



## Fostering Iranian EFL Learners' Listening Comprehension: Metacognitive Intervention through Integrated Experiential Listening Activities

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This study investigated whether metacognitive instruction affected, first, Iranian EFL learners' listening comprehension and, second, skilled vs. less-skilled listeners' comprehension. Fifty nine upper-intermediate level learners were selected from two intact classes to participate in 16 sessions. The classes were randomly assigned to the experimental and the control groups. Participants in the experimental group were further divided into skilled and less-skilled listeners based on their listening pretest scores. The treatment in the experimental group centered on practicing integrated experiential listening activities while the control group practiced the product approach. All the participants took listening comprehension tests as a pretest, immediate posttest, and delayed posttest. Results showed significant differences between the experimental and the control groups at immediate and delayed posttests, and a significant progress in the experimental group's performance over time. Comparing the skilled and less-skilled listeners' performance showed a significant difference at the pretest. Track of changes indicated significant improvements in the less-skilled listeners over time, while the skilled listeners' performance only improved significantly from pretest to immediate posttest. The findings expanded on the previous findings that metacognitive listening instruction is an invaluable approach to fostering listening comprehension. Additionally, it presented important implications to be considered in listening classrooms.

**Keywords:** metacognitive instruction, integrated experiential listening activities, skilled listener, less-skilled listener, listening comprehension

### Introduction

Listening comprehension is a significant language skill, as a good command of it could help learners improve other language skills to a higher level of proficiency (Vandergrift, 2007; Vandergrift & Baker, 2018). Despite its pivotal role as the primary means of language acquisition (Rost, 2002), listening comprehension is the most overlooked of the four language skills in the language classroom (Field, 2009; Yeldham, 2017). One reason for such negligence could be attributed to the perplexity of teaching the skill since it is intangible and unobservable (Brunfaut & Revesz, 2015; Field, 2009). Furthermore, Goh (2010)



argued that manipulating learners' mental processes in the course of listening is not feasible; however, there are pedagogical approaches and activities that teachers could use in the classroom to empower the learners to control these processes for themselves. One way to deal with the complexity and intricacy of listening comprehension and develop learners' knowledge about the listening process is through metacognitive instruction (Chen, 2019; Kobayashi, 2016; Yeldham & Gruba, 2016). In this approach, the emphasis is on training learners to exploit appropriate strategies to deal with listening demands (Goh, 2008; Zohar & Barzilai, 2013). The focus of this approach is on learners' engagement in the teaching process by discussing and sharing the comprehension processes they use in the course of listening activity (Rhodes, 2019).

Over the past two decades, various metacognitive pedagogical approaches have been adopted to foster listeners' comprehension ability. In most of the studies, the pedagogical interventions were carried out by exploiting Vandergrift's (2004) sequences of tasks, Vandergrift et al.'s (2006) Metacognitive Awareness Listening Questionnaire (MALQ), or Vandergrift and Goh's (2012) Metacognitive Pedagogical Sequence (e.g., An & Shi, 2013; Bozorgian, 2015; Chen, 2019; Fahim & Fakhri Alamdari, 2014; Goh, 2018; Kobayashi, 2018, 2020; Rahimirad & Shams, 2014; Sahragard et al., 2015; Vandergrift & Tafaghodtari, 2010; Yeldham & Gruba, 2016). These studies proposed significant implications in the realm of teaching listening skills, yet; it is argued that other types of activities need to be studied for their differential impacts on meeting the broad range of learners' needs and their probable effects on developing learners' listening comprehension ability (Goh, 2008; Zeng & Goh, 2018).

Accordingly, the present study attempted to shed more light on the impact of metacognitive instruction on listeners' comprehension ability by exploiting the integrated experiential listening activities proposed by Goh (2010). This set of activities includes metacognitive pedagogical sequence, self-directed listening, and post-listening perception activities, which aim at raising learners' awareness of the processes involved in listening comprehension and helping them regulate the processes appropriately to achieve the goals. The integrated experiential listening activities are of paramount significance as they provide learners with opportunities to focus on the cognitive as well as the social-affective processes of listening and practice their listening comprehension skills simultaneously (Goh & Vandergrift, 2021). The key feature of these tasks is that they merge the product approach with the metacognitive process-based listening instruction (Goh, 2010).

## Literature Review

### Metacognition and Metacognitive Instruction

According to Zhang and Zhang (2018), metacognition is a characteristic implanted in language learners, blended with different variables which are both sociocultural and cognitive. As process-based teaching, metacognitive instruction seeks to develop three dimensions of metacognitive knowledge in listeners. The first dimension is person knowledge which denotes listeners' knowledge of their weaknesses and strengths. The second dimension, task knowledge, focuses on the goal, the nature, and the demands of listening activities. The third dimension is strategy knowledge, which deals with the knowledge about valuable strategies to learn or complete a listening activity (Flavell, 1979). These three dimensions of metacognitive knowledge, as emphasized by Goh and Vandergrift (2021), contribute to the higher levels of self-management and the ability to adopt appropriate strategies.

Metacognitive instruction seek to develop the ability to integrate students' skills, abilities, and strategies to learn the language (Abrosimova, 2019). It also helps learners develop their metacognitive awareness strategies, while simultaneously, learners are provided with guidance on ways to plan, monitor, and evaluate their comprehension and their progress in listening (Goh & Vandergrift, 2021). Reviewing previous studies on metacognitive instruction, Goh (2008) found that the metacognitive approach to listening could be useful in three ways. The first benefit of such instruction is that it would affect listening,

support learners to be more self-assured, more interested, and less anxious. Secondly, metacognitive instruction has a positive impact on listening performance; and thirdly, weak learners possibly benefit the greatest from such instruction.

Over decades, scholars adopted and proposed various metacognitive models and activities to help teachers and learners with listening strategies. For example, Chamot and O'Malley (1994) proposed a cognitive academic language learning approach (*CALLA*), which integrates content, language, and learning strategies in a meticulously designed lesson. The *CALLA* follows five sequential phases of preparation, presentation, practice, evaluation, and expansion. Later, Chamot et al. (1999) proposed an updated version of the *CALLA*, which focused on nonlinear metacognitive processes of planning, monitoring, evaluation, and problem-solving. The model comprises six stages of preparation, presentation, practice, self-evaluation, expansion, and evaluation, and learners are allowed to return to any phase when they confront challenges and to improve their learning process. Focusing on the benefits of raising metacognitive awareness, Vandergrift (2004) introduced the metacognitive cycle to support learners in using listening strategies. The model includes the five stages of the planning, the first verification, the second verification, the final verification, and reflection. By implementing this model in the classroom, instructors provide the learners with ample opportunities to practice listening. Drawing on the sociocultural theory, Vandergrift and Goh (2012) presented the Metacognitive Pedagogical Sequence model, which emphasizes the exploitation of dialogic interaction in sharing the metacognitive listening strategies. In order to deliver the metacognitive strategies, the instruction in each session focuses on five stages of pre-listening/ predicting, first listen, second listen, third listen, reflection, and goal setting. In this model, learners have the opportunity to boost their learning through peer negotiation and collaboration.

## **Integrated Experiential Listening Activities**

Given the benefits of practicing the metacognitive approach in promoting learners' awareness of the processes underlying the listening comprehension, Goh (2010) introduced integrated experiential listening activities which merge metacognitive with listening comprehension activities to facilitate the teaching process. This set of activities includes a metacognitive pedagogical sequence, a self-directed listening worksheet, and post-listening perception activities, each of which could be used individually or be exploited along with the other ones. Metacognitive pedagogical sequence, as explained by Goh and Vandergrift (2021), includes a chain of activities that combine listening input and comprehension activities with metacognitive activities concentrating on raising learners' awareness. Adapting Vandergrift's (2004) model of metacognitive sequence, Goh (2010) proposed a metacognitive pedagogical sequence that includes eight stages of planning, first listening, pair process-based discussion, second listening, whole-class process-based discussion, third listening, script sound recognition, and personal reflection. The purpose of each stage is to help learners adopt listening strategies through teacher guidance, peer collaboration, and learners practice. Throughout the sequence, learners' comprehension of the text is checked at three verification stages, which help them increase their familiarity with the content and develop their awareness of the metacognitive processes (Goh, 2010).

Concerning the self-directed listening activities, Goh and Vandergrift (2021) argued that these activities highlighted the advantages of language-focused activities and repeated listening in boosting learners' task knowledge and processing abilities. The prerequisite to practicing such activities is to familiarize learners with listening strategies (Goh, 2010), as the presentation of background knowledge on listening strategy use would enhance learners' independent utilization of cognitive strategies (Liu & Goh, 2006). In doing so, the instructor could design checklists that appropriately include listening strategies and present them to learners prior to starting the listening activity. Then, the learners are asked to complete the checklist throughout the listening process and share it with peers or teachers (Goh & Vandergrift, 2021). This negotiation of strategy use would improve learners' performance in listening activity.

The reason for introducing the post-listening perception activities is that listeners always complain about their failure to comprehend some words (Goh, 1999), which is due to phonological changes that occur in speech (Goh & Vandergrift, 2021). Accordingly, understanding the patterns that sounds are changed or modified in normal speech is of great prominence, contributing to a higher level of metacognitive knowledge. Masrai (2022), also mentioned that there is a significant positive correlation between phonological word knowledge and listeners' comprehension ability. Goh (2010) stated that post-listening perceptions activities raise learners' awareness of the building blocks of the speech, from sounds to larger units.

## **The Implementation of Metacognitive Approaches in Listening Classes**

Metacognitive listening instruction has become a hot topic in second and foreign language acquisition, and various scholars attempted to study its differential effect on learners' performance. For example, Cross (2011) performed a study to explore how integrating the pedagogical cycle into listening instruction would change Japanese advanced EFL learners listening comprehension ability. To this end, five lessons focusing on the task sequence of predicting, monitoring, problem identification, and evaluating were designed. The track of score changes from pretest to posttest revealed the significant outperformance of the less-skilled listeners. Accordingly, out of four less skilled and four skilled listeners, three and one listeners, respectively, showed significant improvement in their listening scores. The study underscored that the less-skilled listeners benefited more from implementing the pedagogical cycle. In contrast, the skilled listeners would develop the ability to a threshold beyond which the instruction seems to have the least impact.

Rahimirad and Shams (2014) also studied how Iranian university-level EFL learners' listening performance and metacognitive awareness were affected by the infusion of metacognitive strategy instruction. In so doing, the experimental group practiced the metacognitive strategies proposed by Vandergrift and Tafaghodtari (2010), while no strategy instruction was practiced in the control group. Changes in learners' listening performance and metacognitive awareness were tracked using the listening module of the IELTS and the MALQ, respectively. Results indicated that the experimental group outperformed their counterparts in the control group on the two instruments.

The impact of repeated exposure to the MALQ as the instructional approach was the subject of the study conducted by Sahrgrard et al. (2015). They selected forty intermediated EFL learners and randomly assigned them to the experimental and the control groups. The control group took the MALQ in pretest and posttest, while the experimental group received MALQ in odd sessions. Findings indicated the significant benefits of the questionnaire in the experimental group compared to the control group. Additionally, less-skilled listeners in the experimental group outperformed their skilled counterparts.

Kobayashi (2018) studied Japanese EFL learners' performance on listening tasks. Metacognitive listening instruction (i.e., focusing on metacognitive processes along with activities such as planning, monitoring, and reflecting) was used in the experimental group, and the traditional listening instruction was carried out in the control group. The findings demonstrated a significant increase in the self-regulation ability of the experimental group. In addition, it was reported that the treatment contributed to the better performance of the learners on the listening test and cognition regulation.

In a recent study conducted by Maftoon and Fakhri Alamdari (2020), the efficacy of exploiting metacognitive strategies in developing learners' listening performance and metacognitive awareness was explored. A guided lesson plan focusing on metacognition was employed in the experimental group, and a traditional approach was followed in the control group. The pretest and posttest administration of the listening test and the MALQ demonstrated that intervention led to the outperformance of the experimental group in terms of the listening performance. Furthermore, the study reported that learners' awareness of metacognitive strategies was significantly affected by the process-based metacognitive strategy instruction.

To find out how metacognitive intervention would affect learners' competency in oral communication and would develop their self-regulation ability, Kobayashi (2020) studied a sample of Japanese non-English major freshmen. The metacognitive processes of planning, monitoring, and reflecting was practiced as the intervention. The results showed a significant progress in learners' self-regulation ability and significant gains in regulation of cognition, interactional competence, interaction and cognitive strategies. Moreover, it was found that the treatment had significant impacts on learners with low level of interactional competence.

Milliner and Dimoski (2021) conducted a quasi-experimental research to examine the efficacy of using metacognitive instruction on Japanese EFL learners at lower-proficiency level. They employed process-based intervention in the experimental group and a conventional approach in the control group. The study reported that the experimental group found the intervention very appealing and the intervention boosted their confidence toward L2 listening; yet, the researchers could not find any robust empirical evidence regarding the improvement of listening comprehension in lower-proficiency learners.

Given the significant role that English language plays in today's world, the need for developing L2 listening skills has drawn scholars attention and they attempted to introduce the most appropriate approaches that could boost the skills (Field, 2019; Goh & Vandergrift, 2021). In this respect, it is claimed that metacognitive instruction help learners demonstrate more self-assured stance toward L2 listening skills (Milliner & Dimoski, 2021). Reviewing the literature also highlighted the beneficial contribution of the metacognitive instructional approach to listeners' comprehension ability. However, a careful examination of the studies reveals that, irrespective of the different metacognitive approaches employed for teaching purposes, a small number of studies focused on how listeners' level of comprehension ability might affect their performance. Furthermore, the vast majority of the previous studies adopted the pretest-posttest design to inform the effect of metacognitive instruction. This study, on the other hand, attempted to, first, use a new set of activities (i.e., integrated experiential listening activities) to inform the impact of metacognitive instruction and, second, focus on learners' listening comprehension ability (i.e., skilled vs. less-skilled) as a factor that might affect the success of this approach. Unlike the previous studies, a time-series design was adopted to delineate the impact of the instruction in the middle and at the end of the study as the immediate and delayed-posttest, respectively, to track changes in listeners' comprehension ability over time. According to Hatch and Lazaraton (1991), the time-series approach introduces the benefits of discovering how long it takes for learners to reach the stipulated goal and the fluctuations in learners' performance during the study. To comply with these issues, two research questions were formulated:

1. Do integrated experiential listening activities have any differential impact on participants' listening comprehension ability over time?
2. Do integrated experiential listening activities have any significant impact on skilled and less-skilled listeners' comprehension ability over time?

## **Methodology**

### **Participants**

A sample of 59 Iranian upper-intermediate learners, majoring in teaching English as a foreign language, was selected from two intact classes in an Institute for Higher Education in Mazandaran Province, Iran. Convenience sampling was used for selecting the sample of the study. They were attending the conversation class as a compulsory course. Intact classes were used as the participants were already assigned to the classes by the institute and the researchers could not change the order. The two classes were randomly assigned to the experimental (N = 31, Male = 14, Female = 17) and the control groups (N = 28, Male = 13, Female = 15). The Quick Placement Test (QPT) was administered to ensure that the

sample was homogenous in terms of their proficiency level. Participants' scores on the test ranged from 41 to 45, with mean scores of 42.58 for the control group and 43.05 for the experimental group. According to the test manual, these mean scores are regarded as the upper-intermediate level, which is comparable to a B2 level on the Common European Framework of Reference for Languages (CEFR). An independent samples t-test was also performed on the two groups' scores on QPT, and the results showed no significant difference between the two groups ( $p = .07$ ) in terms of proficiency level. To distinguish between skilled and less-skilled listeners in the experimental group, the listening pretest means score was used (see Table 2). Accordingly, learners whose scores were one standard deviation above the mean were considered skilled listeners ( $N = 10$ , Male = 4, Female = 6), and those who scored one standard deviation below the mean less-skilled ones ( $N = 13$ , Male = 6, Female = 7). The average age of the participants was 19, and learners of both genders attended the study. The participants were all native speakers of Persian. They had the experience of attending English classes prior to the study (3 to 5 years), yet, metacognitive listening instruction was not practiced in the regular classroom in the English language institute.

## **Instruments**

### **Quick placement test**

Designed by Oxford University Press and Cambridge ESOL, the test is available in computer-based as well as paper and pen versions. In this study, a paper and pen version of the test was employed. This version of the test is presented in two parts. The first part includes 40 questions and is aimed at learners who are below or at the intermediate level. The second part includes an additional 20 questions and is taken only by learners whose scores are more than 35 out of 40 on the first part. As the target sample of the study was upper-intermediate level, the test including the two parts and comprising 60 multiple choice questions was used. The focuses of the test are on measuring learners' knowledge of grammar, vocabulary, and cloze passages. It takes approximately 30 minutes to administer. The test enjoys a highly reliability index of .94 (Geranpayeh, 2003).

### **Listening comprehension tests**

In order to assess learners listening comprehension ability, the listening section of the Cambridge ESOL's First Certificate in English (FCE) exam, which is appropriate for learners at the B2 level, was employed. The test includes four parts, with each part comprising a combination of monologues and dialogues. In part one, the test taker listens to eight short monologues or conversations focusing on evaluating the test-taker's ability to listen for opinion, feeling, agreement, attitude, details, purpose, and gist. Each monologue is about 30 seconds, accompanied by a multiple-choice question. In part 2, the test taker listens to a 3-minute-long dialogue or monologue evaluating their ability to listen for specific information. Then, they are required to answer ten fill-in-the-gaps questions. In the third part, five monologues (each about 30 seconds) are played, and the test takers have to match each monologue to a statement. In the fourth part, the test taker listens to a conversation (approximately about 3 minutes) and answers seven multiple-choice questions. The total number of questions is 30, and each correct answer has one point. The test takes about 40 minutes to administer. In this study, three tests of listening were adopted from the FCE exam and were administered as pretest, immediate posttest, and delayed posttest. The results of the Cronbach's alpha indicated reliability indices of .79, .81, and .77 for the pretest, immediate posttest, and delayed posttest, respectively.

## **Procedure**

This study was conducted throughout a whole academic semester which included 16 sessions that were held once a week, and each lasted an hour and a half. In the first session, the QPT and pretest of listening

comprehension were administered. The listening comprehension pretest (T1) was used to provide information about the participants' listening comprehension ability prior to implementing the treatment and also to distinguish between skilled- and less-skilled listeners in the experimental group. The immediate (T2) and delayed (T3) listening comprehension tests were administered in sessions 8 and 16, respectively. Thirteen listening passages were selected randomly from the book *FCE Listening and Speaking Skills 1 and 2* written by Evans et al. (2008) and were practiced in the two groups.

In the experimental group, integrated experiential listening activities were adopted to practice listening comprehension. To do so, the metacognitive pedagogical sequence was the basis of the instruction, and self-directed listening worksheet (See Appendix A) along with the post-listening perception activities were embedded in the process. The metacognitive listening sequence employed in this study included the following stages:

The planning stage: The worksheet was used to help participants talk about their goals, their predictions of the passage, and the choices of proper strategies in case of confronting a challenging situation.

The first listening: The audio was played and participants checked their predictions.

Pair process-based discussion: The participants shared and discussed the information they collected from listening to the passage and the strategies they used for the listening.

The second listening: The participants concentrated on the parts they found challenging in the previous listening and wrote down new information they heard.

The whole-class process-based discussion: The instructor checked whether the participants comprehended the listening passage, then discussed the exploited strategies with participants.

The third listening: The listening passage was played for the third time and participants were told to discuss with the instructor and/or peers the strategies which helped them in comprehending the passage.

Script-sound recognition: Learners were provided with the script of the listening passage so that the learners could match the audio with the text. Prior to presenting the script to the classroom, the post-listening perception activities were introduced. For the post-listening perception activities, some features, including the word stress, tone, meaning segments, prominence, rhythm, and pauses, were practiced. For example, participants listened to the audio and they were asked to write down the prominent words.

Personal reflection: Participants focused on the information they gathered from the discussions they had during the listening task. In addition, they evaluated the usefulness of strategies they employed to comprehend the passage.

As for the instruction in the control group, the participants were required to listen to the passages and answer the questions accompanied by the passages. This conventional approach is commonly used in language classes in Iran. Using this approach, the learners received no instruction concerning the planning, monitoring, or evaluation strategies. Moreover, no other strategy instructions were practiced in the classroom. The same listening passages, as the ones used in the experimental group, were played three times in the classroom. The participants were allowed to talk with their classmates only after the third listening to confirm that they comprehended the listening passage.

## Data Analyses

Using SPSS 23, scores were tested for normality. The Shapiro-Wilk test of normality (Table 1) indicated a non-normal distribution of the scores; therefore, non-parametric tests were employed. For each research question, Mann-Whitney U and Wilcoxon Signed Rank tests were employed to compare the groups' performance at each administration of the test and to track changes in their performance during the time between two tests, respectively. In order to circumvent the problem of type 1 error, it was

essential to employ a Bonferroni adjustment. Hence, for the Mann-Whitney U test and Wilcoxon Signed rank tests, the adjusted alpha level of .017 and .008 were set as the criteria to determine the significant or non-significant differences. The effect size ( $r$ ) was also calculated for each statistical procedure. For the Mann-Whitney U test and Wilcoxon Signed Ranked test, an approximate value of  $r$  was estimated using the  $r = z/\text{square root of } N$  ( $N = \text{total number of cases}$ ) and  $r = z/\text{square root of } N$  ( $N = \text{the number of observations over the two time points}$ ) formulae, respectively (Pallant, 2016). In order to interpret the effect size, Cohen's (1988) guidelines were used where, .1 = small effect, .3 = medium effect, and .5 = large effect.

## Results

Table 1 presents the results of the normality test performed on the two groups' scores. According to the results, the distribution of the scores was not normal ( $p < .05$ ); hence, non-parametric tests were suitable for analyzing the data.

TABLE 1  
*Test of Normality*

		Shapiro-Wilk Statistics	df	Sig.
Experimental Group	T1	.894	20	.031
	T2	.958	20	.001
	T3	.920	20	.017
Control Group	T1	.839	20	.004
	T2	.944	20	.048
	T3	.912	20	.021

Concerning the first research question about the impact of metacognitive instruction on learners' listening comprehension ability over time, Mann-Whitney U and Wilcoxon Signed Rank tests were performed. Table 2 indicates the results of the analyses generated for the two groups' performance at T1, T2, and T3.

TABLE 2  
*Results of Mann-Whitney U Tests for the two Groups*

	Control group			Experimental group			Mann-Whitney U test			
	Mdn	M	SD	Mdn	M	SD	u	z	p-value	r
T1	17.00	18.25	2.17	17.00	18.00	2.05	201.50	.041	.967	.006
T2	19.00	19.10	2.48	21.00	20.90	1.86	109.00	-2.483	.013*	.392
T3	18.00	18.95	2.30	21.50	21.55	2.01	84.00	-3.173	.001*	.501

Mdn = Median, M = Mean, SD = Standard Deviation

\*Significant at a Bonferroni-adjusted alpha level of .017.

As depicted in table 2, the experimental and the control groups performed quite similarly at T1, and the results of the Mann-Whitney U test also demonstrated no significant difference between the two groups ( $U = 201.500$ ,  $z = .041$ ,  $p = .967$ ). The estimation of the effect size also indicated a small effect ( $r = .006$ ). The results for the two groups' performance at the T2 revealed that the experimental group scored significantly better than the control group ( $U = 109.000$ ,  $z = -2.483$ ,  $p = .013$ ), with a medium effect size ( $r = .39$ ). Comparing the two groups' scores at T3 also showed that the experimental group scored significantly higher than the control group ( $U = 84.00$ ,  $z = -3.173$ ,  $p = .001$ ) with a large effect size ( $r = .50$ ). To demonstrate the changes in each group's performance over time on the listening comprehension test, the Wilcoxon Signed Ranked tests were performed.



TABLE 3  
Results of Wilcoxon Signed Ranked Tests

		<i>z</i>	<i>p</i> -value	<i>r</i>
Experimental group	T1-T2	-3.651	.000*	.577
	T1-T3	-3.318	.000*	.524
	T2-T3	-1.043	.002*	.164
Control group	T1-T2	-.568	.117	.089
	T1-T3	-.613	.631	.096
	T2-T3	-.777	.437	.122

\*Significant at a Bonferroni-adjusted alpha level of .008.

According to table 3, there was a significant increase in the experimental group's scores from T1 to T2 ( $z = -3.651, p = .000$ ), with a large effect size ( $r = .57$ ). The treatment in the experimental group also significantly improved participants' performance from T1 to T3 ( $z = -3.318, p = .000$ ). The effect size estimation also indicated a large effect size ( $r = .52$ ). Comparing the results from T2 to T3 revealed a significant improvement in participants' comprehension ability ( $z = -1.043, p = .002$ ), with a small effect size. On the contrary, the results demonstrated no significant improvement in the control group's comprehension ability from T1 to T2 ( $z = -.568, p = .117, r = .089$ ). Further study of the table revealed no significant increase in the control group's scores from T1 to T3 ( $z = -.613, p = .361$ ), with a small effect size ( $r = .096$ ). Moreover, comparing the control group's scores at T2 and T3 showed no significant progress in listening comprehension ability ( $z = -.777, p = .437, r = .122$ ). Overall, the results suggested that practicing integrated experiential listening activities had a significant impact on learners' listening comprehension ability over time. As the effect size estimation indicated, the treatment had the greatest impact on listeners' comprehension from T1 to T2 and the least impact from T2 to T3.

In order to examine the impact of the metacognitive instruction on skilled and less-skilled listeners' comprehension ability, two non-parametric tests were employed. First, the Mann-Whitney U tests were performed to compare the two groups' performance at each time, and then the Wilcoxon Signed Ranked tests were used to indicate how each group's performance changed over time.

TABLE 4  
Results of Mann-Whitney U Tests for the Skilled and Less-Skilled Listeners

	Less-skilled listeners (n = 12)			Skilled listeners (n = 8)			Mann-Whitney U Tests			
	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>u</i>	<i>z</i>	<i>p</i> -value	<i>r</i>
T1	17.00	16.50	.67	20.00	20.25	1.03	96.00	3.808	.000*	.851
T2	20.00	20.41	2.06	22.00	21.62	1.30	66.00	.608	.181	.135
T3	22.50	21.75	2.09	21.00	21.25	1.98	43.00	-.397	.734	.088

*Mdn* = Median, *M* = Mean, *SD* = Standard Deviation

\*Significant at a Bonferroni-adjusted alpha level of .017.

According to the results of the Mann-Whitney U test demonstrated in table 4, there was a statistically significant difference between less-skilled and skilled listeners' comprehension at T1 ( $u = 96.00, z = 3.808, p = .000$ ), with a large effect size ( $r = .85$ ). The results demonstrated no significant difference between less-skilled and skilled listeners at T2 ( $u = 66.00, z = .608, p = .181, r = .13$ ). Comparing the results for less-skilled and skilled listeners' performance at T3 also showed no significant difference ( $u = 43.00, z = -.397, p = .734, r = .08$ ). In order to track changes in each group's performance during the three-time intervals, the Wilcoxon Signed Ranked tests were used, and the results are presented in Table 5.

TABLE 5  
Results of Wilcoxon Signed Ranked Tests

		<i>z</i>	<i>p</i> -value	<i>r</i>
Less-skilled listeners	T1-T2	-2.947	.003*	.601
	T1-T3	-3.068	.002*	.626
	T2-T3	-2.701	.007*	.551
Skilled listeners	T1-T2	-2.050	.005*	.512
	T1-T3	-.980	.139	.245
	T2-T3	-1.134	.257	.283

\*Significant at a Bonferroni-adjusted alpha level of .008.

As indicated in table 5, the infusion of integrated experiential listening activities had a significant impact on less-skilled listeners' performance from T1 to T2 ( $z = -2.947, p = .003$ ), with a large effect size ( $r = .60$ ). This improvement in less-skilled listeners' performance was also noticeable from T1 to T3 ( $z = -3.068, p = .002$ ). The effect size calculation also indicated a large effect ( $r = .62$ ). This group of listeners also demonstrated significant progress from T2 to T3 ( $z = -2.701, p = .007$ ), with a large effect size ( $r = .55$ ). With respect to the changes in skilled listeners' performance, the result portrayed a significant increase in scores from T1 to T2 ( $z = -2.050, p = .005$ ), with a large effect size ( $r = .51$ ). On the contrary, the treatment had no significant impact on participants' listening comprehension from T1 to T3 ( $z = -.980, p = .139, r = .24$ ); and T2 to T3 ( $z = -1.134, p = .257, r = .28$ ).

## Discussions

The present study investigated the impacts of metacognitive instruction using integrated experiential listening activities on learners' listening comprehension ability. Additionally, the study explored how skilled and less-skilled listeners' listening performance changed after being treated with metacognitive instruction. Concerning the first research question of the study (Do the integrated experiential listening activities have any significant impact on learners' listening comprehension ability), the results demonstrated that the group receiving metacognitive instruction outperformed their counterparts in the control group. This improvement might be due to the fact that learners were exposed to listening text repeatedly and they were provided with the opportunity to monitor their progress, consult with others about appropriate strategy adoption, collaborate with teacher and peers to deal with challenges, and practice the approach over time. This process would help learners raise their knowledge of listening strategies as they share ideas with peers to adopt the best strategy that suits the purpose of listening. This process, as Goh (2010) proposed, would empower the learners to monitor the processes for themselves. This is also endorsed by Johnston and Doughty (2006), who claimed that learners' engagement in the task performance would gradually improve learners' acquisition of implicit knowledge. As for the control group, the findings showed no improvement in the listening comprehension scores which could be due to the point that the participants in that group did not have the chance to practice strategies and they only had to respond to the questions.

The current finding, irrespective of the fact that the study used different metacognitive instructional approach, is in accordance with previous studies which highlighted that process-based metacognitive instruction is an invaluable approach in developing learners' listening comprehension ability (e.g., Fahim & Fakhri Alamdari, 2014; Ghorbani Nejad & Farvardin, 2019; Goh, 2019; Kobayashi, 2018; Rahimirad & Shams, 2014, Vandergrift & Tafaghodtari, 2010). Rahimirad and Shams (2014), for example, in the study of Iranian university-level EFL learners listening performance, found that the infusion of the metacognitive instruction which focuses on the process underlying the listening skill would empower learners with the prerequisite ability to extract information from input effectively, hence contributing to better performance on listening tasks. In addition, the present study confirms the results of the study carried out by An and Shi (2013). In their study, Chinese EFL learners' listening comprehension ability was improved due to practicing metacognitive strategies in the classroom.

The result also corroborates the findings of the study conducted by Kobayashi (2018), who found that raising Japanese sophomores' awareness of metacognitive strategies through activities that concentrate on planning, monitoring, and reflection would boost their performance on listening comprehension tasks and help them regulate their learning process. By incorporating post-listening perception activity in the instructional approach, the current study also addressed Goh and Taib's (2006) suggestion. They proposed that the metacognitive instruction, in addition to emphasizing the teacher modeling, reflection and discussion, and incorporating process- and text-based activities, needs to exploit perception practices that facilitate and expedite recognition of speech segments.

The second research question of the study concentrated on investigating if the infusion of integrated experiential listening activities into classroom instruction had a noteworthy impact on skilled and less-skilled listeners' performance. Comparison of the two groups demonstrated that their performance significantly differed only at T1, and no significant differences were observed at T2 and T3. The non-significant difference of the two groups at T2 and T3 is noticeable when the results of the Wilcoxon signed Ranked test are studied. Accordingly, the less-skilled listeners' performance significantly improved over time. On the contrary, the skilled listeners' performance showed significant improvement from T1 to T2 and no further significant progress was observed. The fact that less-skilled listeners' listening comprehension ability development continued overtime is confirmed by Sun et al. (2001) postulation that repeated exposure to and practice of perplexing tasks would incrementally help learners with limited knowledge to develop implicit skills as they have to make various decisions during the task accomplishment by using the recently obtained information. The finding of the current study is also endorsed by some previous comparative studies which attempted to examine the impact of various types of metacognitive instruction on skilled and less-skilled listeners' performance. The results of the current study are endorsed by Cross' (2011) small-scale study which attempted to examine if less-skilled learners' listening performance changed as a result of implementing the pedagogical cycle as a metacognitive listening instruction. He reported that there might be an onset beyond which the intricacy of task and passage probably hinder the constructive influence of the metacognitive approach for skilled learners. Additionally, he concluded that teaching strategies would help those less-skilled learners who are not fully aware of the listening strategies to explore beneficial listening strategies in a more structured manner.

The results of this study also confirm Vandergrift and Tafaghodtari's (2010) claim that less-skilled listeners seem to benefit more from metacognitive instructions. They clarified that this type of listener, first, needs to improve their knowledge and ability to rebuild the input when listening. The systematic and repeated presentation of metacognitive strategies through the implementation of tasks would then help listeners build a more robust representation of information in the memory. This is the reason that less-skilled listeners gradually develop the metacognitive and cognitive processes used by skilled listeners. The results of a quasi-experimental study conducted by Milliner and Dimoski (2021) also showed that the use of process-based metacognitive instruction contributed to better performance of lower-proficiency level learners on listening tasks. In a study conducted by Kobayashi (2020) on the benefits of employing metacognitive intervention on listeners' comprehension ability, the results demonstrated that listeners with lower level of interactional competence benefited the most from the intervention. In line with the current finding, the study performed by Bozorgian (2015) also indicated that the application of process-based metacognitive instruction would raise learners' awareness of metacognitive strategies and would lead to a better listening performance. He further reported that this type of instruction benefited the less-skilled listeners more than the skilled ones. This study is in contrast with the study performed by An and Shi (2013), who studied the efficacy of drawing learners' to metacognitive processes (i.e., predicting, planning, monitoring, evaluation, and problem-solving) on their listening performance. They reported that skilled listeners' performance (in the case of the current study, intermediate to advanced-level learners) significantly improved than the less-skilled learner as a result of the instruction. The reason for this contradictory finding could be attributed to the point that the number of participants in An and Shi's study was three and they adopted a different metacognitive approach to teaching listening. Lau (2017) also

suggested that skilled listeners employed more strategies and used them more regularly and efficiently than do their less-skilled peers.

## Conclusions and Implications

By implementing integrated experiential activities as an instructional approach to teaching listening, the study broadens the previous findings that the metacognitive approach is beneficial for fostering learners' listening comprehension and, more specifically, in helping less-skilled listeners to develop the ability for successful listening. Focusing on the study's findings, it is suggested that the meticulously designed instructional methods that raise learners' awareness of the processes involved in learning how to listen would put learners at a vantage point. Accordingly, it is recommended that teachers expose the learners to the listening material as much as possible to ensure that comprehension is achieved and strategy adoption is negotiated. In addition, the approach used in the study provided the learners with the opportunity to practice the listening passage in detail by concentrating on word stress, tone, meaning segments, prominence, rhythm, and pauses. Taking this point into account, it is recommended that classroom instruction adopt an approach that draws learners' attention not only to the whole picture of the task but also highlights the significance of details to preclude future challenges that might arise during listening.

The study also draws attention to the point that the metacognitive approach is a facilitative and beneficial approach in listening skill development, yet not everyone with different listening ability levels would benefit the same. As indicated in the study, the less-skilled listeners' performance was affected by such an approach over time. Therefore, teachers should take into account the most appropriate way to integrate the approach along with the routine classroom instruction to develop the learners' listening ability with various levels of comprehension ability. As it is accepted that less-skilled listeners need more instructional supports to boost their listening comprehension ability, teachers could change the current curriculum to include sequential activities which could help learners develop their ability gradually. The other implication of this study for teacher is that they could use the integrated experiential listening activities to provide ample opportunities for learners at different range of listening ability to explore, practice, and develop the kind of listening comprehension ability that can prepare listeners for real-life situations. Additionally, material designers should prepare teaching materials that engage learners actively in the listening process, which develops their ability to manage their learning process appropriately. This goal could be achieved when the material designers incorporate learning tasks in the coursebooks that require learners to reflect on their own and peers' learning processes and help them discuss their understanding of their weaknesses and strengths with each other. This would help learners become independent and self-regulated, which is an ultimate goal for every teaching approach.

While the current study presented valuable insight regarding the efficacy of implementing integrated experiential listening activities in developing listening comprehension, further studies are needed to address some issues regarding the efficacy of these activities in promoting listeners' self-regulation ability and metacognitive awareness. In this study, only a small sample of learners was selected to participate in the study. Conducting a study with a larger sample would present more insightful information on how learners' listening comprehension would change due to practicing these activities. Another limitation was that the researcher used intact classes. Using intact class is a type of non-probability sampling; therefore, we need to be cautious in generalizing the findings. Additionally, learners' gender was not considered as a factor that might affect their performance.

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## Appendix A

### **A Sample of Self-Directed Listening Guide Adopted from Goh (2010)**

- Why am I listening to this recording?
- What do I hope to achieve?
- What do I know about this topic?
- What type of information can I expect to hear (and view)?
- What words can I expect to hear? (Use a dictionary, if necessary.)
- What difficulties can I expect?
- What strategies should I use when I encounter these difficulties?
- Am I satisfied with what I have understood? Why?
- Was I able to make use of my prior knowledge about the topic?
- What difficulties did I face? Were my strategies useful?