

THE EFFECT OF INTRAPERSONAL DIFFERENCES AMONG DIFFERENT FACTORS OF METACOGNITIVE AWARENESS OF L2 LISTENING ON THE UNDERGRADUATE EFL BANGLADESHI LEARNERS

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Abstract: Drawing on Flavell's (1979) conception of metacognition, Vandergrift and Goh (2012) proposed a metacognitive framework for L2 listening to facilitate listening comprehension and help learners cope with listening difficulties by influencing their operations through processes of planning, monitoring, problem-solving, and evaluation. This study was executed to find if there is any intrapersonal difference among five factors of metacognitive awareness of L2 listening, and which factors are the most used by the high achievers and low achievers for their successful listening comprehension. The overall purpose of the study was to investigate i) what factors did play the role among high achievers and low achievers, and ii) what are the interpersonal differences among the factors; planning and evaluation, person knowledge, problem-solving, directed attention and mental translation, for L2 listening comprehension. To apprehend the research objectives, twelve Bangladeshi undergraduate EFL learners in the experimental group (06) and control group (06) received metacognitive instruction and traditional instruction based on product approach respectively for 5 weeks using five transactional listening texts. To gauge the changes, a pre-test, a post-test and two metacognitive awareness listening questionnaires (MALQ) were administrated. The quantitative method research embodied the notion of triangulation for this study. Using a one-way within-subjects ANOVA, the result revealed that there was a significant effect of metacognitive awareness factors on L2 listening comprehension accounted for over 65% of the total variance in the data.

Keywords: *metacognitive instruction; MALQ; metacognitive awareness*

INTRODUCTION

Listening, in the curriculum of undergraduate level in Bangladesh where English is learned as the foreign language (EFL), plays a critical role, since learners spent on basic skills during daily communication process is 35 percent for speaking, 16 percent for reading, 9 percent for writing, and 40 percent for listening (Flowerdew, 2005). It is also considered as the main channel for instruction and interaction and the most used skill both in the classroom and beyond. But, learners' listening skills are not getting the amount of attention they merit because most of the L2 listening classes are 'the product of listening' (Goh, 2008) and there is hardly any attention paid towards the process of learners' comprehension or 'how learners arrive at comprehension' (Fahim, 2014). It started to gain attention after the communicative language teaching

(CLT) focusing on the need for teaching listening or effective oral communication. Though the task-based approach to developing listening help learners to become 'active' listeners (Brown, 1987) by performing tasks that bring a 'learning outcome' (Kumaravadivelu, 1990) in 'authentic' situation, learners need to use holistic inferential strategies that assist learners become 'autonomous learners' (Flowerdew, 2005). An autonomous learner 'initiates the planning and implementation of (his/her) own learning program' (Gardner, 1997). Therefore, raising learners' awareness about their own person L2 knowledge, task knowledge, strategy knowledge come to action. In other words, metacognitive instruction, which embodies both strategy-based instruction and metacognitive awareness development, takes the lead in the investigation of this study. The former refers to a

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set of classroom procedures that explicitly train learners to employ relevant strategies to improve their performance (Cohen, 1998), while the latter focuses on learners' self-discovery in developing knowledge, belief and awareness about the learning process with appropriate scaffolding and facilitating from the teachers (Wenden, 1998).

Based on Flavell's (1979) model of metacognitive knowledge Vandergrift, Goh, Mareschal and Tafaghodtari (2006) designed the MALQ encompassing an individual's stored knowledge on cognitive processes to comprehend the listening texts, complete tasks, setting goals to accomplish their comprehension through various actions and experiences. Flavell (1979) identifies three types of metacognitive knowledge, person knowledge, task knowledge and strategy knowledge. Person knowledge stands for learner's own self and 'various factors that affect individual's learning' (Vandergrift and Goh, 2012) including learning beliefs and concepts. Task knowledge stands for the knowledge related to tasks and its purpose, demands and nature of learning (Vandergrift and Goh, 2012) including a variety of features of spoken texts and other meaning building and decoding aspects. Strategy knowledge stands for knowing the strategies 'to accomplish a specific goal', and 'achieving comprehension' and 'improving one's listening ability' (Vandergrift and Goh, 2012). Therefore, metacognition enables learners to understand the processes involved in reaching a learning goal (Bandura, 2001), and helps them develop a positive self-concept (Hacker, Dunlosky, & Graesser, 2009) of self-reflection and self-direction. According to Ehrich and Henderson (2018), 'self-reflection is the ability to think about one's efficacy during language learning, while self-direction is the adoption of more effective and appropriate ways and behaviours to improve language learning.' These two distinct processes constitute metacognitive awareness. On a six-point Likert scale ranging from 'strongly agree' to 'strongly disagree, Vandergrift et.al (2006) designed the metacognitive awareness listening questionnaire (MALQ) which had five factors; planning and evaluation, directed attention, problem-solving, person knowledge, and mental translation. Based on this MALQ they collected data and analyzed via an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA). After studies of Vandergrift and Goh, there were

two major studies on metacognitive awareness, Rahimi and Katal (2012) and Vhaid Aryadoust (2015). Rahimi and Katal (2012) confirmed the five factors of the MALQ designed by Vandergrift (2006) by applying a principal components analysis (PCA) and a confirmatory factor analysis (CFA). But Vahid Aryadoust (2015) adopting a modern measurement approach to scale validation investigated the measurement invariance within L2 listening tests, and found that the Rasch model has a reasonable fit with no misfitting items but two factors, planning and evaluation and problem-solving with poor reliability. Enrich and Henderson (2018) studied the metacognitive awareness adopting Vahid's (2015) measurement method for analysis to attain further evidence of the psychometric properties of MALQ and found the result mostly consistent with Vahid's study. However, this study adopted the model of Goh and Hu (2014) in a different setting to attain evidence of the psychometric properties of MALQ and their interpersonal relationship and the role of factors that influenced their learning.

Therefore, this study investigated the metacognitive awareness through a validated instrument for eliciting learners' self-reports, MALQ, to draw on the strength of statistical inferences to see the insights into patterns of metacognitive awareness for the high and low achievers and the interpersonal relationship among various factors of the metacognitive awareness after metacognitive instruction. The study sought to provide insights on the metacognitive awareness and listening comprehension among Bangladeshi EFL undergraduate learners through the two research questions: (1) What factors of MALQ did play a major role in successful listening comprehension among high achievers and low achievers? (2) What were the interpersonal differences among the factors; planning and evaluation, person knowledge, problem-solving, directed attention and mental translation, for L2 listening comprehension?

METHOD

The participants of this study comprised of 12 participants, both male and female, of first-semester first year of Bachelor of Arts in English at a private university in Bangladesh. They were randomly assigned to a control group (N=6) and an experimental group (N=6). These Bangla- speaking

learners were ranging in age from 17 to 22 years and were exposed to English academically for 12 years where their self-listening hours after the class were approximately 8.92 (μ) hours per week. They also used self-learning materials (75%) which is mostly out of the syllabus (66.7%). Among the out of syllabus materials, they mostly applied to the ‘listening to the news in English’ (41.7%) and

‘watching movies in English’ (41.7%) which are in British accents (50%).

The MALQ contains 21 statements with five distinct factors related to learners’ metacognitive awareness and regulation of listening comprehension strategies; planning and evaluation, person knowledge, problem-solving, directed attention, and mental translation.

Table 1. Five factor wise statement numbers of the MALQ

Five distinct factors of the MALQ.	Statements on the MALQ (item numbers)
Planning and Evaluation	1, 10, 14, 20, 21
Person Knowledge	3, 8, 15
Problem- solving	5, 7, 9, 13, 17, 19
Directed Attention	2, 6, 12, 16
Mental Translation	4, 11, 18

This questionnaire was graded on a 6 grades Likert scale from Strongly Disagree (1) to Strongly Agree (6) without a neutral point so that respondents could not hedge. It was not a test with right or wrong answers, rather their forthright and honest responses were important. This questionnaire had been administrated after pre-test and post-test that were administrated the beginning and the end of the intervention respectively of the seven-week intervention.

A pre-test at the beginning of the intervention and a post-test at the end of the intervention were conducted to understand the effect of the intervention. Participants, both in the experimental and control group, attended the forty-minute tests each time. The tests were designed to gauge the effects of metacognitive instructions on L2 listening comprehension using five texts; four texts to test the top-down processing and one text on the bottom-up processing having thirty-five multiple-choice questions (MCQ). All the texts had the flow of natural speech, real-world conversation, British accent and contemporary subject matters.

This study was conducted in three phases. In phase-I, learners were asked to complete the background questionnaire and attended the pre-test followed by the MALQ. In Phase-II, learners attended a five-week intervention, where the

treatment group attended rigorous metacognitive instruction on L2 listening on five texts followed by performance sheets designed on the metacognitive pedagogical sequence and the control group performed on a traditional approach followed by performance sheets designed on the traditional question and answer based on the same texts. In phase-III, learners attended the post-test followed by the MALQ again and data (quantitative) received from the intervention were analysed using SPSS version 26.

RESULTS AND DISCUSSION

Research question 1: What factors of MALQ did play a major role in successful listening comprehension among high achievers and low achievers?

Among the five factors of the MALQ, it is evident that the participants of this study applied all of them from a descriptive analysis, but directed attention mean score (5.21) on a six-point scale scored the highest, which is an evident of the most used strategy in their successful comprehension. The person knowledge mean score (2.89) showed the least use strategy. Among the rest three factors, planning and evaluation played (4.67) more frequently than problem-solving (4.39) and mental translation (4.33).

Table 2. Descriptive analysis scores of five factors of MALQ

	Mean	SD	Min	Max
Planning and Evaluation	4.67	0.6	3.8	5.6
Directed attention	5.21	0.4	4.8	6.0
Person Knowledge	2.89	1.0	1.0	3.7
Problem-solving	4.39	0.5	3.7	5.0
Mental Translation	4.33	0.7	3.3	5.0

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From the scores of the MALQ, it is evident that high achievers applied all the metacognitive strategies (PE, DA, PK, PS, and MT) to achieve successful comprehension. They also solicit those strategies according to the demands to comprehend for both decoding and meaning building. But, the most frequently used strategies by the high achievers in this study are planning and evaluation, problem-solving, and mental translation along with directed attention. On other hand, the low achievers

applied less metacognitive strategies to comprehend. They used directed attention mostly, planning and evaluation moderately.

Research questions 2: What were the interpersonal differences among the factors; planning and evaluation, person knowledge, problem-solving, directed attention and mental translation, for L2 listening comprehension?

Table 3. Scores multiple regression analysis of MALQ

Mauchly's Test of Sphericity ^a				Epsilon ^b			
Within Subjects Effect	Mauchly's W	Approx. Square	Chi-df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Awareness	.026	12.493	9	.235	.532	.938	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: Awareness

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

From Mauchly's test statistic, it is evident that the assumption of sphericity was not met, $\chi^2(9) = 12.49, p = 0.235$. So, the amount of sphericity was estimated by Epsilon (ϵ), and the Greenhouse-Geisser correction was considered to adjust the

degrees of freedom ($\epsilon = 0.532$) for this study since among Epsilon scores, it is lower than 0.75. Therefore, the significant effect for the test within-subjects variable is $F(4, 20) = 9.45, p < 0.001, \eta^2 = 0.654$.

Table 4. Scores multiple regression analysis of MALQ's five factors' within relation

Tests of Within-Subjects Effects		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Awareness	Sphericity Assumed	17.758	4	4.440	9.453	.000	.654
	Greenhouse-Geisser	17.758	2.129	8.343	9.453	.004	.654
	Huynh-Feldt	17.758	3.751	4.734	9.453	.000	.654
	Lower-bound	17.758	1.000	17.758	9.453	.028	.654
Error(Awareness)	Sphericity Assumed	9.393	20	.470			
	Greenhouse-Geisser	9.393	10.643	.883			
	Huynh-Feldt	9.393	18.755	.501			
	Lower-bound	9.393	5.000	1.879			

According to the benchmarks suggested by Cohen (1988) the effect size of this study exceeded the medium value and was almost near to the large value ($d = 0.8$). This score indicated that the within-subjects variable, the five factors of the metacognitive awareness of L2 listening, accounted for over 65% of the total variance in the data.

Since the main effect was not significant, the standardized post hoc test pairwise comparison with Bonferroni correction was calculated and analysed. The difference between group means, the standard error, the significance value and a confidence interval for the difference between means showed that there were significant differences between

directed attention and person knowledge ($p=0.0082$), planning and evaluation and person knowledge (0.0117) and person knowledge and problem-solving (0.0114) statistically. But, there was not a statistically significant difference between planning and evaluation and directed attention (0.072), planning and evaluation and problem-solving (1.00), planning and evaluation and mental translation (1.00), directed attention and problem-solving (0.21), directed attention and mental translation (0.514), person knowledge and mental translation (0.258) and problem-solving and mental translation (1.00). Considering the reports of the analysis, it could be said that there was substantial interpersonal relation among five factors of metacognitive awareness of L2 listening.

CONCLUSION

This study was evidence of learners' listening processes and various metacognitive strategies use for better comprehension. These findings might positively help learners develop better orchestration of metacognitive strategies while L2 listening. The interpersonal relationship among five factors paved the way for a better understanding of learners' strategy use that marked as a signpost for their development. This total portfolio of their strategy use would lead to being autonomous learners. On the other hand, teachers could keep the record of learners' metacognition and guide them to better application to have successful comprehension. Material developers might also be benefited from this study to develop or revised the existing materials for learners based on their level.

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