

The Dilemma of Metacognitive Intervention and EFL Listening: Is L1 a Panacea in EFL Contexts?

Ebrahim Fakhri Alamdari^{1,*}  & Leila Hosnbakhshan¹ 

¹Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran



10.22080/iselt.2021.20666.1004

Received

September 16, 2022

Accepted

December 5, 2022

Available online

February 28, 2023

Keywords

Listening, Comprehension, L1/L2-Mediated Metacognitive Intervention, Metacognitive Awareness, EFL Learners

Abstract

Listening has recently attracted the attention of both researchers and practitioners worldwide (Renandya & Hu, 2018), and research into L2 listening strategy use has recently tended to focus on metacognitive strategies (Lynch & Mendelsohn, 2020). This study investigated the comparative effect of L1/L2-mediated metacognitive intervention (MI) on the IELTS listening comprehension performance and metacognitive awareness of English as a foreign language (EFL) learners in Iran. The participants were 540 upper-intermediate EFL listeners in three groups, ranging from 17 to 28 years of age. The experimental groups (Ex1=180 / Ex2=180) went through a guided lesson plan in metacognition in English and Persian for twelve weeks, which focused on planning, monitoring, and evaluation. The control group (CG = 180), also instructed by the same teacher, listened to the same texts without any guided attention to the process. The MALQ and an actual IELTS test were used before and after the intervention to track the changes in metacognitive awareness and listening performance. The overall results showed that MI caused a considerable variance in the listening performance and the metacognitive awareness of learners in both experimental groups. The Post Hoc multiple comparison results of the three groups also illustrated that the medium for the delivery of the metacognitive intervention (L1) assisted the listeners in experimental group one, who went through L1-mediated metacognitive intervention, to outperform their peers in experimental group two, who were taught in L2, and the control group, who were taught conventionally.

1. INTRODUCTION

Listening comprehension, once a neglected skill (Renandya & Hu, 2018), is a complex process (Lynch & Mendelsohn, 2020). It facilitates the emergence of other language skills (Vandergrift & Goh, 2012) and is an essential skill for acquiring an additional language (Harding, Alderson, & Brunfaut, 2015; Wallace, 2020). Teaching of listening has received greater attention in recent years (Field 2008; Richards 2009), and the focus of teaching listening is on process rather than product (Graham & Santos, 2015; Santos & Graham, 2018).

*Corresponding Author: Ebrahim Fakhri Alamdari, Department of English, Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran. Email: fakhri.iau.ac@gmail.com



Metacognition, one of the most reliable predictors of learning (Vandergrift & Goh, 2012), has been widely recognized to have a crucial role in learning in general and L2/EFL listening, in particular. It is the ability of learners to control their thoughts and regulate their own learning, and can play an important role in learning to listen (Wenden, 1998). In addition, there is strong evidence that learners' metacognition can directly affect not only the process but also the outcome of their learning (Goh, 2018; Wenden, 1998). In the same vein, experts in the field of second language learning hold the view that learners' metacognitive awareness can contribute to their thinking and comprehension (Wenden, 1998), and can enhance a child's cognitive development, academic learning and language development, in general (Goh & Hu, 2014). One way to mitigate the cognitive demand of listening and facilitate the listening comprehension process for listeners is to use metacognitive intervention (Goh, 2008, 2018).

The use of L1 in ESL/EFL educational settings has also gained enormous recognition over the past two decades (Wach & Monroy, 2020), and many scholars have investigated the controversial impact of L1 on L2/EFL learning (Ellis & Shintani, 2014). Although the role of L1 in L2/EFL contexts has been revisited after decades of being underappreciated (De la Campa & Nassaji, 2009; Wach & Monroy 2020), there are still many scholars holding the view that the use of L1, as a pedagogic tool, could be interfering and debilitating and that L1 could undermine the L2/EFL learning process and may limit learners' L2 input and overshadow their exposure to L2 output (Swain & Lapkin, 2013; Tognini & Oliver, 2012). Other scholars, from an opposite angle, oppose the excessive use of L2, maintaining that it can lead to linguistic imperialism and may jeopardize the students' L1 as well as their culture. Thus, L1 must be deemed as a valuable pedagogic tool in L2/EFL educational settings, acting as a buffer against power relationships and potential cultural hazards in language classrooms (Stables & Wikeley, 1999). The use of L1 also gains support from a sociocultural perspective, claiming that it serves as an indispensable mediating tool assisting L2/EFL learners to complete cognitively demanding L2 tasks with more ease (Anton & Dica-milla, 1999; Ellis & Shintani, 2014; Storch & Wigglesworth, 2003).

Although research on listening with regard to metacognitive interventions is broad in perspective, very few has ever focused on the potential impact of L1-mediated metacognitive intervention on L2 listening. In the light of this paucity in research, the present study focused on the comparative effect of L1/L2-mediated metacognitive intervention on the listening comprehension performance and metacognitive awareness of Iranian EFL learners.

2. REVIEW OF LITERATURE

Metacognitive Interventions and L2 Listening

Metacognition, widely thought to play a crucial role in a child's cognitive development, academic learning, and language development (Goh & Hu, 2014), empowers learners to control their thoughts, regulate their own learning and helps them learn how to listen (Goh, 2018; Wenden, 1998). Metacognitive intervention (MI), an overarching term primarily developed by Vandergrift and Goh (2012), encompasses both the strategy instruction and metacognitive instruction (Cross, 2015). It refers to pedagogical procedures empowering listeners to develop deeper metacognitive knowledge about themselves, the listening task, and appropriate strategies so as to enhance their awareness of the listening process (Vandergrift & Goh, 2012). MI also empowers listeners to plan, monitor, and evaluate their comprehension efforts as well as the progress of their overall listening development (Vandergrift & Goh, 2012).

In recent years, many scholars in the field of listening have developed models of metacognitive intervention (Vandergrift, 2004; Vandergrift & Goh, 2012; Vandergrift & Tafaghodtari, 2010). Many recent studies have applied these models in both ESL/EFL contexts to support the

importance of the MI for enhancing listening comprehension (Bozorgian, 2014; Bozorgian & Fakhri, 2018; Bozorgian & Muhammadpour, 2020; Bozorgian, Yaqubi, & Muhammadpour, 2020, Maftoon & Fakhri, 2020; Vandergrift & Tafaghodtari, 2010) as well as raising metacognitive awareness (Bozorgian & Fakhri, 2018; Maftoon & Fakhri, 2020; Mahdavi & Miri, 2017; Tanewong, 2018; Goh & Hu, 2014). The following studies are among the most recent ones reflecting the vital role of MI in enhancing listening comprehension and raising metacognitive awareness.

Bozorgian and Fakhri (2018) examined the effect of metacognitive intervention on advanced Iranian EFL learners' multimedia listening and their metacognitive awareness in listening. The data were collected through 180 Iranian advanced learners in three groups, two experimental and one control group. Multimedia listening tests and MALQ were to collect data for the study. The findings of the study demonstrated that metacognitive intervention enhanced learners' multimedia listening as well as their metacognitive awareness.

In a recent MI-based study, Maftoon and Fakhri (2020) also investigated the impact of metacognitive intervention on the listening performance and metacognitive awareness of 60 Iranian EFL learners. They used MALQ and a listening test to collect data for their study. The results were in favor of metacognitive intervention, enhancing listening performance and raising learners' metacognitive awareness.

In the most recent study, Bozorgian et al. (2020) investigated the effect of the metacognitive intervention on the listening performance and metacognitive awareness of 136 Iranian upper-intermediate EFL learners with low working memory capacity. IELTS listening tests and the MALQ were used before and after the intervention. The results depicted that the experimental group outperformed the control group in both IELTS listening and metacognitive awareness.

The Myth of L1 in L2/EFL Contexts

The ongoing debate over the use of L1 in L2/EFL classrooms has recently gained unprecedented recognition in educational settings worldwide (Shin et al., 2019). This controversy is well reflected in various academic publications, highlighting the role of L1, as a valuable pedagogic resource, in ESL/EFL classrooms (Butzkamm, 2003; Hall & Cook, 2012). This can also illustrate that the status of L1 has now been revisited after decades of being agonistically neglected by communicative approaches advocating L2- exclusivity inspired by natural approach (Krashen & Terrell, 1983) as well as arguments emanating from input, output and interaction (Long, 1996; Swain, 1985). As a compromise, Macaro et al. (2016) proposed three basic positions for the current status of L1 in L2 teaching: the first one is 'virtual position', denoting L2 exclusivity; the second one is 'maximal position', accepting occasional L1 use; and the third one is the 'optimal position', allowing the judicious use of the L1 as an important resource for L2 teaching.

Many scholars in the field of Applied Linguistics contend that L1 should be used in L2/EFL classrooms and further claim that they have convincing cognitive, sociolinguistic, sociocultural, psychological, and pedagogical reasons for their positions. From a cognitive point of view, they consider L1 users as cognitively sophisticated beings, who can use their L1 knowledge to perceive the concepts better in L2 (Butzkamm, 2003; Cook, 2001). From a socio-cognitive perspective, L1 is regarded as an invaluable tool to pool ideas, which can help mediate L2 learning and promote interaction in L2/EFL contexts (Anton & DiCamilla, 1999; Storch & Wigglesworth, 2003; Thoms et al., 2005). From a sociocultural perspective, L1 serves as a vital mediating tool assisting L2 learners to cope with and accomplish cognitively demanding L2 tasks more smoothly (Anton & Dicamilla, 1999; Ellis & Shintani, 2014; Storch & Wigglesworth, 2003). From a psychological perspective, the use of L1 can reassure learners, boost their confidence, and ultimately help them

develop positive attitudes towards learning a second language (Littlewood, 2014). Pedagogically speaking, the use of L1 can assist teachers to establish rapport with learners more amicably and create a more friendly classroom atmosphere (Edstrom, 2006; Sali, 2014). In addition, L1 helps teachers save time, manage their classes more easily, keep pupils attended, and maintain classroom discipline (Auerbach, 2016).

Although there has been no severe backlash against the use of L1 in L2 settings in recent years (Cummins, 2007), and L1 is currently regarded as a scaffolding tool for the development of L2 (Auerbach, 2016), there are many who still cast doubt on the use of L1 in L2 instruction. They contend that the use of L1 may have deleterious impacts on L2, as it practically diminishes the quantity of comprehensible L2 input, ultimately hampering or interfering with L2 learning processes. In fact, they strive to promote the idea that L2 instruction should take place away from any L1-induced interference (Miles, 2004; Swain & Lapkin, 2013; Tognini & Oliver, 2012).

Overall, SLA researchers have been at pains to prove that L1 is not just a setback to L2 learning but a resource for learners to facilitate their use and learning of an L2 (Ellis & Shintani, 2014). Notwithstanding all the benefits and pitfalls, the following two studies are among the few relevant studies investigating the effect of L1 on listening comprehension performance of listeners in both EFL/ESL contexts.

In a research study investigating the impact of L1 on the use of two particular listening strategies, syntactic cues and prosodic cues, Harley (2000) concluded that Chinese and Polish EFL learners with various levels of proficiency tended to seek prosodic assistance from L1. In other words, they relied on syntax to reconstruct prosodic cues once they encounter confusing sentences. In another study investigating the impact of L1-mediated instruction of listening strategies and its effect on listening comprehension in L2, Bozorgian and Pillay (2013) taught five listening strategies in L1 to sixty Iranian EFL learners over 14 weeks. The results of the study were in favor of L1 instruction, leading to improvements in EFL listening.

It is worth noting that none of the studies mentioned above has ever focused on the comparative effect of L1/L2-mediated metacognitive intervention on the listening comprehension performance and metacognitive awareness of EFL learners. Thus, in an attempt to reach more tangible and consistent findings regarding the efficacy of metacognitive interventions, the present study strove to investigate the matter through the following research questions:

1. Does L1-mediated metacognitive intervention have any effect on the IELTS listening comprehension performance of Iranian EFL listeners?
2. Does L1-mediated metacognitive intervention have any effect on the metacognitive awareness of Iranian EFL listeners?

3. METHOD

Participants

The participants for this study were chosen from among all the available EFL learners preparing for IELTS at an English language institute in Iran. Having screened the EFL listeners through Oxford Placement Tests (OPTs) over the period of three consecutive terms, the researchers chose 540 upper- intermediate male and female participants, who were between 17 and 24 years of age, and randomly assigned them to two experimental (Ex1 = 180 / Ex2 = 180) and a control (CG = 180) group prior to implementing the intervention programs. Consent forms were obtained from all participants, and the participants were clarified with regard to the nature and purpose of the study. The researcher carrying out the intervention programs for both experimental groups in this study was a Ph.D. holder in TEFL, who was teaching in the same language institute for more than 20 years and was quite familiar with both educational contents and MI.

Instruments

Three instruments were used to collect data for the research questions of this study.

Oxford Placement Test (Allan, 2004) was used to screen the participants in terms of homogeneity at the outset of the study. It also served as a criterion to estimate the reliability as well as the concurrent validity of the IELTS listening tests in this study. The test had high Cronbach's alpha consistency reliability, .94 (Larson-Hall, 2010).

Metacognitive Awareness Listening Questionnaire (Vandergrift et al., 2006) was used to measure EFL learners' metacognitive awareness and their perceived use of metacognitive strategies at the beginning and end of the study. The 6-point Likert-scale MALQ comprises 21 items covering five factors: problem-solving, planning and evaluation, mental translation, person knowledge, and directed attention. Its internal reliability estimates range from .68 to .78 (Vandergrift et al., 2006) and it also enjoys high validity (Goh & Hu, 2014).

Cambridge IELTS 14, published by Cambridge University Press and UCLES (2019), was used to assess the learners' listening performance before and after the intervention. The Cronbach's alpha reliability and the concurrent validity of the IELTS listening test were both high, 0.91 and 0.86, respectively (Larson-Hall, 2010).

Procedures

Having received the approval from the headquarter of the English language institute and screened the participants through OPT, the researchers administered the IELTS listening test and the MALQ to all participants as pre- test at the outset and post-test at the end of the intervention to compare and assess their initial and final performances on both and further investigate the probable effect(s) of MI. The metacognitive intervention was presented to the participants in three phases:

In phase one, weeks one to four, the MI dealt with planning, focusing on advanced organizers, directed and selective attention, and learning management. All these concepts were fully clarified to the participants through ample examples and explanations. The researcher then helped the learners concentrate on what they were listening to and tried to establish information linkage during listening. As regards directed attention, the researcher told the listeners to overlook irrelevant distracters and keep their attention focused on what was happening in the listening. In the case of selective attention, the researcher wanted the listeners to focus on the given topic and identify the key words prior to the listening. For learning management, the researcher advised the listeners to understand various contexts while listening and strive to adapt themselves to any new circumstances they encountered throughout the listening. In this phase, the researcher advised the learners to frame their mind to understand the audio text. The listeners were advised to keep their attention focused on what the speakers were talking about. In the second phase, weeks five to seven, the MI concerned with monitoring, concentrating on comprehension, auditory, and double-checking monitoring. The researcher elaborated on the definition of monitoring and focused on comprehension monitoring strategies, in particular. The researcher advised the learners to translate any odd words to see if they sounded right and try to put everything together, as understanding one thing could lead to the understanding of another. Through auditory monitoring, the listeners learned how sounds made sense and through double-checking. They realized how to check comprehension throughout listening. In the final phase, weeks eight to ten, the MI covered evaluation, concentrating on performance evaluation, strategy evaluation, and problem identification. Having defined the concept of evaluation and gone through the listening activity, the researcher emphasized the power of evaluation, and reiterated that performance evaluation in listening input could fill out where they lack understanding in listening. With regard to strategy

evaluation, the researcher further emphasized the use of learning strategy before and while listening, and reiterated that strategy evaluation in listening input could develop the use of listening strategy when the need is felt. Having familiarized the learners with problem identification strategy, the researcher recommended the listeners to pinpoint the areas where misunderstanding happened during listening check and recheck. Then the listeners instructed how to overcome their previous listening barriers.

The Intervention Programs

The intervention for the experimental groups was based on Vandergrift and Goh's "Pedagogical Cycle" (2012). The pedagogical cycle comprised five stages including planning/predicting, first verification, second verification, final verification, and reflection (Vandergrift & Goh, 2012) and was utilized as a process-based approach to raise the listeners' metacognitive awareness in listening. The participants in the experimental groups one and two participated in a twelve-week metacognitive instruction program, twice a week, each about 90 minutes. Each session, the participants listened to a different oral text, which was aligned with the content of the intervention program. It should be noted that the medium for the delivery of MI to learners in experimental groups one and two were L1 (Persian) and L2 (English), respectively. Having implemented the intervention, the researcher administered the posttest and the MALQ to explore the probable effect(s) of the intervention.

The participants in the control group were exposed to the traditional approach, comprising pre-, while-, and post-listening stages for every listening task. They listened to the same texts but were not engaged in any formal prediction activity, nor were they given the chance to experience the process of listening through discussing, predicting, or monitoring their comprehension with their peers. In pre-listening stage, they were given a warm-up related to the topic of the listening task in order that they might activate their prior knowledge for improved listening comprehension. In the while-listening stage, the learners listened to the CD to complete a task that was aligned with the pedagogical contents presented to them in each unit. They were allowed to listen to the aural text as many times as the instruction in each unit required them. Having listened to the aural text, the learners read their answers one by one to get them checked. To help the learners solve their potential problems, the teacher played the CD once more to deal with any ambiguities the listeners might have encountered throughout the listening task. In the post-listening stage, the teacher asked one or two learners to give a summary and engaged the class in a discussion in order to confirm their comprehension of the text. Also, there was no discussion of strategy use, nor were the students engaged in any formal reflection on their approach to listening.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 22 was employed to analyze the IELTS listening test and MALQ scores to respond to the research questions. First, the equality of variance and the distribution of the data were analyzed. Then, due to the non-normality of the data set, the data collected from the two groups were analyzed using the Kruskal-Wallis test for pre- and post-tests.

Table 1: Descriptive statistics of the overall scores of the three groups for the pre- and post-tests of IELTS listening

Tests	Groups	Minimum	Maximum	Mean	Std. Deviation	N
Pre-tests	Ex1	7.00	18.00	12.53	2.54	180
	Ex2	10.00	15.00	12.52	1.26	180
	CG	7.00	18.00	12.62	2.58	180
Post-tests	Ex1	9.00	20.00	16.15	2.16	180
	Ex2	11.00	20.00	14.56	1.55	180
	CG	8.00	18.00	12.57	2.43	180

Table 2: Kruskal Wallis test results comparing the three groups in the pre- and post-tests of IELTS listening

Scores	Groups	N	Mean Rank	Chi-square	df	Sig.
Pre-tests	Ex1	180	262.41	.776	2	.679
	Ex2	180	275.97			
	CG	180	273.12			
Post-tests	Ex1	180	375.39	161.24	2	.000
	Ex2	180	267.70			
	CG	180	168.41			
The effect size			.30			

4. RESULTS

The reliability indices of Cronbach's alpha reported in the pre- and post-tests for experimental (EG1: $\alpha = .89$, $\alpha = .87$; EG2: $\alpha = .85$, $\alpha = .88$) and control ($\alpha = .87$, $\alpha = .84$) groups of IELTS listening and MALQ, experimental (EG1: $\alpha = .90$, $\alpha = .89$; EG2: $\alpha = .88$, $\alpha = .89$) and control ($\alpha = .85$, $\alpha = .87$), were moderate (Larson-Hall, 2010). The pretests of listening and MALQ indicated the listeners' base-line information on language competence level and metacognitive awareness.

Research Question 1

The first research question focuses on whether the L1-mediated metacognitive intervention has any significant effect on EFL learners' listening performance. The answer to this question is affirmative.

The results of the descriptive statistics (Table 1), Ex1 (M = 16.15; SD = 2.16), Ex2 (M = 14.56; SD = 1.55), and the CG (M = 12.75; SD = 2.43), and Kruskal-Wallis test (Table 2) for the post-test of IELTS listening indicated that the participants in Ex1 and Ex2 outperformed their peers in the CG. In fact, the mean rank score obtained by Ex1 (375.39) exceeds the mean score obtained by Ex2 (267.70), which is, in turn, higher than the mean score of CG (168.41). The Chi-square value (161.24) is more than the critical value for the df of 2 and the p-value of .05, suggesting that the differences in mean scores among the three groups are statistically significant after the intervention. The effect size of .30 is moderate (Cohen, 1988). The p-value of .00 ($.00 < .05$) also implies that the intervention programs did lead to a great variance in the listening performance of learners in both experimental groups, suggesting that the medium of instruction can be effective, and can lead to variance in learners' listening performance.

Table 3: Descriptive statistics of the overall scores of the three groups for the pre- and post-tests of MALQ

Tests	Groups	Minimum	Maximum	Mean	Std. Deviation	N
Pre-tests	Ex1	65.00	97.00	82.16	7.73	180
	Ex2	61.00	110.00	81.85	9.42	180
	CG	64.00	99.00	80.87	7.59	180
Post-tests	Ex1	80.00	120.00	94.81	7.53	180
	Ex2	61.00	116.00	91.26	10.17	180
	CG	52.00	100.00	79.95	9.05	180

Table 4: Kruskal Wallis test results comparing the three groups in the pre- and post-tests of MALQ

Scores	Groups	N	Mean Rank	Chi-square	df	Sig.
Pre-tests	Ex1	180	289.60	4.196	2	.123
	Ex2	180	264.03			
	CG	180	257.87			
Post-tests	Ex1	180	361.41	188.04	2	.000
	Ex2	180	305.68			
	CG	180	144.41			
The effect size			.33			

Research Question 2

The second research question asks whether the L1-mediated metacognitive intervention has any effect on the metacognitive awareness of Iranian EFL listeners. The answer to this question is also affirmative

Both the descriptive statistics (Table 3), Ex1 (M = 94.81; SD = 7.53), Ex2 (M = 91.26; SD = 10.17), and the CG (M = 79.95; SD = 9.05) and Kruskal-Wallis test (Table 4) demonstrated that the participants in both experimental groups outperformed their peers in the control group in the post-test of strategy questionnaire. The Chi-square value (188.04) is more than the critical value for the $df = 2$ and the p -value = .05, suggesting that the differences in mean scores among the three groups are statistically significant after the intervention. The effect size of .33 is moderate (Cohen, 1988). The p -value = .00 ($.00 < .05$) also implies that the intervention programs, the medium of instruction, did lead to a significant variance in the metacognitive awareness of learners in Both experimental groups after the intervention.

To find out the exact differences among the three groups in terms of IELTS listening performance and metacognitive awareness, the researchers had to utilize a post-hoc Tukey's HSD Test (Table 5) in the light of the fact that this kind of test can pinpoint where the exact differences among the three groups lie.

Table 5: Post Hoc Tukey's HSD test for the post-tests of listening and MALQ

Tests	Groups	N	Mean Difference	Std. Error	Sig.
Listening	Ex1 vs. Ex2	180	1.58	.219	.000
	Ex1 vs. CG	180	3.40	.219	.000
	Ex2 vs. CG	180	1.81	.219	.000
MALQ	Ex1 vs. Ex2	180	3.54	.947	.000
	Ex1 vs. CG	180	13.85	.947	.000
	Ex2 vs. CG	180	11.31	.947	.000

As regards IELTS listening, the results show that there was a statistically significant difference between Ex1 and Ex2 in terms of their listening performance after the intervention programs. This can further suggest that metacognitive instruction through L1 proved to be more effective and led to a greater variance in the listening performance of learners in Ex1. In pair two, the results also show that there was a statistically significant difference between the two groups, Ex1 and CG, in terms of their listening performance after the intervention, as the p-value is less than .05 ($.006 < .05$). This implies that the intervention program designed for the participants in Ex1 resulted in a variance in their listening performance, compared with their peers in the CG, who were taught conventionally without any attention to the process. The comparison, in pair three, lies between Ex2 and CG. The results revealed that there was a statistically significant difference between the two groups in terms of their listening performance after the intervention, as the p-value is less than .05 ($.00 < .05$). This result also suggests that metacognitive instruction through L2 also helped the learners in Ex2 improve their listening performance, and led to a great variance in the overall post-test results, compared with the participants in the CG, for whom the conventional teaching of listening was in practice.

Turning to metacognitive awareness, the results indicate that there was a statistically significant difference between Ex1 and Ex2 in terms of their metacognitive awareness after the intervention program, suggesting that metacognitive instruction through L1 proved to be more effective and led to a greater variance in the metacognitive awareness of learners in Ex1. In pair two, there was a statistically significant difference between Ex1 and CG in terms of their metacognitive awareness after the intervention, as the p-value is less than .05 ($.006 < .05$). This implies that the intervention program designed for the participants in Ex1 resulted in a variance in their metacognitive awareness, compared with their peers in the CG, who were taught conventionally without any attention to the process. The comparison between Ex2 and CG in pair three revealed that there was a statistically significant difference between the two groups in terms of their metacognitive awareness after the intervention, as the p-value is less than .05 ($.000 < .05$). This result also suggests that metacognitive instruction through L2 also helped the learners in Ex2 raise their metacognitive awareness, and led to a great variance in the overall post-test results, compared with the participants in the CG, for whom the conventional teaching of listening was in practice.

5. DISCUSSION

Using L1 plays a clearly complex role in L2 learning, and there is conspicuous paucity in research investigating the facilitative or debilitating effect of L1 on actual learning (Ellis & Shintani, 2014). The focus of research into L2 listening strategy use has recently shifted to metacognitive strategies (Lynch & Mendelsohn, 2020). This cohort study was to examine the comparative effect of L1/L2-mediated metacognitive intervention on IELTS listening

comprehension performance and metacognitive awareness of Iranian EFL learners. The overall result of the study is in favor of L1 use. In other words, the medium of delivering the metacognitive intervention (L1) assisted the listeners in experimental group one to outperform their peers in experimental group two and the control group in both the listening performance and the metacognitive awareness.

As regards listening performance, the findings of this study are consistent with those of (Bozorgian, 2014; Bozorgian & Fakhri, 2018; Bozorgian & Muhammadpour, 2020; Bozorgian, Yaqubi, & Muhammadpour, 2020, Maftoon & Fakhri, 2020; Vandergrift & Tafaghodtari, 2010), underscoring the indispensable role metacognitive intervention can play in the enhancement of listening skill. This further suggests that should listening be taught in tandem with metacognitive interventions through a process-based approach, better outcomes could be expected (Maftoon & Fakhri, 2020). The results of this study are, nevertheless, at odds with those of two other studies (Chen & Huang, 2011; Rahimi & Katal, 2013) investigating the potential benefits of MI and MALQ, leading to no immediate outcome in terms of improvements in listening. The length of MI, contextual factors, and the listeners' level of communicative competence could be the potential causes of this mismatch (Bozorgian, 2014; Maftoon & Fakhri, 2020),

With regard to metacognitive awareness, the results are congruous with those of (Bozorgian & Fakhri, 2018; Bozorgian & Muhammadpour, 2020; Maftoon & Fakhri, 2020; Mahdavi & Miri, 2017; Tanewong, 2018; Goh & Hu, 2013), all confirming the contribution of process-based MI to metacognitive awareness. This result, however, empirically contradicts Bozorgian (2014) who reported no conspicuous improvements in learners' metacognitive awareness after the implementation of MI. Listeners' inadequate knowledge about metacognitive strategies, their failure to perceive and apply these strategies in practice, and their lack of understanding the function of these factors are the main factors to consider in the case of this discrepancy (Bozorgian, 2014; Maftoon & Fakhri, 2020). Perhaps, this puzzle, the discrepancies in results and the potential factors behind them, highlights the urgent need for the use of L1 in both ESL/EFL contexts.

Using L1, a cognitive resource for L2 learners, is one of the primary means through which learners can mediate L2 learning (Ellis & Shintani, 2014). The tendency for L1 use has grown in strength in recent years, and it is obvious that the pendulum has swung in favor of L1 in applied linguistics (Hall & Cook, 2012). Turning to L1, the result of this study corroborates those of Harley (2000) and Bozorgian and Pillay (2013), who used L1 as the medium of instruction in EFL context. These findings also suggest that the use of EFL learners' L1, as the medium of instruction, can empower learners to better perceive complex listening strategies, which might look perplexing once presented in a foreign language, especially for listeners with limited linguistic competency. This is in line with Graham and Macaro (2008), maintaining that the intervention can bring about enhanced listening proficiency. In addition, this notion can be substantiated by Field (2008), maintaining that the use of L1 can help EFL learners compensate for their limited linguistic competence, inadequate vocabulary repertoire, limited listening exposure, and working memory capacity.

Theoretically, Macaro (2009), endorsing the learning contribution of L1 to L2, proposes a framework demonstrating that the use of L1 can result in enhanced learning in L2 through three distinctive sources. To begin with, he asserts that, psycho-linguistically, predicting, processing and storing knowledge are all tightly merged with the cognitive theory used in both L1 and L2 language learning through interaction in both short and long-term memory. Secondly, he argues that socio-cultural theory backs L1 assistance in L2 learning and stresses the notion that both think aloud and engaging in mental commentaries taking place in L1 can contribute to L2 learning. He

ultimately justifies the issue through the lens of code-switching theory and argues that L1 can facilitate the process of L2 learning through linguistic styles (both formal and informal) in real life interactions.

Commenting on the extent to which L1 should be incorporated into teacher talk, Macaro (2009) strongly argues in favor of intra-sentential rather than inter-sentential codeswitching and strongly advocates the notion that teachers ought not to produce the whole sentences in L1, but should use it strategically for the clarification of essential words and lexical strings.

The overall results of the present study also revealed a significant difference between Ex1, Ex2, and CG in terms of their metacognitive awareness, which was achieved through the intervention programs in this study. However, a closer look at the results of the two experimental groups (Ex1 & Ex2) in this study indicated that the medium of metacognitive instruction did lead to a superiority of one group over the other. In other words, there was a significant difference between the two experimental groups (Ex1 & Ex2) in terms of their listening performance and metacognitive awareness after the implementation of the intervention programs, suggesting that the listeners in Ex1 who went through L1-mediated metacognitive intervention outperformed their peers in Ex2, who went through a metacognitive intervention program in L2. This result might not have, otherwise, been achieved. This can further substantiate Mendelsohn (1995), pointing out that first language strategies ought to be unlocked so that learners can implement them automatically in L2 learning.

With regard to the significance of using L1 in L2 learning development, research findings (See Carless, 2008) illustrate that the belief system of language teachers considering L1 as interference (See Kellerman, 1995) in L2 learning development has been transformed in the last two decades (Ellis & Shintani, 2014). Consequently, experienced teachers, inexperienced teachers, and teacher trainers view L1 not only as a constructive means to scaffold learning but also as an effective means of classroom management (Littlewood & Yu, 2009). This can further support the inclusion of L1 into curriculum as well as classroom syllabi.

6. CONCLUSION

This study delved into the comparative effect of L1/L2-mediated metacognitive intervention on IELTS listening comprehension performance and metacognitive awareness of Iranian upper-intermediate EFL learners. Returning to the focal inquiry in this study as to whether L1 is a panacea in EFL contexts, the overall result of the study is amazingly in favor of L1. Given the obtained result, it can be concluded that L1 can be used as an aid in EFL classes assisting teachers in establishing rapport and solidarity, maintaining and facilitating communication throughout a lesson, conveying meaning, mitigating the learners' anxiety, and clarifying the vague points throughout teaching (Auerbach, 2016; Edstrom, 2006; Sali, 2014). Students should bear in mind that L1 ought to be used judiciously for scaffolding and peer learning, contributing to shape their L2/EFL knowledge. Another word of caution is that L1 must not overshadow L2 in EFL contexts, which can cause interference and laziness. The major contribution of this study lies in its initiative to have compared the effect of two various media of metacognitive intervention, Persian and English, on the IELTS listening performance and metacognitive awareness of EFL listeners, as none in the literature has ever sought to investigate the impact of these two media on the listening performance and metacognitive awareness of ESL / EFL learners. With regard to pedagogical implications, the findings underscore the urge for heightening the learners' metacognitive awareness and use, especially in EFL settings. One way to promote their awareness is to incorporate awareness-raising tasks in EFL instructional materials, whether in L1 or in L2, to draw their attention to different learning strategies making them more motivated and ultimately

self-regulated throughout language learning process. The findings, therefore, shed light on the notion that devoting enough time to listening activities aligned with an L1/L2-mediated MI, can alter listeners' outlook towards learning in general and listening input in particular. Thus, it is incumbent upon curriculum developers and textbook writers to incorporate and highlight listening strategies in textbooks and consider devoting ample time to each listening task so as to promote the significance of teaching listening strategies in the classroom. Regarding future research directions, while MI successfully improved EFL learners' listening performance, it is not known to what extent and in what ways metacognitive instruction contributed to the listening improvement. Future research designs necessitate considering each metacognitive strategy separately so that the relative contribution of each to listening can be clearly pinpointed. Additionally, given the complex and largely internal nature of metacognitive strategy use, future research needs to investigate metacognitive awareness as measured by the MALQ and actual metacognitive strategy use through the use of stimulated recall or think-aloud protocols. There is an urgent need to interview students to find out which medium of instruction, L1 or L2, sounds more effective to them. Last but not least, this study focused on learners and tried to investigate their listening performance and metacognitive awareness through a process-based approach. Future research can, likewise, investigate the teachers' views on teaching listening and the issues they face during teaching this basic skill.

Disclosure statement

No potential conflict of interest to be reported.

Funding

This work was self-funded.

Data availability statement

Given the privacy of research participants, the data supporting the findings of this study are available on request from the corresponding author.

References

- Allan, D. (2004). *Oxford placement tests 2: Test pack*. Oxford University Press.
- Antón, M., & DiCamilla, F. J. (1999). Socio-cognitive functions of L1 collaborative interaction in the L2 classroom. *The Modern Language Journal*, 83(2), 233–247. <https://doi.org/10.1111/0026-7902.00018>
- Auerbach, E. (2016). Reflections on Auerbach (1993), Reexamining English only in the ESL classroom. *TESOL Quarterly*, 50, 936–939. <https://doi.org/10.1002/tesq.310>
- Bozorgian, H. (2014). The role of metacognition in the development of EFL learners' listening skill. *International Journal of Listening*, 28(3), 149–161. <https://doi.org/10.1080/10904018.2013.861303>.
- Bozorgian, H., & Fakhri Alamdari, E. (2018). Multimedia listening comprehension: Metacognitive instruction or metacognitive instruction through dialogic interaction. *ReCALL*, 30(1), 131–152. <https://doi.org/10.1017/S0958344016000240>
- Bozorgian, H., & Muhammadpour, M. (2020). Metacognitive intervention: High WMC learners' listening performance and metacognitive awareness. *Foreign Language Research Journal*, 9(4), 1055–1084. <https://doi.org/10.22059/JFLR.2019.273053.592>.

- Bozorgian, H., & Pillay, H. (2013). Enhancing foreign language learning through listening strategies delivered in L1: An experimental study. *International Journal of Instruction*, 6(1), 105–122.
- Bozorgian, H., Yaqubi, B., & Muhammadpour, M. (2020). Metacognitive intervention and awareness: Listeners with low working memory capacity. *International Journal of Listening*. <https://doi.org/10.1080/10904018.2020.1857764>
- Butzkamm, W. (2003). We only learn language once. The role of the mother tongue in FL classrooms: Death of a dogma. *The Language Learning Journal*, 28(1), 29–39. <https://doi.org/10.1080/09571730385200181>
- Carless, D. (2008). Student use of the mother tongue in the task-based classroom. *ELT Journal*, 62(4), 331–338. <https://doi.org/10.1093/elt/ccm090>
- Chen, C. C., & Huang, C. T. (2011). Raising EFL college students' metacognitive awareness about listening. Paper presented at the NYS TESOL 41st Annual Conference, Melville, NY.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cook, V. (2001). Using the first language in the classroom. *Canadian Modern Language Review*, 57(3), 402–423. <https://doi.org/10.3138/cmlr.57.3.402>
- Cross, J. (2015). Metacognition in L2 listening: Clarifying instructional theory and practice. *TESOL Quarterly*, 49(4), 883–892. <https://doi.org/10.1002/tesq.258>
- Cummins, J. (2007). Rethinking monolingual instructional strategies in multilingual classrooms. *Canadian Journal of Applied Linguistics*, 10(2), 221–240. <http://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=20680862>
- De la Campa, J. C., & Nassaji, H. (2009). The amount, purpose, and reasons for using L1 in L2 classrooms. *Foreign Language Annals*, 42(4), 742–759. <https://doi.org/10.1111/j.1944-9720.2009.01052.x>
- Edstrom, A. (2006). L1 use in the L2 classroom: One teacher's self-evaluation. *Canadian Modern Language Review*, 63(2), 275–292. <http://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=18369910>
- Ellis, R., & Shintani, N. (2014). *Exploring language pedagogy through second language acquisition research*. London: Routledge.
- Field, J. (2008). Guest editor's introduction: Emergent and divergent: A view of second language listening research. *System*, 36, 2–9. <https://doi.org/10.1016/j.system.2008.01.001>
- Goh, C. C. (2008). Metacognitive instruction for second language listening development: Theory, practice, and research implications. *RELC Journal*, 39(2), 188–213. <https://doi.org/10.1177/0033688208092184>
- Goh, C. C. (2018). Metacognition in second language listening. In *The TESOL Encyclopedia of English Language Teaching* (pp. 1–7). John Wiley & Sons. <https://doi.org/10.1002/9781118784235.eelt0572>
- Goh, C. C., & Hu, G. (2014). Exploring the relationship between metacognitive awareness and listening performance with questionnaire data. *Language Awareness*, 23(3), 255–269. <https://doi.org/10.1080/09658416.2013.769558>
- Graham, S., & Macaro, E. (2008). Strategy instruction in listening for lower-intermediate learners of French. *Language Learning*, 58(4), 747–783. <https://doi.org/10.1111/j.1467-9922.2008.00478.x>

- Graham, S., & Santos, D. (2015). *Strategies for second language listening: Current scenarios and improved pedagogy*. Palgrave Macmillan.
- Hall, G., & Cook, G. (2012). Own-language use in language teaching and learning: State of the art. *Language Teaching*, 45(3), 271–308. <https://doi.org/10.1017/S0261444812000067>
- Harding, L., Alderson, J. C., & Brunfaut, T. (2015). Diagnostic assessment of reading and listening in a second or foreign language: Elaborating on diagnostic principles. *Language Testing*, 32(3), 317–336. <https://doi.org/10.1177/0265532214564505>
- Harley, B. (2000). Listening strategies in ESL: Do age and L1 make a difference? *TESOL Quarterly*, 34(4), 769–777. <https://doi.org/10.2307/3587790>
- Kellerman, E. (1995). Crosslinguistic influence: Transfer to nowhere? *Annual Review of Applied Linguistics*, 15, 125–150. <https://doi.org/10.1017/S0267190500002658>
- Krashen, S., & Terrell, T. (1983). *The natural approach: Language acquisition in the classroom*. Pergamon Press.
- Littlewood, W. (2014). Communication-oriented teaching: Where are we now? Where do we go from here? *Language Teaching*, 47(3), 249–362. <https://doi.org/10.1017/S0261444812000134>.
- Littlewood, W., & Yu, B. H. (2011). First language and target language in the foreign language classroom. *Language Teaching*, 44, 64–77. <https://doi.org/10.1017/S0261444809990310>
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). Academic Press.
- Lynch, T., & Mendelsohn, D. (2020). Listening. In N. Schmitt & M. P. H. Rodgers (Eds.), *An introduction to applied linguistics* (pp. 223–239). Routledge.
- Macaro, E. (2009). Teacher use of codeswitching in the second language classroom: Exploring ‘optimal’ use. In M. Turnbull & J. Dailey-O’Cain (Eds.), *First language use in second and foreign language learning* (pp. 35–49). Multilingual Matters.
- Macaro, E., Graham, S., & Woore, R. (2016). *Improving foreign language teaching: Towards a research-based curriculum and pedagogy*. Routledge.
- Maftoon, P., & Fakhri Alamdari, E. (2020). Exploring the effect of metacognitive strategy instruction on metacognitive awareness and listening performance through a process-based approach. *International Journal of Listening*, 34(1), 1–20. <https://doi.org/10.1080/10904018.2016.1250632>
- Mahdavi, N., & Miri, M. (2017). Co-shaping metacognitive awareness and developing listening comprehension through process-based instruction. *International Journal of Listening*, 33(1), 53–70. <https://doi.org/10.1080/10904018.2016.1260454>.
- Mendelsohn, D. (1995). Applying learning strategies in the second/foreign language listening comprehension lesson. In D. Mendelsohn & J. Rubin (Eds.), *A guide for the teaching of second language listening* (pp. 132–150). Dominic Press.
- Rahimi, M., & Katal, M. (2013). The impact of metacognitive instruction on EFL learners’ listening comprehension and oral language proficiency. *Journal of Teaching Language Skills*, 5(2), 69–90. <https://doi.org/10.22099/jtls.2013.1555>
- Renandya, W. A., & Hu, G. (2018). L2 listening in China: An examination of current practice. In A. Burns & J. Siegel (Eds.), *International perspectives on teaching the four skills in ELT* (pp. 37–50). Palgrave Macmillan.
- Richards, J. C. (2009). *Teaching listening and speaking*. SEAMEO Regional Language Centre.

- Sali, P. (2014). An analysis of the teachers' use of L1 in Turkish EFL classrooms. *System*, 42, 308–318. <https://doi.org/10.1016/j.system.2013.12.021>
- Santos, D., & Graham, S. (2018). What teachers say about listening and its pedagogy: A comparison between two countries. In A. Burns & J. Siegel (Eds.), *International perspectives on teaching the four skills in ELT* (pp. 21–35). Palgrave Macmillan.
- Shin, J., Dixon, Q. L., & Choi, Y. (2019). An updated review on use of L1 in foreign language classrooms. *Journal of Multilingual and Multicultural Development*, 41(5), 406–419. <https://doi.org/10.1080/01434632.2019.1684928>
- Stables, A., & Wikeley, F. (1999). From bad to worse? Pupils' attitudes to modern foreign languages at ages 14 and 15. *The Language Learning Journal*, 20(1), 27–31. <https://doi.org/10.1080/09571739985200231>
- Storch, N., & Wigglesworth, G. (2003). Is there a role for the use of the L1 in an L2 setting? *TESOL Quarterly*, 37(4), 760–770. <https://doi.org/10.2307/3588224>
- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Newbury House.
- Swain, M., & Lapkin, S. (2013). A Vygotskian sociocultural perspective on immersion education: The L1/L2 debate. *Journal of Immersion and Content-based Language Education*, 1(1), 101–129. <https://doi.org/10.1075/jicb.1.1.05swa>
- Tanewong, S. (2018). Metacognitive pedagogical sequence for less-proficient Thai EFL listeners: A comparative investigation. *RELC Journal*, 50(1), 86–103. <https://doi.org/10.1177/0033688218754942>
- Thoms, J., Liao, J., & Szustak, A. (2005). The use of L1 in an L2 on-line chat activity. *Canadian Modern Language Review*, 62(1), 161–182. <https://www.learntechlib.org/p/98046/>
- Tognini, R., & Oliver, R. (2012). L1 use in primary and secondary foreign language classrooms and its contribution to learning. In E. Alcón Soler & M. P. Safont Jordá (Eds.), *Discourse and learning across L2 instructional contexts* (pp. 53–78). Rodopi.
- UCLES, C. U. P. A. (2019). *Cambridge IELTS 14 academic student's book with answers: Authentic examination papers*. Cambridge University Press.
- Vandergrift, L. (2004). Listening to learn or learning to listen? *Annual Review of Applied Linguistics*, 24, 3–25. <https://doi.org/10.1017/S0267190504000017>
- Vandergrift, L., & Goh, C. C. (2012). *Teaching and learning second language listening: Metacognition in action*. Routledge.
- Vandergrift, L., Goh, C. C. M., Mareschal, C. J., & Tafaghodtari, M. H. (2006). The metacognitive awareness listening questionnaire: Development and validation. *Language Learning*, 56(3), 431–462. <https://doi.org/10.1111/j.1467-9922.2006.00373.x>
- Vandergrift, L., & Tafaghodtari, H. M. (2010). Teaching L2 students how to listen does make a difference: An empirical study. *Language Learning*, 60(2), 470–497. <https://doi.org/10.1111/j.1467-9922.2009.00559.x>
- Wach, A., & Monroy, F. (2020). Beliefs about L1 use in teaching English: A comparative study of Polish and Spanish teacher-trainees. *Language Teaching Research*, 24(6), 855–873. <https://doi.org/10.1177/1362168819830422>
- Wallace, M. P. (2020). Individual differences in second language listening: Examining the role of knowledge, metacognitive awareness, memory, and attention. *Language Learning*. <https://doi.org/10.1111/lang.12424>

Wenden, A. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19(4), 515–537. <https://doi.org/10.1093/applin/19.4.515>