Research Article

Metacognitive Listening Instruction: Is It Effective in Enhancing Listening Skills and Metacognitive Awareness?

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Abstract: This classroom-based research emerged out of the purpose of the teacher-researcher to improve students' listening comprehension. The setting is an ELT preparatory class at a Turkish state university with 19 voluntary and convenient English language learners as participants. The intervention of metacognitive listening instruction implemented once a week for 45 minutes is hypothesized to be helpful in enhancing listening comprehension and metacognitive awareness. One group pre-test/post-test experimental design was employed to achieve the purpose of the study. In this design, a metacognitive awareness listening questionnaire (MALQ) was administered before and after the experiment. Midterm and final exams served as pre-test and post-test to evaluate listening comprehension levels. The findings elicited from the descriptive and inferential statistics indicated that while students' listening comprehension improved, their metacognitive awareness did not increase except for the subcomponents of planning/evaluation and person knowledge. The outcomes were interpreted and discussed by referring to previous studies. A number of pedagogical implications were also presented.

Üst Bilişsel Dinleme Eğitimi Dinleme Becerisini ve Üst Bilişsel Farkındalığı Geliştirmede Etkili Midir?

Özet: Bu sınıf-merkezli araştırma araştırmacı öğretmenin öğrencilerin dinleme becerisini geliştirme ihtiyacından doğmuştur. Araştırmanın katılımcıları bir Türk üniversitesinin İngilizce Öğretmenliğinde okuyan gönüllülük ve uygunluk örneklemine göre seçilmiş 19 hazırlık sınıfı dil öğrencisidir. Haftada bir kez 45 dakika süreyle uygulanan üst bilişsel dinleme eğitimi dinleme becerisini geliştirmede ve üst bilişsel farkındalığı artırmada faydalı olacağı varsayılmaktadır. Araştırmanın amacına ulaşmak için tek gruplu ön test/son test deneysel desen kullanılmıştır. Bu tasarımda, uygulama öncesi ve sonrası üst bilişsel farkındalık dinleme anketi (MALQ) uygulanmıştır. Buna ek olarak, ara sınav ve final sınavı sırasıyla dinleme düzeyini ölçmek için ön test ve son test olarak kullanılmıştır. Betimsel ve çıkarımsal istatistiklerden elde edilen bulgular, öğrencilerin dinleme becerisinin iyileştiğini, planlama/değerlendirme ve kişi bilgisi gibi alt bileşenler dışında üst bilişsel farkındalıklarının ise artmadığını göstermiştir. Sonuçlar önceki çalışmalara atıfta bulunularak yorumlanmış ve tartışılmıştır. Öğretmenlere yönelik birkaç somut pedagojik öneride bulunulmuştur.

1. Introduction

The listening skill is a complex, implicit, psychologically anxiety-inducing, cognitively demanding, and active process. This process entails decoding phonemic symbols, and transient oral input, apprehending lexical and functional structures, rendering supra-segmental features, and interpreting the micro- and macro socio-cultural context of speech. Foreign language learners, especially lower-level ones, have more difficulty in comprehending an audio text due to speech pace, attention loss, unfamiliar world knowledge, unfamiliar words, unknown spoken words, and elisions (Goh, 2000; Gökmen, 2021; Hasan, 2000). Therefore, foreign language listeners find listening the most challenging and weakest skill in their language education (Gökmen, 2021; Lopez, 2017), substantiating the name of the 'Cinderella skill' given to the listening skill (Nunan, 2002).

Listening skill, which is essential yet neglected in foreign language education, needs more academic focus because improving listening comprehension in the insipient phases of foreign language education could provide listeners with four advantageous aids: cognitive, efficiency, utility, and affective aids (Vandergrift, 1999). Prioritization of success in listening comprehension could comfort learners off cognitive overloads of speaking. This would make learners more efficient language users since they would not be forced to perform those productive skills. In addition, proficiency in listening would lower learners' affective filter and provide learners with a psychological advantage by paving the way for other foundational language skills.

Listening courses at all levels of instruction need attention to improving listening comprehension in terms of communicative input and output. However, these lessons are traditionally practised according to the product-based comprehension approach. This approach involves testing listeners' comprehension levels and answering questions bereft of any training in relevant skills or strategies (Field, 1998, 2012). From the cognitive theory perspective, as the foreign language learner is consciously active, constructive, and strategic in his/her learning journey, so is the listener in his reforming meaning of any audio text (Carrier, 2003). Therefore, a more holistic, involving linguistic and non-linguistic knowledge, cognitive, learner-based, and process-oriented approach, including top-down and bottom-up processes, is necessitated to promote foreign language learners. This metacognitive approach would also help learners be cognizant of their learning problems and discover appropriate solutions to enhance their long-lasting listening performance and learner autonomy (Borg, 2017; Carrier, 2003; Chen, 2019; Vandergrift, 2003; Wenden, 1998).

1.1. Theoretical Background

Metacognition can be recapitulated as cognitive monitoring of one's learning process and employing self-regulation for possible problems emerging during the process. Flavell put forth an interactive approach to monitoring one's cognition in 1979. According to this model, while knowledge of person, task, and strategy is classified under metacognitive knowledge, monitoring cognitive and emotional processes is subsumed under metacognitive experiences. The aims of cognitive behaviour can be defined as goals or tasks, whereas planning, monitoring, and evaluating any cognitive procedures are included under metacognitive strategies or actions. Overall, metacognitive behaviours are tactical habits of self-regulated learners who can manipulate their learning environments, adapt or adopt learning strategies, and modify ineffective strategies (Elcin & Sahinkarakas, 2021).

Out of the above metacognitive concepts, the present study focuses on metacognitive strategies. These strategies have also been studied from the perspective of learning strategies. Learning strategies researched to define good language learner by O'Malley and Chamot (1990) and Rubin (1975) were readapted to the features of good language listener in the framework of listening strategies (O'Malley, Chamot & Kupper, 1989; Vandergrift, 1997, 1998). The purpose is to train poor language listeners to use the strategies of successful language listeners. Out of those strategies, the present study focuses on metacognitive strategies because they are deemed more crucial for low-level listeners with low usage profile of metacognitive strategies (Vandergrift, 2003) and because they govern the cognitive strategies in terms of their frequency and ways of use. These metacognitive strategies can be mainly compiled under planning, monitoring, and evaluation (Vandergrift, 1999).

The intricate quality of listening skills and the paucity of instructional methods have redeemed foreign listening training (Borg, 2017). Therefore, much research has been conducted on metacognitive strategies for enhancing listening comprehension (Macaro, Graham & Vanderplank, 2007). As an oft-researched area within the field of listening strategy instruction (Rahimirad & Zare-ee, 2015), Vandergrift and Goh (2012) describe the approach of metacognitive listening instruction (hereafter, MLI) as "pedagogical procedures that enable learners to increase awareness of listening process by developing richer metacognitive knowledge about themselves as listeners, the nature and demands of listening, and strategies for listening" (p. 97). These procedures could be best practised by letting "learners also learn how to plan, monitor, and evaluate their comprehension efforts and the progress of their overall listening development" (Vandergrift & Goh, 2012, p. 97). This pedagogic cycle involves planning (advance organization, directed attention, selective attention, self-management), monitoring (comprehension and double-check monitoring), and evaluation and problem identification (Vandergrift, 2003). To be more specific, the metacognitive pedagogical sequence to regulate listeners' listening processes includes the stages;

> pre-listening (planning/predicting stage), first listen (first verification stage and planning with a peer for the second listen), second listen (second verification stage with text reconstruction or another comprehension activity), third listen (final verification stage with or without a transcript), and the reflection and goal-setting stage (Vandergrift & Goh, 2012, pp. 109–110).

All these stages could help listeners raise consciousness about their strong and weak characteristics (person knowledge), be aware of the properties and challenges of an audio text (task knowledge), and recognize suitable and effective strategies (strategy knowledge) (Vandergrift & Goh, 2012). The present study adopted the above metacognitive pedagogical sequence for the listening lessons.

1.2. Literature Review

Vandergrift (2003) deduced that high-level listeners frequently use selective attention and comprehension monitoring and harness top-down and bottom-up cognitive processing skills, which allows them to spare more effort for metacognitive strategies. However, less skilled listeners are so focused on bottom-up cognitive strategies such as mental translation that they cannot direct their attention to metacognitive strategies hindering them from constructing meaning. Seeing the need to quantitatively measure the awareness of metacognitive strategies in future research, Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) produced one of the most frequently used research instruments, the metacognitive awareness of listening questionnaire (MALQ). Preliminarily administered to 966 Iranian and French learners in Canada, Vandergrift et al. (2006) produced this 21-item Likert-scale

questionnaire measuring five discrepant qualities akin to metacognitive awareness and self-regulation of foreign language listening, involving planning/evaluation, mental translation, directed attention, problem-solving, and person knowledge all of which could be subsumed under the three main strategies; planning, monitoring, evaluation.

Mareschal's (2007) work on two small listener groups consisting of both low- and high-proficiency individuals showed that the intervention of MLI improved the two groups' metacognitive awareness, self-regulatory abilities, and usage of strategies, all of which promoted confidence and motivation in return. However, the perception tasks in the sequence especially developed less-proficient learners in terms of recognizing keywords and their spoken forms. Graham and Macaro (2008) found improved listening proficiency and enhanced confidence in 68 lower-intermediate learners of French as a result of cognitive and metacognitive strategy instruction on listening performance and self-efficacy.

Cross (2011) surveyed the role of MLI on listening performance via a pedagogical cycle flowed through prediction, monitoring, identification of problems, and evaluation. The results evinced that low-skilled listeners made more progress than high-skilled listeners. In a socio-cultural-oriented study, Cross (2010) found that peer-to-peer dialogues improved learners' metacognitive awareness regarding text, comprehension, and strategies in foreign language listening. In a later exploratory study, Cross (2014) studied a Japanese learner of English to further autonomous listening outside the instructional settings through metacognitive instruction and disclosed that the learner developed meta-textual skills in harnessing the podcasts outside the classroom utilizing guidance and feedback in metacognitive instruction.

Goh and Taib (2006) conducted micro-scale work with ten low-proficient ESL learners on MLI through eight process-based listening lessons encompassing three phases: a 'listen and answer' task, reflections after listening, and self-reporting and group discussion. All the learners enhanced their self-confidence in tackling the comprehension break-downs in listening and doing the listening exercises with the help of the internalized knowledge of strategies and a better understanding of the listening skills. Likewise, in a process-based MLI study involving prediction/planning, monitoring, evaluating, and problem-solving conducted with high-level and low-level proficient listeners over a semester, Vandergrift and Tafaghodtari (2010) discovered that the experimental group receiving MLI exceeded the control group, and low-proficient learners outpaced high-proficient ones due to their progress in the intervention, especially in their promoted awareness in problem-solving and mental translation.

Siegel (2013) investigated second-language listeners' perceptions of listening strategy instruction in a university context in Japan. The listeners disclosed a favourable disposition toward explicit listening strategy instruction. Bozorgian (2012), comparing the pre-test and post-test of IELTS listening tests, revealed that low-level listeners made further progress than high-level listeners in enhancing listening comprehension via MLI. In the second study (2014) using a lesson plan based on a pedagogical metacognitive cycle, the findings obtained from IELTS tests and the MALQ showed that learners' listening comprehension developed after the training in metacognition, yet without any metacognitive awareness.

Goh and Hu (2014) uncovered a significant favourable relationship between listeners' metacognitive awareness and listening skills in a Chinese context. The analysis of individual factors also indicated the same positive relation between listening ability, problem-solving strategies, and directed attention. Rahimirad and Shams (2014) experimentally surveyed the

influence of metacognitive strategy instruction on 50 EFL listeners' listening comprehension and metacognitive awareness. The results reached through IELTS, and MALQ proved progress both in improved listening comprehension and metacognitive awareness.

In an intervention work, Wang (2016) unveiled that learners' listening scores in the proficiency tests, though they showed progress, did not display any significant difference between the experimental and control groups. However, the analysis of reflective listening journals demonstrated that listeners' metacognitive knowledge of person, task, and strategy had been raised. Lotfi, Maftoon, and Birjandi (2016) explored the impact of Mendelsohn's (1994) and Macaro's (2001) strategic models on pre-intermediate and intermediate EFL listeners. The two groups receiving the above models proved to be more effective than the control group bereft of any treatments, though those groups did not differ from each other in their listening performances. Furthermore, intermediate listeners outstripped pre-intermediate ones in the treatment groups.

Lopez (2017) conducted an experimental study on the possible influence of listening strategy instruction with 38 learners of Spanish, including a control group. The findings of this study showed moderate differences between the groups. Borg (2017) explored the effect of metacognitive listening strategy instruction on six learners of English through pre-and post-tests, interviews, and questionnaires. The analysis revealed less improvement in listening comprehension but more growth in metacognitive knowledge.

Tanewong (2019) conducted a quasi-experimental study to see the effect of MLI on 64 lower-proficient Thai listeners. The analysis of MALQ, listening test, open-ended questionnaire, and semi-structured interviews indicated that no statistically significant difference was found between groups in terms of listening comprehension. In addition, even though the intervention group showed more progress in all metacognitive strategic processes, the control group showed improvement only in the planning and evaluation processes. Mahdavi and Miri (2019) studied 60 high-beginner EFL learners to promote listening performance and metacognitive awareness. The results disclosed that the experimental group receiving MLI improved their listening comprehension and metacognitive awareness.

Al-Shammari (2020) conducted a quasi-experimental study with a pre-test/post-test design with 60 Iraqi sophomores EFL learners. The results extracted from the MALQ instantiated the positive impact of MLI on learners' listening comprehension and metacognitive awareness. Specifically speaking, the intervention group increased their usage of problem-solving, mental translation, and planning/evaluation strategies yet decreased the use of person knowledge and directed attention. Maftoon and Fakhri Alamdari (2020) conducted an experimental study with the MALQ and a listening test on 60 intermediate listeners in Iran. The experimental group showed significant enhancement in their listening comprehension and metacognitive awareness.

Robillos and Bustos (2022) employed MLI on 27 Thai ELF learners via sequential mixed-method research and proved MLI's favourable effect on listening performance and metacognitive knowledge, though problem-solving and directed attention were not found significant in their progress. One of the rare works conducted in a Turkish socio-cultural context was conducted by Coşkun (2010). The experimental study carried out with 40 beginner-level learners indicated that the experimental group outperformed the control group in listening performance as a corollary of MLI.

1.3. The Present Study

The rationale could provide the nature of the present study, the gap in the literature, and the aim of the study. First of all, all these aforementioned empirical studies, together with anecdotal evidence (Vandergrift, 1999), have shown that if awareness could be raised among learners and practitioners in listening skills, it might benefit listening performance and metacognitive awareness. However, to reach consistent results and triangulation between studies and other settings, including both foreign and second language contexts, more studies are required to be conducted in the contexts of foreign languages, as in Turkey (Goh, 2008). As for the gap in the literature, most of the reviewed studies are done with English learners. However, more studies are needed to be conducted on ELT teacher candidates because their metacognitive awareness could have an immense effect on their future English students. Thus, their training and commitment to metacognitive listening strategies are crucial in aiding their own and their future students' development in learning how to plan, control, and evaluate their foreign language listening. On the grounds of the rationale, this study aims to explore the possible impact of MLI on ELT prep class students' listening development and metacognitive awareness. To this end, three research questions were determined as follows:

1. To what extent can metacognitive listening strategy instruction enhance language learners' listening comprehension in the EFL classroom?
2. To what extent can metacognitive listening strategy instruction raise language learners' metacognitive awareness in the EFL classroom?
3. How does metacognitive listening strategy instruction affect language learners' metacognitive awareness regarding the five MALQ subcomponents?

2. Method
2.1. Research Design

The study embodies the features of teacher research and one-group pre-test/post-test experimental design. It is partly classroom-based teacher research since the research setting is the real-life classroom context of the teacher-researcher. It is suggested that language teachers keep their eyes, ears, and minds open to the classroom dynamics and procedures for unexpected problems and intervene in the instruction following stages of planning, observing, and assessing the intervention (Kumaravadivelu, 2001). In this study, facing problematic listening comprehension, the teacher-researcher planned the intervention, observed the classroom, and assessed the outcomes of the intervention. This research design is practical and necessary in closing the gap between theory and practice and researcher and teacher.

A one-group pre-test/post-test experimental design was adopted to improve students' listening comprehension, involving an experimental group without any outside control group (Fraenkel, Wallen, & Hyun, 2012). It is succinctly used to see a possible change of an experiment on one intact group by testing the group before and after the experiment. In the present study, the whole ELT prep class was tested before and after the intervention. The mid-term and final exams sequentially served pre-test and post-test to measure the level of change in listening proficiency. The MALQ also served as a pre-test and post-test to evaluate the degree of fluctuation in metacognitive awareness. This research design is quite helpful in evaluating an intervention without any left-behind participant groups.

2.2. Setting and Participants

The setting of the study is an ELT prep class at a Turkish state university consisting of 22 learners of English as a foreign language who will be credited to get a degree to be English teachers at the end of four-year of teacher training. They were receiving education 20 hours per week. Eight hours were allocated to four foundational language skills provided by other colleagues. The teacher-researcher was lecturing a 45-minute long main course for 12 hours. While the pre-intermediate B1 book (Krantz & Norton, 2015) was studied in the fall semester, intermediate B1+ (Roberts, Buchanan, & Pathare, 2015) was covered in the spring semester. Students were supposed to take one midterm test in the fall semester and one final test in the spring semester as proficiency exams. The students were supposed to get at least 70 points out of the scores of the mid-term exam (%30), final exam (%40), and projects (%30) to be evaluated as successful in passing to the upper level.

The convenience sampling method was used to determine the participants, as the whole class volunteered to participate in the study (Fraenkel et al., 2012). Due to unprecedented reasons such as sick leave or haphazard attendance to classes, 3 of the participants were left out, and the study ended up with 19 participants (18 females and a male). All the participants were between 18 and 20 years old and were from different Turkish cities. Their proficiency levels were between B1 and B1+ levels, according to the CEFR. The other criteria to perceive them in those levels is the course books which are pre-intermediate and intermediate levels.

2.3. The Intervention

Unsatisfactory results in the mid-term exam led the teacher-researcher to change and intervene during the listening instruction in the spring semester. The cycle of metacognitive strategy instruction (planning, monitoring, and evaluating) suggested by Vandergrift (1999) was followed during the intervention. The influence of metacognitive instruction on listening achievement and metacognitive awareness was examined. The intervention began after the mid-term exam and pre-test of the MALQ. It was implemented in a 45-minute lesson once a week over 12 weeks and ended after the final exam and post-test of MALQ.

Out of two types of metacognitive listening instruction (see Goh, 2008), the teacher-researcher adopted guided reflections on listening; that is, students were guided through the listening activities in planning, monitoring, and evaluating their listening processes as a way of MLI. Specifically, the teacher-researcher gave brief explicit instruction on the sets of listening strategies, their definitions, and exemplary usages provided by Vandergrift (1997) in the form of process-based listening strategy instruction (Siegel, 2015).

The audio texts from the textbooks were used as listening materials. In each lesson, the participants listened to audio texts in six stages of planning, monitoring, and evaluation of metacognitive strategies (Vandergrift & Goh, 2012). In the pre-listening stage, students predicted the contents of the text. In the first listening, students checked their predictions with a peer and planned for the second listening. In the second listening, students reconstructed their comprehension. Students listened to the text for the third time to verify their comprehension with or without a transcript. In the last stage, students reflected on their listening skills and set goals for future listening processes. Lastly, at the end of the semester and the intervention, MALQ was filled up by participants, and later the results of the final exam were analysed to see the impact of the experiment on listening proficiency and metacognitive knowledge.

2.4. Data Collection

Data were collected through two data collection instruments to seek answers to the research questions. Midterm and final exams in the institution involved a section dedicated to listening. The participants' midterm and final exam scores from the listening sections provided the first data set. The MALQ designed by Vandergrift et al. (2006) was the second data collection instrument.

The midterm exam done at the end of the fall semester of the 2021-2022 academic year served as a pre-test. The final exam at the end of the academic year was used as a post-test to measure the efficiency of the intervention on listening proficiency. These exams were prepared by the School of Foreign Languages from the supporting materials of the Cambridge Navigate Coursebook series. The mid-term exam consisted of two parts. The first part contained five fill-in-the-blank questions to be completed with appropriate words not provided. The second part included five true-or-false statements. The final exam also embodied two parts. The first part had five true-or-false statements. The second part was composed of five three-option multiple-choice items.

The MALQ consists of a six-point Likert-type scale between strong disagreement (1) and strong agreement (6) (see Vandergrift et al., 2006). The MALQ consists of 21 items categorized into five factors of strategy use. The questionnaire involves six items for problem-solving (5, 7, 9, 13, 17, 19), five items for planning/evaluation (1, 10, 14, 20, 21), three items for mental translation (4, 11, 18), four items for directed attention (2, 6, 12, 16), and three items for person knowledge (3, 8, 15). The questionnaire was conducted once before the intervention and once afterward to observe the change in listeners' dispositions towards the metacognitive strategies. The reliability of the MALQ as a result of Cronbach's alpha analysis was found to be .71, indicating an acceptable value (Field, 2013).

2.5. Data Analysis

Descriptive and inferential statistics were utilized for the analysis of the data retrieved from the mid-term and final exams and the MALQ. For data analysis, the SPSS 20 was harnessed. A non-parametric test was implemented and illustrated in the present study because the sample size was small, necessitating fewer generalized assumptions about the population of the sample (Fraenkel et al., 2012). Therefore, the Wilcoxon Signed-Rank test and descriptive statistics were used to analyse the significance of the scores of mid-term and final exams and the MALQ to answer the three research questions.

The number of correct responses to the questions in the listening part of the mid-term and final exam was tallied as a measure for evaluating listening proficiency. The function of the pre-test and post-test of the listening exam was to determine participants' baseline level of listening proficiency. The test of Wilcoxon Signed-Ranks was computed and illustrated with descriptive statistics as Mean scores and inferential statistics as p. significance value.

The aim of the pre-test and post-test of the MALQ was to inquire about the impact of metacognitive instruction on metacognitive awareness. Therefore, the test of Wilcoxon Signed-Ranks was analysed and showed with descriptive statistics as Mean scores and inferential statistics as p. significance value. In addition, for the subcomponents of metacognitive awareness, the test of Wilcoxon Signed-Ranks was computed and demonstrated with descriptive statistics as Mean scores and inferential statistics as p. value.

3. Findings

The first research question investigated to what extent metacognitive listening strategy instruction could enhance learners' listening comprehension. To this end, descriptive statistics, including mean scores and standard deviations and inferential statistics for the significance of the results, were consulted.

Table 1.

Descriptive Statistics of Mid-Term and Final Exams as the Pre-test and Post-test

Participants	Midterm as pre-test	Final as post-test	Disparity
P1	50	60	+10
P2	50	60	+10
P3	40	50	+10
P4	40	50	+10
P5	30	70	+40
P6	60	90	+30
P7	40	60	+20
P8	70	80	+10
P9	60	90	+30
P10	70	60	-10
P11	50	60	+10
P12	30	50	+20
P13	90	100	+10
P14	40	50	+10
P15	50	80	+30
P16	50	50	0
P17	30	50	+20
P18	40	60	+20
P19	20	40	+20
N: 19	M= 47.89 SD= 16.85	M=63.68 SD=16.73	
Minimum Score	20	40	
Maximum Score	90	100	

As could be seen in Table 1 for the individual scores, metacognitive strategy instruction seems to have improved almost all the students' listening comprehension in the post-test. A non-parametric Wilcoxon signed ranks test was conducted to measure the significance of the results.

Table 2.

Wilcoxon Signed Ranks Test Results

		N	Mean Rank	Sum of Ranks	Sig. (2-tailed)
Post-test/Pre-test	Negative Ranks	1[a]	5.00	5.00	
	Positive Ranks	17[b]	9.76	166.00	.000
	Ties	1[c]			
	Total	19			

Table 2 shows the results of the Wilcoxon Signed Ranks Test, which indicates a statistically significant difference between pre-test and post-test exam scores (p=.000, *p*<.001). This shows that metacognitive listening instruction helped improve students' listening proficiency, as also displayed in the higher mean scores in the post-test (M=63.68, SD= 16.73) than pre-test (M=47.89, SD=16.85) in Table 1. To describe the Tables more in detail,

while 17 students scored higher in the post-test (17[b]), one student scored one point lower (1[a]), and one student scored the same (1[c]) in the pre-test and post-test exams.

Table 3.

Descriptive Statistics of MALQ Before and After the Intervention

	N	Mean	SD	Minimum	Maximum
MALQ pre-test	19	4.2431	.43756	3.38	5.05
MALQ post-test	19	4.3233	.38835	3.52	5.14

The second research question aimed to reveal to what extent metacognitive strategy instruction in the EFL classroom could raise students' metacognitive awareness. As shown with descriptive statistics in Table 3, students have a few more mean scores in the post-administration (M= 4.32, SD=0.38) of MALQ than in pre-administration (M= 4.24, SD=0.43).

Table 4.

The Wilcoxon Signed Ranks Test Between Pre-Test and Post-Test of MALQ

		N	Mean Rank	Sum of Ranks	Sig. (2-tailed)
MALQ post-test – MALQ pre-test	Negative Ranks	8[a]	6.44	51.50	
	Positive Ranks	9[b]	11.28	101.50	
	Ties	2[c]			.235
	Total	19			

a. MALQ post-test < MALQ pre-test   b. MALQ post-test > MALQ pre-test   c. MALQ post-test = MALQ pre-test

To determine the significance value of the outcomes above, the Wilcoxon test was computed, and results evinced in Table 4 that no statistical difference was found between the pre-test and post-test (p=.235, *p*<.001). To describe the tables more in detail, the number of students with metacognitive awareness increased with only one student in the post-test (Mean Rank=8[a], 9[b]), which rejects the hypothesis that metacognitive instruction would raise students' metacognitive awareness to a higher level.

Table 5.

Descriptive Statistics Regarding Subcomponents of MALQ

		N	Mean	SD	Minimum	Maximum
Planning	Pre-test	19	4.1158	.77550	2.40	5.80
	Post-test	19	4.6053	.49445	3.83	5.83
Problem	Pre-test	19	4.4474	.62867	3.00	5.67
	Post-test	19	4.4211	.69887	2.80	5.60
Direct	Pre-test	19	4.3289	.73623	2.50	5.50
	Post-test	19	4.2500	.65085	3.25	6.00
Mental	Pre-test	19	3.9298	.95309	2.00	5.67
	Post-test	19	3.8947	1.03072	1.67	5.67
Person	Pre-test	19	4.2456	.83771	2.67	5.67
	Post-test	19	12.3684	2.56495	8.00	18.00

The third research question focused on the effect of metacognitive strategy instruction on the students' metacognitive awareness regarding each of the five MALQ factors. As shown in Table 5, the Wilcoxon Signed Ranks Test results showed that except for the planning (pre-test M=4.11, post-test M=4.60) and person knowledge (pre-test M=4.24, post-test M=12.36) of metacognitive strategies, students' metacognitive awareness regressed in the other

components as problem-solving, directed attention, and mental translation contrary to the hypothesized increase.

Table 6.

Significance Levels of MALQ Subcomponents according to Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks	Sig. (2-tailed)
Post-test planning - Pre-test planning	Negative Ranks	4[a]	9.38	37.50	.021
	Positive Ranks	15[b]	10.17	152.50	
	Ties	0[c]			
	Total	19			
Post-test problem -Pre-test problem	Negative Ranks	14[d]	7.96	111.50	
	Positive Ranks	5[e]	15.70	78.50	.507
	Ties	0[f]			
	Total	19			
Post-test mental - Pre-test mental	Negative Ranks	7[g]	6.36	44.50	
	Positive Ranks	5[h]	6.70	33.50	.659
	Ties	7[i]			
	Total	19			
Post-test direct - Pre-test direct	Negative Ranks	11[j]	9.50	104.50	
	Positive Ranks	7[k]	9.50	66.50	.403
	Ties	1[l]			
	Total	19			
Post-test person - Pre-test person	Negative Ranks	0[m]	.00	.00	.000
	Positive Ranks	19[n]	10.00	190.00	
	Ties	0[o]			
	Total	19			

a. post-test planning < pre-test planning / b. post-test planning > pre-test planning / c. post-test planning = pre-test planning /
d. post-test problem < pre-test problem / e. post-test problem> pre-test problem / f. post-test problem = pre-test problem/
g. post-test mental < pre-test mental / h. post-test mental > pre-test mental / i. post-test mental = pre-test mental /
j. post-test direct < pre-test direct / k. post-test direct > pre-test direct / l. post-test direct = pre-test direct/
m. post-test person < pre-test person / n. post-test person > pre-test person / o. post-test person = pre-test person

As for the inferential statistics to detect any significance of the results above, Table 6 displays that the difference only between pre-tests and post-tests of planning (p=.021, *p*<.001) and person knowledge (p=.000, *p*<.001) is statistically significant that amounts to the fact that students' metacognitive awareness in terms of planning/evaluation and person knowledge has been raised thanks to metacognitive listening instruction.

4. Discussion

The final exam indicates progress in listening proficiency because of the higher scores. However, when the types of the exercises in the mid-term and final exams were examined, while the questions in the mid-term exam included fill-in-the-blanks items and True/False items, the final exam encompassed true/false and three-option multiple-choice questions which might have made the final exam easier in guessing the correct answer. This is because it would be quite difficult for students to fill in the blanks with appropriate words out of many other possible choices not provided to students to guide them. The results could also be interpreted as such that language education that lasted for a semester could also have improved students' listening proficiency. Another evidence for the above interpretation is the findings in the MALQ, which did not raise students' metacognitive awareness. Even the success in listening could be ascribed to extensive listening done outside the classroom, as so estimated by Vandergrift (1999), who surmised that the achievement of listening strategies and their instruction could also be improved by outfitting learners with extensive listening

practice outside the classrooms. Concerning the previous studies, the result that metacognitive instruction overall improved listening comprehension is in congruence with the earlier studies conducted by Goh and Taib (2006), Coşkun (2010), Maftoon and Fakhri Alamdari (2020), Mahdavi and Miri (2019), Rahimirad and Shams (2014), Robillos and Bustos (2022), and Siegel (2013). However, other earlier studies conducted by Borg (2017), Tanewong (2018), and Wang (2016) did not discover any possible impact of MLI on listening comprehension. The impact of MLI might also differ in terms of levels of students. When Table 1 is examined, it would be observed that less-skilled listeners improved their listening comprehension via MLI more than high-skilled listeners, which complies with the results found by Bozorgian (2012), Cross (2011), and Vandergrift and Tafaghodtari (2010) yet contradicts with the studies done by Lotfi et al. (2016) and Vandergrift (2003) who found more improvement in higher-level learners.

It was also found that metacognitive listening instruction did not have a positive effect on students' awareness of metacognitive strategies, as was observed in the statistical outcomes of the MALQ. The possible rendering of these results could be that the instruction of metacognitive strategies was unsatisfactory, or students could not see its improving effect on their listening comprehension. The results that led to no increase in metacognitive awareness could also be ascribed to the fatigue of the students or intense and monotonous phases in the metacognitive pedagogical cycle. This outcome of low usage of metacognitive strategies could also be explained by the low-level proficiency of listeners in current and previous studies (Cross, 2010). High-level listeners can spare more effort in using metacognitive strategies since they frequently and flexibly use a combination of top-down and bottom-up cognitive strategies (Lotfi et al., 2016; Vandergrift, 2003). Therefore, low-level listeners cannot allocate time and effort for metacognitive strategies because they are at the stage of improving their cognitive strategies. However, when lower-level learners get training in MLI, they could show progress in metacognitive awareness, as found in Mahdavi and Miri (2019) and Vandergrift and Tafaghodtari (2010). By large, the results of the present study were contradictory to the previous studies conducted by Borg (2017), Cross (2010), Mareschal (2007), Maftoon and Fakhri Alamdari (2020), Rahimirad and Shams (2014), and Wang (2016) who found improved metacognitive awareness. The current results substantiated other earlier ones, such as Bozorgian (2014), Lopez (2017), and Tanewong (2018), who did not find any effect of MLI on metacognitive awareness.

As for the specific subcomponents of the metacognitive strategies in the questionnaire investigated in the third research question, the decrease in the problem-solving, directed attention, and mental translation components in the MALQ could be explained by instrument decay which is a threat to pre-test and post-test administration of an instrument (Fraenkel et al., 2012). The increase in the planning/evaluation and person metacognitive subcomponents could be explained by the intervention, which made the students listen to an audio text thrice through the stages of first planning, second monitoring, and third evaluation. These phases, in turn, might have led the students to evaluate their listening in each phase which might have positively affected person knowledge, viz., students' perception of their listening comprehension. Therefore, students' confidence level in their listening ability might have raised probably due to the focus on one aspect of listening in each stage. The students' improved personal perceptions of listening in terms of confidence and motivation were also found by Graham and Macaro (2008) and Mareschal (2007). This might also positively affect learners' self-efficacy, which might improve listening performance on tests, as found in Rahimi and Abedini (2009). As a surmise, if learners had to transform their cognition of metacognitive subcomponents as mental translation, directed attention, and

problem-solving into explicit planning, metacognitive awareness of those subcomponents would have increased as well. Al-Shammari (2020) also previously investigated the impact of MLI on each factor of MALQ and found very divergent results from the ones in the present study in that learners' awareness of planning/evaluation, mental translation, and problem-solving factors increased, whereas directed attention and person knowledge decreased. Goh and Hu (2014), on the other hand, found that directed attention and problem-solving strategies were found to be more significant than planning/evaluation, mental translation, and person knowledge in terms of learners' level of use, the results of which are quite contradictory to the present results. Another opposing result was found by Vandergrift and Tafaghodtari (2010), who unearthed that English language listeners' use of metacognitive strategies as problem-solving and mental translation has developed. However, problem-solving and directed attention were not found to progress in learners' metacognitive development (Robillos & Bustos, 2022), supporting the current results. In another study, planning/evaluation, problem-solving, and directed attention were discovered to be significant in learners' gains of metacognitive strategies (Tanewong, 2018).

The findings of the study could indicate that metacognitive listening instruction apparently improved students' listening proficiency but not metacognitive awareness in general. However, in specific, students' metacognitive awareness was raised in terms of subcomponents of metacognitive awareness, such as planning/evaluation and person knowledge. To wrap up all these interpretations and discussions, whether the influencing direction is from learners' listening proficiency to using specific strategies or from using strategies to enhance listening proficiency is still controversial (Graham & Macaro, 2008). According to Renandya and Farrell (2010) and Tanewong (2019), training in listening strategies is more like a catch-22 problem that abides unsolved for ELT practitioners and a challenging and exciting topic for ELT researchers.

5. Conclusion

This study substantiated the efficiency of metacognitive listening instruction on listening proficiency through one group pre-test/post-test experimental design, which helped the teacher-researcher improve his listening instruction besides students' listening comprehension. Even though metacognitive instruction did not raise students' metacognitive awareness in general, it positively influenced students' metacognitive awareness of planning and evaluation of the listening process and their confident perception of listening tasks.

Regarding pedagogical implications, as the current MLI intervention achieved improved listening comprehension, EL practitioners should devote some of the class time to the explanation and exemplification of metacognitive listening strategies (Chamot, 1995; Mendelsohn, 2006) in phases of raising awareness, explicit instruction, practising strategies, assessment of efficiency of strategies, and their use outside the classroom. As the present study found raised metacognitive awareness in two sub-components (planning/evaluation and person knowledge), the listening activities could be done in stages such as pre-listening, first, second, and third listening, and reflection to help listeners plan and evaluate their listening process. This could also result in more motivated learners who would be good at tackling listening stress and anxiety accounting for person knowledge. As the metacognitive subcomponents such as directed attention, mental translation, and problem-solving were not found to have improved, the listening texts could be shorter to keep learners' attention on the text. As for possible comprehension problems during the listening activities, language

teachers could employ cognitive strategies and listening micro-skills (Field, 1998). Transcripts could be provided to learners to read it once before the listening activity not to let their minds be busy with mental translation. For ELT programs, teacher educators could incorporate metacognitive listening strategies into their syllabi so that teacher candidates could teach them to their future students.

As a last word in a postmodernist discourse (Gökmen & Takkaç, 2020), no study in any research design is perfect and valid for all cultural or educational situations. This study using non-parametric statistics indicates that the results cannot be generalized to other contexts but can guide practitioners who are having similar problems with students' listening skills and can guide researchers to conduct studies that can be generalized. Therefore, this study embodies some constraints that teachers and researchers should bear in mind. First, the internal consistency of both the pre-and post-test (mid-term and final exams) was not sought because each exam had two sections measuring different listening proficiency aspects. Listeners' skills might have developed during the language learning process, which might have affected the results of this study. The research design did not have any comparison or control group as in other quasi or true experimental designs to learn whether the success solely stemmed from the intervention or other uncontrolled variables that could have affected the results. As Fraenkel et al. (2012) underline, variables or threats to internal validity range from history, maturation, and instrument decay to data collector characteristics, data collector bias, testing, statistical regression, the attitude of subjects, and implementation.

To give some suggestions to compensate for the above constraints, other experimental designs involving a control group could be administered to see whether metacognitive instruction or learners' linguistic proficiency improves learners' listening perception. Also, more studies should be conducted in purely qualitative designs to have a deep and thick understanding of the learners' listening skill or mixed-method designs to exploit the combined benefits of quantitative and qualitative data in a pragmatic sense to reach a generalized and contextual interpretation. Learners' note-taking process during listening might be considered and analysed through content analysis. A Turkish adaptation of the MALQ with reliable and valid results (Durmaz & Aşık, 2022) could also be applied to A1/A2 level Turkish learners of English if there are some concerns about the comprehensibility of its original language. As non-parametric statistics were used in this study which might have affected the strength of the study (Fraenkel et al., 2012), parametric statistics could be used for larger and normally dispersed groups. As learners' harnessing of cognitive strategies in listening could be an influence on listening performance, a comparison could be made between the learners using cognitive strategies and metacognitive strategies. Pre-test and post-tests of listening proficiency could be changed with more robust and comprehensive tests like IELTS.

As a closing remark, since the listening research has revolved around guiding and motivating learners about how to "learn to listen," teaching practice should also be geared towards facilitating English language learners in learning how to listen so that they can listen better to learn more (Vandergrift, 2004). To listen better to learn more, cognitive or metacognitive strategy-based instruction should also incite EL listeners to extensive listening outside the classroom. To this end, metacognitive strategy instruction could positively influence listening comprehension by raising more confident and less anxious listeners with enhanced metacognitive awareness.

Note on Ethical Issues

The author confirms that ethical approval was obtained from Siirt University (Approval Date: 07/04/2022).

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