire, Meta-Cognitive Awareness Listening Questionnaire and listening comprehension tests were used as instruments of this study. The results of this study revealed that there was a strong positive significant correlation between critical thinking ability and metacognitive listening strategies. In order to investigate difference between learners with high and low critical thinking ability and their metacognitive listening strategies use an independent sample t-test was employed, and the results showed a significant difference between the learners with high and low critical thinking ability and their metacognitive listening strategies use.

Keywords: *critical thinking; metacognitive listening strategies listening skill; EFL learners.*

1. Introducton

The role of listening in language education is undeniable. Of four skills, listening is the most difficult and the skill most frequently used. Listening plays an vital role in our daily communication. It makes a significant contribution in foreign language learning. Nunan (1998) asserted that, "listening is the basic skill in language learning … in fact over 50% of the time that students spend functioning in a foreign language will be devoted to listening" (p. 1). Despite of its undeniable role, listening has often been left out and considered as passive skill (Oxford, 1993; Elkhafaifi, 2005). It is the general consensus in acadamia lingua that listenting is crucial to first language acquisition. It was discovered by second language listening research that more specialized learners are likely to depend on a set of strategies to classify their listening processes (Vandergrift, 2003). Research into facilitating language learning through strategic instruction is a relatively new development in language pedagogy over the past 25 years (Rubin, 1975; Wenden & Rubin, 1978; O'Malley &Chamot, 1990). Listening comprehension strategies are universal actions, behaviors, approaches, procedures, and plans listeners use to be able to comprehend oral tasks more easily (Chen, 2008).Strategies are specific methods of approaching a problem or task, modes of operation for achieving a particular end, planned designs for controlling and manipulating certain information. They are contextualized "battle plans" that might vary from moment to moment, or day to day, or year to year (Brown, 1995, p.104: as cited in Gilakjani, 2011). Comprising one of the three main categories in O'Malley and Chamot's (1990) general classification of strategies, with cognitive and socio/affective strategies being the other two, metacognitive strategies is defined as the individual's level of consciousness (Wenden, 1998) and performs a considerable role in the cognitive processes of language as a means of communication. According to Vandergrift, Goh, Mareschal, and Tafaghodtari (2006), during listening there are five factors underlying the meta-cognitive awareness strategies consisting of problem solving, planning and evaluation, mental translation, person knowledge, and directed attention. Problem-solving includes a group of strategies which listeners employ to make inferences (guess what they do not understand) and to monitor

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these inferences. Planning and evaluation are used as preparatory stages for listening, and evaluating the outcome of the listening efforts (Richards, 1990). Mental translation consists of those strategies that listeners must learn to avoid if they try to become skilled listeners (Vandergrift, 2003). Personal knowledge includes listeners' perceptions concerning the difficulty involved in L2 listening and their self-efficacy in L2 listening (Sparks &Ganschow, 2001), and finally, directed attention represents strategies that listeners use to concentrate and stay on task, e.g., getting back on track when losing concentration or focusing harder when having difficulty understanding (Rost, 2002). According to Oxford (1990), the conscious use of meta-cognitive strategies helps learners get back their focus when they lose it. According to Goh (2008), metacognitive teaching in listening comprehension has provided many worthy results. He mentioned that metacognitive teaching provides the promotion of confidence, motivation, and interests among learners. Moreover, he states that recently some studies have proved the positive effects of metacognitive teaching on enhancing listening comprehension ability.

Critical thinking as one of the factors influencing the process of learning is a cognitive ability in human being which influences the process of thinking. Halpern (1996) considers critical thinking as the use of cognitive skills or strategies that raise the probability of desirable results. According to Kabilan (2000) to be proficient in a language, learners need to be able to think critically and creatively as they use target language. The ability to think critically is important among students in higher education as the content of education at this level necessitates higher order thinking such as the ability to employ critical evaluation to provide evidence for their views, and to dispute the validity of realities they get from teachers. Critical thinking is "thinking that is purposeful, reasoned and goal directed. It is the kind of thinking involved in solving problems, formulating, inferences, calculating likelihoods, and making decisions" (Halpern, 1989, p.5). Atkinson (1997) observes that at the present time critical thinking is one of the foremost concepts under deliberation in education. In the United States, critical thinking has been generally employed for first language education, but nowadays it has also acknowledged a high position in second and foreign language learning and teaching.

Significance of the present study is that it endeavors to explore the relationship among critical thinking and metacognitive awareness listening strategies of Intermediate EFL learners. Furthermore, this research study differentiates between high critical thinkers and their low counterparts on their listening performance. In this regard, exploring learners' critical ability will enlighten their performance in metacognitive listening strategies use which ultimately results in their improvement.

2. Literature review

In FLA context, especially in listening comprehension, researchers like Bacon (1992), O'Malley & Chamot (1990), and Vandergrift (2003) have focused on FL learners' use of meta-cognitive strategies for dealing with difficulties and enhancing comprehension. Studies have shown the impact of raising meta-cognitive awareness on students listening performance (e.g., O'Malley &Chamot, 1990; Vandergrift, 2003, 2005). Purpura (1999) discovered that meta-cognitive strategies have an important, positive, and direct effect on cognitive strategies, so it is the most influential in developing learners' listening comprehension. Goh and Yusnita (2006) advocate the positive and direct impact of listening strategies on listening performance. Goh (2000) found that more skilled listeners own a higher degree of awareness of their listening problems. Metacognitive strategies, being the most essential in developing learners' skills (Anderson, 1991), activate thinking and have the power to guide and improve the learning performance (Anderson, 2003). This stance is supported by Goh (2002) who argues that learners' metacognitive awareness correlates well with the effective learning taking place in all learning contexts. In a nutshell, literature in cognitive psychology and second language acquisition does support and document this line of research (Bolitho et al., 2003; Fernandez-Duque, Baired, &Posner, 2000).In the context of second language acquisition, and pertinent to listening in specific, Goh and Yusnita (2006) approve the direct and positive impact of listening strategies on the listening performance. According to Yang(2009), instructing listeners about the role of metacognition in L2 listening helps learners to tackle the listening task more effectively, differentiating successful listeners from unsuccessful ones. In the context of second language acquisition, and pertinent to listening specifically, Goh and Yusnita (2006) approve the direct and positive impact of listening strategies on the listening performance.

Based on metacognition theory, the metacognitive awareness of listening strategies involve the the language learner being aware of the listening strategies at his or her disposal, and how far he can organize and manage the listening comprehension process (Vandergrift, Goh, Mareschal, & Tafaghodtari, 2006). The importance of metacognitive awareness in listening comprehension has been recently highlighted. The extant literature hosts evidence that the use of metacognitive strategies leads to better listening performance (Vandergrift, 2003: Thompson & Rubin, 1996). Vandergrift (2007) explored the relationship between metacognitive instruction and listening performance; findings approved a causal relationship between the two.

In educational setting, it is extensively acknowledged that learning to think is one of the most significant goals of official schooling. Dewey (1933) declared that the central purpose of education is learning to think. As part of the education, learners need to extend and learn to apply critical thinking skills to their academic studies effectively (Kealey, Holland, & Watson, 2005), to the complex problems that they will face in their professions (Yeh, 2004), and to the critical choices they will be forced to make as a result of the information explosion and other rapid technological changes (Oliver & Utermohlen, 1995). According to critical thinker theorists, critical thinking is a prominent way through which teachers can let learners decide, devise and employ their potential ability. Critical thinkers are able to implement the process of logical thinking to confirm or disprove a hypothesis, to discern what is true, what is false and separate facts from opinions (Wood, 2002). Ennis (1987) defines critical thinking as a coherent as well as thoughtful process which connects skills and dispositions. Kress (1985) believes that critical thinking is a language itself and defines critical thinking ability as a social practice. Moreover, Astleitner (2002) defines critical thinking ability as 'a purposeful, self-regulatory judgment which results in interpretation, analysis evaluation, and inference, as well as explanations of evidential, conceptual, methodological or contextual consideration upon which the judgment is based' (p. 53). Brookfield (1987) states two interrelated processes for critical thinking, 'identifying and challenging assumptions, and imagining and exploring others' (p. 229). Schafersman (1991) believes that education must engage 'how to think' in addition to 'what to think'.

3. Method

3.1. Participants

This study was conducted on a convenient sample of 120 first year university students from the Faculty of Information and Communication Technologies, Bitola, Macedonia.The participants study English as a foreign language.

3.2. Instruments

To carry out the research investigation, four different instruments were employed in the present study:

Straightforward Quick Placement & Diagnostic test

The Straightforward Quick Placement & Diagnostic is the English language proficiency test that has been designed to decide which of the five levels of the Straightforward series is the most appropriate for each student. It has 50 questions, the first 40 are grammar questions and the final 10 are vocabulary questions.

Listening texts/tests

The listening tests are designed by researcher. Each lesson consists of audio exercises and students have a task to answer the questions posed in the tests in relation to the level of numeration and explanation, explanation of functions and characteristics and explanation of differences and similarities. The choice of the listening text content is in accordance with the English subject in the first year study program, the first semester at the Faculty of Information and Communication Technologies.

Metacognitive Awareness Listening Questionnaire (MALQ)

In order to provide the required data, MALQ, a 19 item questionnaire developed by Vandergriftet al. (2006), was used. It was designed for researchers and instructors to measure the extent to which language learners are aware of and can regulate the process of L2 listening comprehension. MALQ comprises of five metacognitive factors; the first factor, "Planning and Evaluation", includes five items about how listeners prepare them-

selves for listening and assess the results of their listening performance. The second factor, "Problem Solving", consists of six items on inferring what is not recognized, and monitoring those inferences. The third, "Directed Attention", includes four items on how listeners concentrate, stay on task, and focus on their listening tasks. The fourth factor, "Meta Translation", includes three items about the ability to use mental translation and finally, "Personal Knowledge" includes three items to elicit listeners' perceptions concerning how listeners' learn best, the difficulty caused by L2 listening and their self-efficacy in L2listening. Students were asked to respond items using a 5 Likert scale ranging from never, seldom, sometimes, often, to always. According to Vandergrift et al. (2006), learners select a scale without a neutral point so that answers cannot hedge.

Watson-Glaser Critical Thinking Questionnaire

It was applied to evaluate the learners' critical thinking. This questionnaire includes 80 items and is consisted of five subtests: a) Inference b) Recognizing Unstated Assumptions c) Deduction d) Interpretation e) Evaluation of Arguments.

3.3. Procedures

In order to achieve the purpose of the present study, the following procedures were followed. First, a general proficiency test was administered in order to make sure of the proficiency level of the students (intermediate). Second, students were asked to listen seven listening texts about technology during one month and did the activities aimed at practicing the metacognitive listening strategies. Third, the students were asked to complete Meta-Cognitive Awareness Listening Questionnaire and Watson-Glaser Critical Thinking Questionnaire.

3.4. Results and discussion

The researcher tried to answer this research question: Is there any statistically significant relationship between the critical thinking of EFL learners' ability and their use of metacognitive listening strategies? For these purposes MANOVA was used.

The following tables reveal the aggregate summary statistics for the students.

Table 1. Descriptive statistics of critical thinking and metacognitive listening strategies

Variable	Observations	Arithmetic mean	Standard deviation	Minimum	Maximum
Critical thinking level	120	46.26	14.42	21	78
Personal Knowledge	120	4.36	1.18	1	6
Planning and Evaluation	120	5.25	0.87	1	6
Meta Translation	120	4.45	1.30	1	6
Directed Attention	120	4.68	0.99	1	6
Problem Solving	120	5.983	4.435	4	6
Dummy variables for critical thinking	120	0.5206612	0.5016502	0	1

The previous table shows that the sample is 120 observations (students). The average assessment of critical thinking level, personal knowledge, planning and evaluation, meta translation, directed attention, problem solving and dummy variables for critical thinking is the following: 46.26,4.36,5.25,4.45,4.68,5.983,0.5206612.Their standard deviations are: 14.42,1.18,0.87,1.30,0.99,4.435,0.5016502. The cut point was indicated according to average o fminimum (21.00) and maximum (78.00) scores of the students in the questionnaire and metacognitive listening strategies are rated from 1 to 6 (personal knowledge), 1 to 6 (planning and evaluation), 1-6 (Meta Translation), 1 - 6 (Directed Attention), 4 - 6

(problem solving), 0 - 1 (dummy variables for critical thinking). Through MANOVA we will confirm that the previous average values are significant in terms of the division of students into two groups: high and low critical thinkers' group. Next, we display the average grades of students group.

Table 2. Average grades for critical thinking and metacognitive listening strategies

Dummy variable of critical thinking	Critical thinking level	Personal knowledge	Planning and evaluation	Meta Translation	Directed Attention	Problem solving	Observations
0	36.33	4.29	5.08	4.26	4.68	5.45	57
1	61.38	4.48	5.50	4.75	4.67	5.77	63
Total	46.26	4.36	5.25	4.45	4.68	5.58	120

In this sample, the average of critical thinking level is 46.26. 63 students are above that average (with an average score of 61.38), or 63 students belong to the first group, i.e. high and the rest of the students, 57 are below that average (36.33) or belong to the low critical thinkers' group. Personal knowledge is 4.29 in the low group, while 4.48 in the high group. Planning and evaluation is of higher value in the high group (5.50), and in the low group (5.08). Meta Translation strategies have a higher value in the high group (4.75> 4.26). Directed Attention is with a higher grade in a low group. Problem solving strategies have higher value in the high group. Results exposed that metacognitive listening strategies were mostly used by the students from the group 'high critical thinkers'. Through the values in the MANOVA table, the significance of the results of the descriptive statistics will be displayed.

Table 3. MANOVA - Critical thinking level and metacognitive listening strategies

Source	Statistics	Degrees of freedom		F(df1,df2)=F		Prob>F	
Model	W 0.3627	1	6	115	33.68	0	E
	P 0.6373		6	115	33.68	0	E
	L 1.7574		6	115	33.68	0	E
	R 1.7574		6	115	33.68	0	E
Residual		39					
Number of observations		40					
		e = exact, a		a= approximate		u = uppep bound on F	

Legend:W = Wilks' lambda L = Lawley-Hotelling trace P = Pillai's trace R = Roy's largest root

From the previous table, it is noted that the F-test is significant and that the p-value is low, which is an indicator that the statistical correlation of critical thinking level and metacognitive listening strategies is significant. The following table provides a multivariate regression. The degree of freedom is 1.

Table 4. Multivariate regression

Dependent Variable	Control Variable	
Critical thinking ability	Dummy variable for critical thinking =1	61.38 (13.58)**
Personal knowledge	Dummy variable for critical thinking =1	4.485 (10.64)**
Planning and evaluation	Dummy variable for critical thinking =1	5.505 (10.13)**
Meta Translation	Dummy variable for critical thinking =1	4.755 (10.86)**
Directed Attention	Dummy variable for critical thinking =1	4.670 (11.17)**
Problem solving	Dummy variable for critical thinking =1	5.777 (7.07)**
N		121
	* p<0.05;	** p<0.01

From the values of the previous regression for MANOVA, it is noted that in all levels of statistical significance, the results of the group i.e. high critical thinkers are more positive. Also, metacognitive listening strategies are more positive in high critical thinkers' group compared to their counterparts in group 2, i. e. low.

Based on these data, we can conclude that the critical thinking level and the application of metacognitive listening strategies are closely related, and this implies that students who are more critically oriented are more able to receive, evaluate and respond to a message. They have a greater ability to apply more metacognitive listening strategies, which is essential meaning for greater efficiency in mastering professional English and the listening skill. Metacognitive listening strategies help students in making the listening task less problematic. This means that they are keen on developing listening plans, establishing their own purposes behind listening. Results showed that students were capable of redirecting their focus when distracted. They also tended to focus harder in order to manage difficulties in understanding text rather than give up. Also, they were able to analyze related information, search for possible solutions as well as to incorporate their own experience and general knowledge in text interpretation to deduce the meaning of unknown words.

4. Conclusion

This study was carry out to identify if there is any statistically significant relationship between the critical thinking of EFL learners' ability and their use of metacognitive listening strategies. The findings of the study found a positive and significant correlation between the critical thinking ability and metacognitive listening strategies. This strong positive and significant value signifies that there exists a strong relationship between the critical thinking ability and metacognitive listening strategies of EFL learners. So, it shows that if the learners think more critically, it is likely for them to employ more metacognitive listening strategies. The results of this study can underline that it is essential to place teaching in a critical circumstance as well as learners' metacognitive listening strategies use while they listen to the texts. Also, it could be accomplished that learners who think more critically, attempt to be success in their learning troubles usually by using metacognitive listening strategies, they compensate their learning troubles by working, investigating and analysis and by arranging, centering and evaluating their individual learning.

Present study suggests teachers develop critical thinking of learners and learners' consciousness of metacognitive listening strategies concurrently since their incorporation should lead to an improved listening comprehension.

Conflict of interests

The authors declare no conflict of interest.

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