Impact of Metacognitive Strategy Instruction on Iranian EFL Learners' Listening Anxiety

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Abstract
This study aimed to investigate the efficacy of metacognitive strategy instruction intervention on reducing language listening anxiety of Iranian EFL learners in the light of 2 listening metacognitive strategy instruction models of Integrated Experiential Learning Task (IELT) (Goh, 2010) and Metacognitive pedagogical Sequence (MPS) (Vandergrift, 2004). Participants were 63 B1 level learners who were chosen through random sampling and were randomly assigned to 2 experimental and 2 control groups. Before and after the intervention, Kim's (2000) Foreign Language Listening Anxiety scale (FLLAS) and the listening section of Preliminary English Test (PET) were administered to all groups as pre and post tests. All four groups were taught by the same researcher and the listening comprehension material was constant over the groups. The first experimental group received IELT intervention, the second experimental group received MPS intervention, and both control groups received traditional product-based listening comprehension instruction while the active control group also received explicit instruction of the metacognitive strategies. ANCOVA results proved that although both IELT and MPS were effective in lowering anxiety level, the performance of MPS was of a large effect size, and it was a better model to lower learners' anxiety. Both models significantly improved learners' listening comprehension.

Keywords: listening comprehension anxiety, metacognitive strategy instruction, task-based metacognitive strategy instruction, embedded metacognitive strategy instruction

Introduction

Emotion cannot be cut out of our lives as it is the heart of being. Emotions can regulate our thoughts and functions, give us energy and courage or void us of them, so it is quite clear that affect and cognition are interwoven. Duncan and Barrat (2007) take a step further and state that affect is one of the primary subsystems of the mind and is indeed a form of cognition. Of course their justification is neurobiological but the same idea holds valid in the realm of language learning as well. Dornyei (2009) believes that it is emotion that shapes cognition through regulating perception and attention, and posits that it may be the conscious regulation of emotion that influences cognition. So basically, emotion and cognition have a close mutual and reciprocal contact.

Many researchers have been concerned with the role of affect in language learning (e.g. Horwitz & Young, 1991; Stevick, 1990) and the concern has more recently crystallized into a concern over affect and strategies (e.g. Mercer, 2015; Oxford, 2011; Plonsky, 2011). As Mercer (2015) states, humanistic approaches drove researchers and theorists to investigate and elaborate

on emotions in learning a second language with a great focus being on anxiety but as she emphasizes, this great body of research on anxiety has scarcely led into identification of an instructional paradigm to reduce the anxiety or to validate a strategy instruction that does so.

Oxford (2017) voices the same concern and offers four reasons as to why the field of L2 learning has endured such neglect. First is, that the field has not been concerned with the remarkable neurobiological link between emotion and cognition in learning a second language. Second, that is a logical consequence of the first reason, is that the field has favored cognition and metacognition as if the two are all that matters and affect plays no role in cognition domain. The Third and forth reason Oxford (2017) mentions are teachers' lack of familiarity with helpful strategies or their not being skilled in instructing them.

Listening comprehension seems to be the most stressful language learning skill of all. As Vandergrift (2004, p. 4) points out "listening comprehension is the least explicit of the four language skills, making it the most difficult skill to learn." Listening comprehension is known to be a challenge for both language learners and instructors and years of being teachers has told us how crucial and important it is. As Bozorgian (2012) states, listening comprehension leads to lots of frustration, and poor performance on the part of both learner and teacher.

The importance of listening comprehension strategies in promoting learners' listening comprehension performance is well-founded in the literature (Cohen, Weaver, & Li, 2013; O'Malley &Chamot, 1990; Vandergrift, 2004; Veenman, Van Hout-Wolters, &Afflerbach, 2006). Studies endorsing the benefits of promoting metacognition and metacognitive strategies in listening comprehension are also not few (e.g. Cohen & Macaro, 2007; Goh, 2008, 2010; Griffiths, 2008; Oxford, 2017; Vandergrift, 2007; Vandergrift & Tafaghodtari, 2010) but as posited by Vandergrift and Cross (2017) most of the studies in the research literature are basically correlational, comparing the amount of strategy use by different levels of language proficiency or investigating the effect of using an strategic approach on language learning outcome. Research background is very slim on experimentations comparing different models of metacognitive strategy instruction, leading to deciding the optimal model (Bozorgian, 2012; Goh, 2010; Vandergrift & Cross, 2017) and even more demanding on assessing models of metacognitive instruction for their affective impact on the learners. After all, if a model is successful in inducing listening achievement but takes a heavy toll on learners' ease of mind through increasing levels of listening anxiety in them, we should probably give its being successful a second thought. The present study was an attempt which of the two task-based and embedded metacognitive strategy instruction models could better lower listening anxiety of the learners.

Review of the Literature

Listening anxiety

Listening anxiety is a determining learner variable in language learning and as Kimura (2008) refers to it, it is context-specific so it is related to but quit different from foreign language classroom anxiety. Kim (2000) investigated the effect of listening anxiety on listening performance of Korean English learners in the mold of her doctoral dissertation and proved a moderate association between listening anxiety and comprehension. The listening anxiety of the participants was measured by FLLAS, the inventory she herself devised. Elkhafaifi (2005) also reported a strong association between how anxious Arab learners were and how poorly they performed on a listening test. Brunfaut and Revesz (2015) also found that lower levels of anxiety correlate with better listening comprehension results and vice versa. Based on the relevant researches, it is justified to conclude that anxiety has the potential to cloud the efficacy of cognitive processing of the aural input. Vandergrift and Goh (2012) acknowledge that the effect

anxiety has on listening comprehension performance stems from the ephemeral nature of aural input and maintain that frequent listening to the similar texts in a context where there is no threat of assessment next to a well organized metacognitive instruction can help learners handle listening anxiety.

Accordingly, Vandergrift and Goh (2012) believe that listening activities and the way they are presented are major sources of listening anxiety. As they posit, in language teaching context, at the expense of process, the main focus is on the outcome of listening and learners are almost always placed in situations to show how much they comprehended and they scarcely get to remark on what they did not understand, the steps they went through to comprehend or the things they feel anxious about regarding listening. Oxford (2017, p.217) also draws on a pool of scientific research on language learning anxiety and concludes that such anxiety can lead to "worsened cognition and achievement, negative attitudes toward the language, decisions to drop the language, less willingness to communicate and diminished self-confidence, reduced personality and lowered personal agency and control." Vandergrift and Goh (2012) further maintain that, listening comprehension is tested through speaking, which is as stressful, and this fact doubles listening comprehension anxiety. Learners are told what to listen to, they are "primed" (Vandergrift & Goh, 2012, p. 4) through using pre-listening activities, but they are not taught how to listen.

Considering the research background on how anxiety affects cognitive processing of the aural input, a host of researchers confirm metacognitive strategy instruction as a way to help language learners have a better control over their cognition and thus better deal with listening anxiety (Chou, 2017; Goh, 2010; Movahed, 2014; Vandergrift, 2004; Vandergrift & Goh, 2012; Vandergrift & Tafaghodtari, 2010). Metacognitive strategy instruction is elaborated on in the following subsection.

Metacognitive instruction in listening

The simplest way to view "metacognition" is that it is thinking about thinking. Flavell (1979, cited in Vandergrift & Tafaghodtari, 2010) first coined the term and divided the concept into three types of metacognitive knowledge; namely, person knowledge (what one knows about themselves as the cognitive processor), task knowledge (what one knows about the needed information and resources to complete a task), and strategy knowledge (what one knows the strategies that can help achieve their goal).

Metacognition is, thus, important in listening as learning how to listen is mainly an individual act and as Vandergrift and Goh (2012) maintain, learners need to be aware of their learning processes, the demands a listening task has and the things they can do about it in order to be successful. Goh and Taib (2006) also believe that mastery over these three types of knowledge help listeners perform in a way that leads to the selection of appropriate strategies for improving their performance. The two aforementioned studies confirm that the major element that links metacognition to listening comprehension success is self-regulation. As declared by Pintrich and De Groot (1990), self-regulated learning has three major constructs which are metacognition, cognition and resource management and as confirmed by Goh and Taib (2006) and Vandergrift and Goh (2012) metacognitive strategy instruction is a guaranteed way to help learners adjust their cognitive processes in the face of new task demands.

Although the research background on strategy instruction in listening comprehension is promising (Vandergrift & Tafaghodtari, 2010), as Vandergrift (2003) posits, the optimal success is reported on those listeners who not only use more metacognitive strategies but are skilled in reusing and orchestrating them again and again in reoccurring cycles. This echoes Vandergrift

and Goh's (2012) concern that what the field of strategy instruction needs is a framework through which a repertoire of strategies is instructed in the form of a "structured support" so that the attempts are unified and the success can be recreated.

Drawing on the concept of metacognition introduced by Flavell and the confirmation of its self-regulation results, Goh (2010) and Vandergrift (2004) each proposed a framework to instruct metacognitive strategies into listening comprehension. The present study aimed at investigating the effect of the two different models of metacognitive strategy instruction of listening comprehension on learners' listening anxiety level. The models potency in improving listening comprehension performance of learners was also investigated so the researchers could judge the success or failure of a model from cognitive, metacognitive and affective perspective. Having the aforementioned goals in mind, the researchers formulated the following questions to be answered through the study:

Q1. Is there a significant difference between task-based and embedded metacognitive strategy instruction in improving listening comprehension performance of Iranian EFL learners?

Q2. Is there a significant difference between task-based and embedded metacognitive strategy instruction in affecting Iranian EFL learners' listening anxiety?

Methodology

Participants

Out of a pool of 172 Iranian EFL learner volunteers who took Oxford Placement Test (OPT) to see if they qualify to be a part of the study, 118 were 1 standard deviation (S.D. = 8.6) below and above the mean (M = 128.47). As they scored 120-134 on OPT, they were rendered lower intermediate English learners (B1). 103 out of 118 legible participants responded back to their participation invitation, who were randomly divided into 4 groups and in each group between 14 to 17 learners could match their schedule with the time and place set for the group's instruction sessions. So, the following groups formed with 63 participants: Experimental Group 1 (EG1) (N = 17), Experimental Group 2 (EG2) (N = 16), Active Control Group (ACG) (N = 14), and Passive Control Group (PCG) (N = 16). None of the participants knew which group they were in; they just knew that they were taking part in an experimental study on listening comprehension.

Instruments

The data for this study was obtained using the following scales:

Oxford Placement Test (OPT)

To select the participants displaying at the same level of listening proficiency, OPT was used. The test is calibrated against some of international language examinations like IELTS and TOEFL and has also been adopted by the Association of Language Testers in Europe (ALTE), so it is reliable language performance placement test.

OPT has two parts of Use of English (N= 100) and Listening (N= 100) through which, according to learners' scores out of 200, levels them in a 0-9 OPT band. Cronbach's alpha of .94 for internal consistency of the scores and reliability index of .95 was obtained using Intraclass Correlation Coefficient have been reported for the test which makes it a reliable placement test.

Preliminary English Test (PET)

The listening section of Preliminary English Test (PET) was used as listening comprehension pre- and post test of this study. PET consists of 25 listening comprehension

questions arranged on listening to short dialogues, interviews, monologues and incorporate different types of questions: choosing a picture as the answer, multiple choice questions, filling in the blanks, and true or false questions. Cronbach's alpha reported on the internal consistency of PET scores was .86, so the test is highly reliable.

Foreign Language Listening Anxiety scale (FLLAS)

Kim's (2000) Foreign Language Listening Anxiety Scale (FLLAS) is a self report 5-point likert questionnaire that is, as cited in Kim (2000), loosely based on Horwitz, Horwitz and Cope's (1986) Foreign Language Learning Classroom Anxiety Scale (FLLCAS). FLLAS consists of 33 items and covers 3 main domains of listening anxiety; tension and worry through statements 17, 29, 27, 16, 5, 18, 26, 33, 24, 23, lack of confidence through statements 14, 19, 31, 6, 10, 21, 20 and problems encountered through statements 1, 2, 3, 4, 7, 8, 9, 12, 13, 15, 22, 25, 28, 30, 32, 11. Considering the negatively worded statements the possible scores on this scale can range from 49 to 145, where the higher the score is, the more anxiety the learner experiences when listening to a foreign text, in this case English. Kim (2000) reported reliability of .93 Cronbach's coefficient alpha for the scale and Kimura (2008) reported its internal consistency as .93 alpha and a test-retest reliability of .84.

Exhaustive list of metacognitive strategies

There is a number of metacognitive strategies classifications in the literature where each offer instances for strategies for every category. The researchers considered Chamot, Barnhardt, El-Dinary and Robbins's (1999), Goh's (2010), O'Malley & Chamot's (1990), Oxford's (2011) and Vandergrift's (2003) to come up with a list of strategies and their instances to be taught in EG1 and ACG and to be integrated in EG2. Every session 3 instances of strategies were worked on (whether taught or integrated). The list is as presented below:

●*Planning*: organizing concepts or principles, directed attention, self-management, setting goals, activating background knowledge, predicting

●*Monitoring*: selective attention, contextualizing, asking of it make sense, deduction/induction, note taking, using imagery, self-talk, cooperation

●*Problem solving*: inferencing, substitution, manipulation, using resources, asking for clarification

●*Evaluating*: summarizing, verification of goals, verification of predictions, evaluating strategy use, self-evaluation

Goh's (2010) Integrated Experiential Learning Tasks (IELT)

IELT, as Goh (2010) maintains, is a task-based metacognitive listening strategy instruction that follows the three-phase pedagogical sequence of pre-task, on-task and post-task as Long (1985) elaborates on. This model is also accompanied by guided reflections on listening comprehension, through assigning learners listening diaries, listening anxiety and motivation charts, and encouraging reflection through process-based discussions and self-report checklists.

In IELT, pre-task phase revolves on planning when learners set goals and review the topic and their background knowledge about it. They also predict the problems they may encounter, and the appropriate strategy to deal with it. Then there are 3 listening phases the first 2 are followed by pair and whole class process-based discussions respectively during which comprehension of the text as well as problems encountered and strategies used are shared and checked. The strategies of the day are also introduced in these steps. After the third listening phase, learners listening to the text one last time while reading the text and then reflect on their

understanding, their strategies use and complications and also track their listening anxiety and motivation in their charts.

Vandergrift's Metacognitive Pedagogical Sequence (MPS)

MPS is a 5 stage sequence of metacognitive strategy training model with a pre-listening stage, 3 listening stages and a reflection stage. It was devised by Vandergrift (2004) and empirically implemented by Vandergrift and Tafaghodtari (2010). Defined in metacognitive cycles, MPS starts with planning, when learners predict what they would hear and check the predictions' accuracy after each listening cycle along with taking notes on the complications they face and would then brainstorm on the ways to face them. In the final stage which is the reflection stage, the learners mention the strategies they used and the ones they plan to use next time. The 3 strategies which are to be taught each session are embedded in after listening discussions and brainstorms.

Procedure

This study aimed to experimentally investigate the efficacy of 2 metacognitive strategy instruction models in lowering listening comprehension anxiety of lower intermediate Iranian EFL learners. Accordingly, FLLAS and PET were administered to 4 randomly formed experimental and control groups before starting and after finishing an eight session intervention using the aforementioned IELT (Goh, 2010) and MPS (Vandergrift, 2004) to instruct metacognitive strategies to EG1 and EG2 respectively, while ACG received explicit strategy instruction on the exhaustive strategy list both experimental groups used alongside traditional product-based instruction of listening and PCG received only traditional product-based listening instruction. All four groups shared the same material for the 8 sessions of intervention.

Results

To answer the research questions, ANCOVA was run and the results were reported at the level of significance of $\rho < .05$. Before running the test the general assumptions of normality of distribution were checked for pre- and post- test scores of PET listening section and FLLAS. According to George and Mallery (2010) ±2 asymmetry and Kurtosis is considered acceptable to prove normal univariate distribution and as the values of skewness and kurtosis of the total scores of both tests were limited to ± 1.814 so the scores are of normal univariate distribution. Also, as homogeneity of regression slopes were approved on the scores, normal distribution of all pre- and posttest scores was confirmed. Table 1 summarizes the means and standard deviations of listening anxiety level of the participants before and after the intervention in the four groups of the study.

Table 1. *Mean and Standard Deviation on PET and FLLAS scores of four groups*

	FLLAS pretest	FLLAS posttest	PET pretest	PET posttest
EG1	94.65(14.06)	95.29(7.31)	131.65(14.23)	147.41(15.12)
EG2	112.06(16.67)	97.81(12.83)	130.25(3.17)	148.13(3.59)
ACG	115.79(10.49)	106.29(11.10)	119.71(7.01)	127.50(10.47)
PCG	111.06(8.55)	111.31(8.48)	123.19(14.47)	129.06(14.87)

George and Mallery (2010) believe that in comparing more than two groups, in case groups are of roughly equal size, homogeneity of the groups can be assumed. Groups of this

study are almost of equal size, so based on the assumed homogeneity, ANCOVA was run to see if group (the intervention each group received) as independent variable has a role in a change in listening anxiety (anxiety posttest scores) as dependent variable. Participants' scores on FLLAS pretest were used as a covariate. As table 2 indicates, a change in participants' listening anxiety was significantly predicted by the group and covariate. $F(3, 58) = 17.69$, $\rho < .001$, $\eta_p^2 = .47$.

Table 2. *ANOVA Test on listening anxiety by including listening anxiety pretest as covariate*

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Group	1704.684	3	568.228	6.424	.001	.249

As clearly stated through Table 2, the performance of groups over the level of listening anxiety of the learners was not the same and they are significantly different ($\rho \leq .05$) which indicates that the covariate (learners' listening anxiety prior to the intervention) significantly predicted the dependent variable (learners' listening anxiety after receiving the intervention). The partial eta squared reported on the effect of group ($\eta_p^2 = .25$) indicated a large effect size. Based on the parameters' estimates (Table 3), both experimental groups significantly affected listening anxiety level of the participants (EG1, $\rho = .003$ & EG2, $\rho < .0001$) while the changes of listening anxiety level of ACG was not significant compared to the PCG ($\rho = .069$). The information presented in Table 3 approved EG2 as the group with the best listening anxiety reduction effect as the group experienced a 13.8 units of reduction in their listening anxiety level after receiving the intervention. The partial eta squared reported for EG2 also indicated a large effect size for the group. EG1, also experienced a reduction of listening anxiety due to the interventional model it received which was a 11.11 units reduction. The partial eta squared reported for this group indicated a medium effect size.

Table 3. *Parameters estimates of groups performance on listening anxiety*

					95% Confidence Interval		
Parameter	B	Std. Error	T	Sig.	Lower Bound	Upper Bound	Partial Eta Squared
EG1	-11.117	3.626	-3.066	.003	-18.375	-3.858	.139
EG2	-13.799	3.327	-4.148	.000	-20.458	-7.140	.229
ACG	-6.437	3.471	-1.855	.069	-13.385	.511	.056
PCG	0[a]						

To evaluate the group's effect on the listening anxiety level change in a two by two comparison, pairwise comparison was checked. Considering the ad hoc test results, as shown in Table 4, indicated that listening anxiety changes in EG1 was only significant comparing to PCG ($\rho = .003$) where the change in EG1 was not significant when compared to EG2 and ACG. On the other hand, EG2 showed a significant lowering of listening anxiety compared to both ACG ($\rho = .038$) and PCG ($\rho < .001$).

Table 4. *Pairwise comparison of listening anxiety in four groups*

(I) group		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
EG1	EG2	2.682	3.668	.468	-4.660	10.024
	ACG	-4.679	3.941	.240	-12.568	3.209
	PCG	-11.117*	3.626	.003	-18.375	-3.858
EG2	ACG	-7.361*	3.460	.038	-14.287	-.435
	PCG	-13.799*	3.327	.000	-20.458	-7.140
ACG	PCG	-6.437	3.471	.069	-13.385	.511

As the instructional models were metacognitive listening comprehension strategy models, their success in inducing listening comprehension achievement was controlled as well. The participants' performance on PET posttest, when considering the PET pretest scores as covariate proved significant. As demonstrated in Table 5, there was a significant effect of type of intervention on levels of listening comprehension performance after controlling for the effect of scores on PET pretest, $F(3, 58) = 12.48$, $\rho < .001$, $\eta_p^2 = .392$.

Table 5. *ANOVA Test on PET listening section including PET pretest as covariate*

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
group	1598.983	3	532.994	12.480	.000	.392

The results of parameters estimates indicated that EG1($\rho < .001$, $\eta_p^2 = .325$) and EG2 ($\rho < .001$, $\eta_p^2 = .254$) showed significant improvement in listening comprehension performance as measured by PET posttest compared to both control groups. Performance of ACG in inducing listening comprehension achievement was not significant ($\rho = .497$). It is noteworthy that EG1 and EG2 had a large effect size while the partial eta squared reported for EG2 was borderline ($\eta_p^2 = .25$) and in this respect EG1 outperformed EG2.

Table 6. *Parameters estimates of groups performance on PET*

Parameter	B	Std. Error	T	Sig.	95% Confidence Interval Lower Bound	Upper Bound	Partial Eta Squared
EG1	10.536	2.368	4.449	.000	5.796	15.276	.325
EG2	12.540	2.374	5.282	.000	7.788	17.292	. 254
ACG	1.645	2.407	.684	.497	-3.172	6.463	.008
PCG	0[a]						

Post hoc pairwise comparisons were also run (Table 7), where EG1 and EG2 proved to be significantly better than ACG in listening comprehension attainment. The difference between EG1 and EG2 in improving listening comprehension performance of the participants as measured

by PET posttest was not significant (ρ = .383) which indicates their being as far away as one another from PCG and ACG in inducing listening comprehension attainment.

Table 7. *Pairwise comparison of listening comprehension in four groups*

(I) group		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
EG1	EG2	-2.004	2.279	.383	-6.565	2.558
	ACG	8.891*	2.532	.001	3.823	13.959
	PCG	10.536*	2.368	.000	5.796	15.276
EG2	ACG	10.894*	2.526	.000	5.838	15.951
	PCG	12.540*	2.374	.000	7.788	17.292
ACG	PCG	1.645	2.407	.497	-3.172	6.463

Discussion

This study was an attempt to experimentally investigate the effect of two listening comprehension metacognitive strategy instruction models on listening comprehension anxiety and listening comprehension attainment of Iranian B1 level EFL learners. As for the first research question, compared to both active and passive control groups, IELT (the model used to instruct EG1) and MPS (the model used to instruct EG2) proved to be significantly effective in inducing listening comprehension attainment as measured by PET posttest. Moreover, IELT proved to be a more successful model in improving listening comprehension according to the larger effect size reported for it, compared to MPS on which only a medium effect size was reported. Only introducing the strategies to ACG through explicit strategy instruction without going through reflection and evaluation phases showed no significant improvement in listening comprehension of the participants.

As far as the second and main research question was concerned, the table was turned. Although both IELT (EG1) and MPS (EG2) significantly lowered learners' listening anxiety level, and they were not significantly different in doing so, MPS, the model used to instruct listening comprehension metacognitive strategies to EG2, performed significantly different from both control groups (ACG, PCG) in lowering learners' listening anxiety and a distinctly large effect size was reported for it. It is alongside the fact that the effect size reported on IELT lowering listening anxiety of EG1 was small and the reduction of listening anxiety in EG1 and ACG was not significant.

Research data is pretty solid on the negative effect listening anxiety has on second language listeners and the findings of this study, at least at parts, are consistent with findings of Goh and Taib (2006), Movahed (2014) and Vandergrift (2007) on the effect of metacognition and metacognitive strategy instruction on lowering listening anxiety. Generally speaking, lower levels of listening anxiety are reported to positively correlate with listening metacognitive awareness (Vandergrift, 2007). Goh and Taib (2006) planned and performed an eight-session metacognitive instruction course for 10 primary school pupils and reported metacognitive instruction to reduce listening anxiety of young learners and help them build confidence in approaching listening tasks due to the metacognitive listening instruction. Movahed (2014) also implemented MPS to instruct 55 EFL beginners and reported a lowering of their listening anxiety level compared to the control group. The point to consider is that although Goh and Taib's (2006) metacognitive instruction

lowered participants' listening anxiety, they are not very clear on the dynamics of the instruction procedure and in case of Movahed (2014) who clearly states the steps of the procedure he undertook, there is no report on how well MPS would perform in comparison to some other instruction model in lowering the listening anxiety level.

Distinct performance of metacognitive strategy instruction in lowering learner's listening anxiety might be attributed to learners engaging in top-down processes through the instruction and moving away from bottom-up processing of product-based listening comprehension which is what they are usually used to. As Field (2004) maintains, a major problem second language listeners face is their dependency on bottom-up processing for understanding aural texts where they are fixated on the word level which occupies a great proportion of their working memory and inhibits the processed words to get into the 'higher-level meaning'. ACG and PCG having no reduction of listening anxiety confirm Field (2004) as well. As product-based listening comprehension instruction model was used to instruct both control groups, learners are exposed to aural input and are asked to comprehend. Even ACG who received explicit metacognitive strategy instruction in the form of sole presentation of the strategies and were deprived of evaluation and reflection phases showed no significant listening anxiety reduction. This finding is supported by Vandergrift (2003) who refers to planning, predicting, monitoring and evaluation strategies as mandatory reflection steps when dealing with metacognitive strategies because they have the potential to build motivation for L2 listening and increase the efficacy of metacognitive strategy use.

Compared to IELT (EG1) which is a task-based model of metacognitive strategy instruction model, MPS (EG2) which is an embedded model of consecutive cycles of metacognitive strategy instruction proved more effective based on the reported effect size. This difference might be attributed to more elaborate structure of IELT, asking students to perform on many levels and varying worksheets. One of the participants in EG1 mentioned in her listening anxiety diary that "the fact that I need to think back about every listening session to see when I experienced listening anxiety makes me anxious because I can clearly see that I was anxious many times and it is reoccurring." It is in line with Chen and Chang's (2009) stating that listening anxiety increases with an increased cognitive load in a vicious cycle of anxiety taking up working memory processing resources and leaving little room for cognitive tasks, which in turn would lead to more anxiety and thus less cognition and it is while listening comprehension being extra demanding on online processing resources makes the situation even worse.

The improved listening comprehension performance in EG1 and EG2 might, in part, be attributed to the lowered listening anxiety in these two groups; the contrary to which is witnessed in ACG and PCG. This echoes findings of Elkhafaifi (2005) and Brunfaut and Reveresz (2015) who confirm lower levels of listening anxiety and better listening performance as being associated.

Conclusion

The present study revealed that both IELT and MPS were significantly efficient in inducing listening comprehension attainment and also in lowering listening anxiety levels of the participants while IELT had a larger effect size on the former and MPS enjoyed a distinctly larger effect size on the latter. We may conclude that MPS is the optimal model of metacognitive strategy instruction as it managed to the reach the aim with better results in lowering listening anxiety level of the participants.

One reason for MPS outperforming IELT in lowering listening anxiety level might be its being an embedded strategy instruction model. IELT is pretty elaborate on reflection and

evaluation phases and include a number of worksheets that are to be filled out both inside class during the instruction and also at home as the learner's homework. Learners are asked to track their listening anxiety and to write diaries and complete charts on their affect. Although all these documentation of the procedure have literature back up and have proved their importance in different circumstances, and they helped IELT to outperform MPS in inducing listening comprehension performance, it might be overloading cognitive processes of the EG1 participants so, according to Chen and Chang (2009) this overload led to higher levels of listening anxiety.

On the other hand, considering the performance of the two models on listening anxiety level of the learners, we may speculate about the total impact of metacognitive strategy instruction on improved listening comprehension performance of the participants. That is, may be the lowered levels of listening anxiety has helped the top-down processes to better lounge in participants' cognitive process of learning. Actually, as the nature of metacognitive strategies is far from clear, it could be concluded that lowered levels of listening anxiety ameliorated the real potentials of both task-based and embedded model of metacognitive strategy instruction.

It is a valid point that learning a language is a complex phenomenon and listening comprehension skill is specifically difficult as the aural data is implicit and complex and totally under the control of the speaker. Both model of metacognitive strategy instruction implemented in this study proved significantly efficient in inducing listening comprehension attainment, but as recognizing the debilitating effect of listening anxiety on listening comprehension performance is the first step in devising an instruction model.

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