A self-regulated learning approach to extensive listening and its impact on listening achievement and metacognitive awareness

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Abstract

The role of self-regulation in general learning has been investigated for some time now. Its significance and contribution to second language (L2) listening, however, has yet to be discussed extensively with empirical support. This article reports a case study involving four college EFL students in China over a six-month period of self-regulated learning (SRL) in developing their listening in independent settings. The study examined how the achievement and metacognitive awareness of four high-achieving and low-achieving listeners may have been affected by strategies they used for self-regulating extensive listening activities. It also examined the learners' engagement during four phases of self-regulated listening, namely, task definition, goal setting and planning, strategy enactment, and metacognitive adaptation. Findings revealed substantial differences in the two groups' metacognitive engagement in three SRL phases. The article argues that the achievements of the respective learners in listening development were affected by these differences. Pedagogical implications of a self-regulated learning approach in extensive listening for L2 listening development are discussed.

Keywords: self-regulated learning strategies; listening; metacognition

1. Introduction

Listening is a critical dimension in language learning and plays an important role in second language (L2) pedagogy. The importance of listening in communication has also been well documented (Feyten, 1991; Wolvin, 2010; Wolvin & Coakley, 2000). Nevertheless, many scholars agree that listening is still being overlooked in L2 learning, as greater prominence is accorded to the development of more "visible" skills such as speaking and writing, as well as reading, which is seen to be an important gateway to knowledge in academic contexts (Nation & Newton, 2008; Nunan, 1997; Vandergrift 1997). Listening remains a much neglected skill and listening strategies are seen as the "Cinderella" of strategies (Vandergrift, 1997), receiving little research attention as compared to reading, writing or speaking.

Even when the curriculum recognizes the importance of listening, such as the current curriculum of college English in mainland China, more is needed to facilitate a principled approach to helping language learners develop their abilities. In China, listening comprehension is a compulsory module for all non-English major undergraduates. In the important College English Test Band 4 (CET4) the assessment of listening comprises 35% of the total weighting of the test (Goh & Zeng, 2014). Beyond language learning and assessment, listening is also valued as an important language communication skill in the current economic landscape.

In spite of this, listening is the weakest skill for Chinese tertiary-level EFL learners (Jiang, 1994). Chinese students who are studying in other English-speaking countries also consider listening to be their greatest challenge (Liu, 2005). Given the limited classroom instruction time (an average of 2 hours per week of listening instruction for 30-32 weeks in an academic year) and an approach that mainly emphasizes exam preparation, there is a need to find other ways of helping college English learners improve their listening through independent learning outside class. Chinese EFL students have for decades practiced extensive listening on their own, but what is needed is teacher support that promotes self-regulated learning (SRL) to ensure that listening development through extensive listening practice is directed and not left to circumstances. Drawing on experiences from educational psychology and second language learning in general (Oxford, 2011; Pintrich, 2004), such a teacher-supported SRL approach to independent listening development would include principles for planning and implementing learner-oriented SRL activities in independent settings. It underscores the critical role of metacognition in the learning process and provides learners with essential metacognitive tools for self-regulated learning beyond the listening classroom (Vandergrift & Goh, 2012).

To understand the effectiveness of an SRL approach, we conducted a comparative case study of two high-proficiency listeners and two low-proficiency listeners who experienced a six-month independent listening program after class by engaging in SRL activities and materials prepared specially to support their independent learning.

2. Learner strategies in L2 listening

Learner strategies refer to deliberate procedures used by learners to enhance comprehension, learning and retention of the target language (Chamot, 1995; Cohen, 1998). In L2 listening, learners use appropriate strategies to achieve comprehension goals, particularly when they have limited ability to understand the oral texts (Gu, Hu, & Zhang, 2009; Vandergrift, 2008). Strategies help learners improve comprehension, retention, and recall of information; and, at the same time, they assist them in planning for overall listening development as part of their language learning effort (Vandergrift & Goh, 2012).

Recent research shows that successful L2 listening involves careful orchestration or clustering of both metacognitive and cognitive strategies (Graham & Macaro, 2008; Vandergrift, 2003b). In addition, Vandergrift and Goh (2012) contend that listeners with heightened metacognitive awareness are able to orchestrate the enactment of various strategies according to task and learner variables. General listening strategies can also be examined in terms of tactics or individual techniques through which each strategy is operationalized (Goh, 2002), and this can offer greater clarity about hierarchic relationships among strategies (Oxford & Cohen, 1992).

Despite early debates about whether strategy instruction is useful for listening (Field, 2000; Ridgway, 2000), possible resistance from learners (Huang, 2006) and other challenges, researchers have argued that learners can benefit from learning to use listening strategies to compensate for incomplete understanding, missed linguistic or schematic input, misidentified clues and other listening limitations (Flowerdew & Miller, 2005; Rubin, 1994; Vandergrift, 2003a). The consistent use of metacognitive strategies, in particular, is a feature of high achieving L2 listeners (Goh, 1998) and can contribute to improving learners' L2 listening comprehension (Vandergrift, 2004). One form of L2 listening pedagogy integrates listening tasks with teacher-directed strategy use by learners (Vandergrift & Goh, 2012).

Vandergrift (Vandergrift, 2004; Vandergrift & Tafaghodtari, 2010) proposed a metacognitive cycle to help learners integrate the use of strategies while listening and guide listeners in the acquisition of implicit knowledge about listening processes. Besides developing metacognitive awareness about L2 listening, this cycle also develops L2 perception skills and word recognition skills,

as recommended by Graham (2006). Vandergrift (2007) argues that this metacognitive listening cycle has strong theoretical support as it closely parallels the research demonstrating implicit learning through task performance. Further empirical support is found in a number of studies applying this metacognitive cycle in listening classes (Cross, 2011; Liu & Goh, 2006; Vandergrift & Tafaghodtari, 2010).

While the metacognitive listening cycle develops strategic processes during listening comprehension, it is essentially a classroom pedagogy. Learners also need to have support in using strategies to strengthen activities for developing listening beyond the classroom, in particular, in raising their metacognitive awareness of how to self-direct and manage their efforts (Goh, 2008). This calls for an approach to supporting L2 learners' extensive listening endeavors which enable them to self-regulate their learning process with the help and guidance of the teacher, thereby taking greater ownership of their listening development in an informed manner.

3. Self-regulated learning

Self-regulated learning (SRL) is a complex process by which learners personally activate and sustain cognition, affect and behavior that are systematically oriented toward the attainment of learning goals (Efklides, 2009; Schunk, 2008). Our study adopts the definition of SRL by Pintrich (2000) as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" (p. 453). The concept of self-regulated L2 learning strategies was first put forward by Oxford (2011, 2017) in her S^2R model. This framework examines closely the theoretical underpinnings of self-regulation in L2 learning and applies self-regulation for understanding development in each of the L2 skill areas, including listening. Participants in our study were responsible for taking charge of their overall listening development and initiating extensive listening tasks in independent settings. We follow Winne and Hadwin (1998) in characterizing self-regulated learners as learners who are actively and efficiently managing their own learning through monitoring and strategy use. Their mode of SRL model emphasizes the importance of metacognition, which is an important construct for the process of learning to listen in an L2 (Goh, 2008; Vandergrift & Goh, 2012; Vandergrift & Tafaghodtari, 2010). Metacognition is defined as cognition about cognition and involves monitoring and control functions (Dinsmore, Alexander, & Loughlin, 2008; Flavell, 1979; Schunk, 2008). Research has shown that metacognition interacts with motivation and affect, and these interactions have important implications for SRL (Efklides, 2009).

Winne and Hadwin's (1998) SRL model presents SRL as a more global and inclusive construct which subsumes metacognitive knowledge and strategy use (Pintrich, 2000; Winne & Hadwin, 2008). It describes the specific cognitive processes that entail a learner's self-regulation through four basic phases that are considered to be recursive in nature: task definition, goal setting and planning, strategy enactment, and metacognitive adaptation (Greene & Azevedo, 2007). This model enables the forging of linkages between learners' metacognitive knowledge system and their self-regulatory behaviors in EFL listening development. To our knowledge, this L2 study, which adopts a self-regulatory learning theoretical framework in order to understand the efficacy of learning strategies, is the first of its kind for extensive listening.

4. Chinese EFL listening

Listening is often perceived to be the weakest language skill among Chinese tertiary-level EFL learners at the lower or intermediate proficiency levels (Wang, 2002; Wu, Liu, & Jeffrey, 1993). In spite of this, many Chinese learners receive a limited amount of in-class listening instruction per week, with lessons focusing heavily on checking the answers to pre-set comprehension questions. In similar kinds of listening classes, the process of helping students learn to listen was often overlooked (Mendelsohn & Rubin, 1995; Vandergrift, 2004). A great number of students passively relied on classroom listening instruction and may not have realized that they themselves should take charge of their listening development (Goh & Taib, 2006; Vandergrift, 2003b; Wang, 2002). It was also not unusual for some students to give up on their listening because they felt they had caught very little of what was said (Goh, 2000). With the availability of technology-enabled resources, it is important that teachers consider ways of supporting learners in their extensive listening efforts so that they can learn how to manage their learning and benefit from the authentic resources made available through their mobile devices. To this end, an SRL approach merits consideration, as self-regulated listening activities not only increase learners' exposure to authentic oral texts but also enhance their metacognitive knowledge and self-regulatory abilities for listening success (Berne, 2004; Mendelsohn, 2006).

An SRL approach that emphasizes the role of metacognition and learning strategies is adopted in this study to help Chinese EFL learners plan and carry out extensive listening activities beyond their classrooms. The study aimed to understand how such an SRL approach to extensive listening practice could benefit language learners and whether the gains that learners derive from an SRL program might be affected by their level of engagement during the program. This study is also an example of a study that heeds Hu's (2016) call to strategy

researchers to conduct strategy research that is emancipatory where learners' participation can assist them in acquiring new knowledge and developing greater awareness of themselves so that their learning endeavors can be guided by these new understandings.

5. Research questions

This study was undertaken to answer the following research questions:

1. Do learners engaged in a SRL approach to extensive listening benefit differently in terms of listening development and metacognitive awareness of the listening process?
2. What are the self-regulatory behaviors of high- and low-achieving listeners at the four self-regulated learning phases of task definition, goal setting and planning, strategy enactment and metacognitive adaptation? What similarities and differences are there between the two groups of learners?
3. To what extent can the self-regulatory behaviors of the two groups of learners account for the differences in the benefits they derived from the SRL program?

6. Method

6.1. Participants

Four participants (three females and one male) with an average age of 19 were selected from one intact class. They had been learning English for an average of seven years, beginning from secondary school education. Of these an average of six years included practicing L2 listening. Results from listening tests and participants' self-reports confirmed that their listening ability remained the weakest of the four language skills.

For the purpose of comparison, the four participants were placed into two groups according to their achievements in two tests: The National Entrance Examination (English paper) and a mid-term listening test (Table 1). Two top performers in both tests in the class ($N = 30$; 90th percentile) were designated as high achieving (HA1 and HA2) while two participants in the 20th percentile were designated as the low achieving group (LA1 and LA2). These groupings served to provide some comparison among the learners according to their listening performance.

Table 1 Selection criteria of four participants for the case study

		Sex	National Entrance Examination score[*]	Mid-term listening test score[**]
High achieving				
	HA1	F	123.0	57.0
	HA2	F	121.0	55.5
Low achieving				
	LA1	F	101.0	49.5
	LA2	M	99.0	49.0
Class mean			109.0	53.5

Note. * The score is on a 150-mark system; ** The score is on a 100-mark system

6.2. Instruments

6.2.1. *Metacognitive Awareness Listening Questionnaire* (MALQ)

This study adopted the *Metacognitive Awareness Listening Questionnaire* (MALQ; Vandergrift, Goh, Mareschal, & Tafaghodtari, 2006) as an instrument to assess the learners' metacognitive awareness and perceived use of strategies while listening to oral texts. The MALQ is a 21-item questionnaire comprising items from five factors related to L2 listening comprehension processes: *problem-solving*, *planning and evaluation*, *mental translation*, *directed attention* and *person knowledge*. It was used without any adaptions or translations in the present study because the items were written in simple English that the Chinese college EFL learners could understand.

6.2.2. *Self-regulated Learning Portfolio* (SRLP)

The *Self-regulated Learning Portfolio* (SRLP) consisted of a set of templates for the participants to record their listening activities and track their progress in both metacognition and listening performance. Part I consisted of a weekly listening plan for the learners to record their plans for listening tasks as well as their monitoring and evaluation of the completion of these tasks. It also recorded time spent on each task and how many times learners listened to each text. Part II was a self-directing listening guide which helped learners to plan how to approach the task, monitor their comprehension during the task and evaluate their efforts after it. Part III was a form for a weekly listening diary where the learners wrote their reflections on their weekly listening activities in and outside the classroom and their description of strategy use. A listening strategy inventory comprising various metacognitive and cognitive strategies was also included for their reference. It functioned as a learning tool, familiarizing

students with listening strategies and helping them to expand their strategy repertoire and promote more effective strategy use (Macaro, Graham, & Vanderplank, 2007; Vandergrift, 2003a, 2003b).

6.2.3. Value reflection form

At the end of the SRL program, the participants completed a reflection form which was aimed to evaluate what they had gained from the SRL program and the challenges they had faced. This was done in Chinese to facilitate the learners' expression of any complex thoughts that they might have difficulty expressing in English.

6.2.4. Interviews

Individual and group interviews were conducted in Chinese to obtain detailed information on the participants' evolving metacognitive awareness, strategy use, and self-regulatory skills in listening. Individual interviews were conducted before the learners began the SRL program when they had completed the MALQ questionnaire. A group interview was also conducted in Chinese with the four participants at the end of the SRL program. The purpose of this interview was to supplement data from the students' value reflection forms and to allow the researchers to explore specific issues that arose during the conversation and which might not have been included in the written reflections.

6.2.5. Listening tests scores

Scores of two large-scale listening tests (a university-based mid-term listening test and a national CET4 listening test) were used to assess the participants' progress in listening performance after the SRL program. A comparison of the participants' results in these two tests (overall score and listening score) was used as an indicator of the participants' improvement in listening performance.

6.3. Data collection and analysis

Data collection was completed in the following ways:

1. Collection of participants' test results for the two listening tests (midterm and CET4), responses to the MALQ and individual and group interviews were conducted at different points of the study. The interviews in Chinese were recorded, transcribed and translated.

2. Completed SRLP documents were submitted via email to one of the authors, who provided answers and feedback to the questions and comments in the SRLP through online text chatting and email. At the end of the SRL program, the participants took part in a specially arranged session, in which they wrote individual value reflections and completed a second response to the MALQ. After that they participated in a group interview led by one of the researchers.
3. Comments from the participants' listening teacher were obtained to provide qualitative evaluation on the performance of the four participants.

Data obtained from MALQ responses, listening test scores, and strategy use frequencies, were processed using SPSS to address Research question 1. The quantitative data all went through tests of normality before further analysis to examine participants' pretest-posttest changes in listening performance, metacognitive knowledge and strategy use.

To address the second and third research questions, data were collected mainly through verbal reports and interviews. Retrospective verbal reports written in Chinese were translated independently and cross-checked against the translation of another translator for consistency. Coding was done in two stages. In Stage one, one of the authors and a colleague coded a set of transcripts from one participant independently according to a preliminary coding scheme that was based on previous studies on educational objectives (Anderson et al., 2001; Krathwohl, 2002) and listening strategies (i.e., Goh, 2002; Gu, Hu, & Zhang, 2009; O'Malley, Chamot, & Kupper, 1989; Vandergrift, 2003b). Informal calibration discussions were held to resolve inconsistencies and disagreements before the coding scheme was finalized. In Stage two, the data was divided into two sets and coded independently according to the coding scheme. The transcripts were then double-coded by the two coders with inter-coder reliability improving from .69 to over .84 after the two stages.

7. Results and discussion

7.1. How learners have benefitted from the SRL program

Table 2 shows the four participants' listening performance on the pre- and posttest. While HAs improved by almost 20 marks on a 100-mark test paper, LAs improved by only 9 marks. Furthermore, scores of HAs improved from 2-7% (pretest) to 14-16% (posttest) above the class mean score in the CET4 listening test, showing that they achieved greater progress in their listening performance. Scores of LAs on the other hand dropped from 7-8% to 10-12% below the class mean score after six months of participation in the SRL program.

Table 2 Listening performance of the high- and low-achieving listeners on the pretest and the posttest

	Mid-term listening test score as pretest**	CET4 listening test score as posttest**
HA1	57.0	76.0
HA2	54.5	74.5
LA1	49.5	59.0
LA2	49.0	58.0
Class mean	53.5	65.5

Note. ** The score is on a 100-mark system

With respect to the changing level of metacognitive knowledge in listening, although all four participants benefitted from the SRL approach, HAs' response scores showed an overall 80% increase compared with the LAs in the five metacognitive factors in the MALQ framework, as indicated in Table 3.

Table 3 Comparison of high- and low-achieving listeners' pre- and post-test MALQ scores

		High-achieving			Low-achieving		
		HA1	HA2	Mean	LA1	LA2	Mean
Directed attention	Pretest	5.25	5.25	5.25	4.75	4.25	4.50
	Posttest	5.50	5.33	5.42	4.50	4.00	4.25
Problem solving	Pretest	5.50	5.17	5.34	4.33	4.25	4.29
	Posttest	5.33	5.25	5.29	4.50	4.25	4.38
Planning/evaluation	Pretest	4.67	4.60	4.64	4.00	3.75	3.88
	Posttest	5.25	5.33	5.29	4.17	3.33	3.75
Person knowledge	Pretest	2.33	2.67	2.50	3.33	4.00	3.67
	Posttest	2.00	2.33	2.17	4.00	4.00	4.00
Mental translation	Pretest	2.00	2.33	2.17	4.50	4.67	4.59
	Posttest	2.00	2.33	2.17	4.50	4.50	4.50

Note. The score is based on a 6-point Likert scale as used in the MALQ

The results showed that HAs manifested greater progress than LAs in terms of listening performance. Although it is not possible to establish a clear causal effect of the SRL program, the data from the SRLP, reflections, evaluations and interviews strongly suggest that HAs were more engaged in their listening practice and development through self-regulated extensive listening. This would have contributed to their listening development compared with Las, who were less engaged (see sections to follow on three other phases of SRL). This result is different from classroom-based studies where metacognitive instruction utilizing a pedagogical cycle was found to benefit less-skilled listeners more in their listening development (Cross, 2011; Vandergrift & Tafaghodtari, 2010). This could be argued to be due to learners' self-regulated learning contexts where

there was limited teacher input during the listening tasks, unlike previous class-room-based studies (see e.g., Vandergrift & Tafaghodtari, 2010).

Results also revealed much higher overall improvement in five metacognitive factors for HAs, lending further support to previous studies demonstrating the positive outcomes of different kinds of metacognitive interventions for L2 listening development (Goh & Taib, 2006; Goh & Zeng, 2014; Graham & Macaro, 2008; Mareschal, 2007; Vandergrift & Tafaghodtari, 2010; Zeng, 2007). Moreover, HAs showed much stronger metacognitive awareness than LAs in factors such as planning/evaluation, directed attention and problem-solving. The increase in reported use of these three strategies reflect HAs' stronger self-regulatory skills in listening: planning, evaluating, managing attention for better comprehension and applying strategies to infer and to monitor these inferences (Kintsch, 1998; Vandergrift, 2003a). As skilled and effective listeners are generally found to frequently employ these strategies while listening, it could be argued that good control of planning/evaluation, attention-managing and problem-solving strategies signals a great step for learners to becoming self-regulated and autonomous listeners. As indicated by their responses on personal knowledge, HAs were also more confident and less anxious compared to LAs in English listening after the self-regulated learning program. Similarly, their lower mean scores for mental translation indicate that they were refraining from using mental translation strategies.

7.2. How learners compared in self-regulatory behaviors

The four SRL phases for listening development in independent settings are task definition, goal setting and planning, strategy and tactic enactment and metacognitive adaptation. Results of the HAs-LAs comparisons in these four phases are first presented in Table 4, and these will then be discussed and further illustrated with excerpts from the learners' reflections. These behaviors are analyzed and presented in terms of the learners' understanding of their general listening development and the specific listening tasks that they engaged in during their weekly listening.

7.2.1. Task definition

Task definition refers to an understanding of what a task is. All four participants largely shared a common understanding of what the general task of developing listening and specific listening tasks entail. They regarded listening in English as a real challenge and felt that listening was more difficult than other three macro-skills of English. This is indicative of learners' lack of confidence and levels of anxiety, both of which can result in an inability to apply metacognitive knowledge while listening

in particular (Vandergrift et al., 2006). HAs, nevertheless, reported that they did not feel nervous when listening to English, which might have resulted from their increased exposure to English listening materials through the SRL program.

Table 4 Differing self-regulatory behaviors in listening for HAs and LAs

		High-achieving	Low-achieving	
Task definition	General listening development	It is a challenge and more difficult than the other three language skills.		
	Specific listening task	Generally determined by understanding of the nature and purpose of listening and the task type.		
Goal setting & planning	General listening development	Mastery orientated.	Performance orientated.	
	Specific listening task	Set more demanding cognitive and metacognitive goals.	Mainly behaviorally and cognitively oriented.	
Strategy enactment	General listening development	Frequent use of all essential metacognitive listening strategies.	Metacognitive tactics not reported:	
			Selective attention	1. Check current interpretation with context of the message. 2. Notice how information is structured. 3. Listen to specific parts of the input.
			Comprehension monitoring	4. Pay attention to visuals and body language.
	General listening development	Orchestrated a broader spectrum of cognitive listening tactics to infer, predict, contextualize, visualize, elaborate, or to reconstruct meaning of the oral text.	Cognitive tactics not reported:	
			Prediction	1. Anticipate details while listening/local.
			Inferencing	2. Apply knowledge about the target language. 3. Use visual clues.
Metacognitive adaptation	General listening development	Varied and more sophisticated metacognitive adaptation.	Simple and limited forms of metacognitive adaptations.	
	Specific listening task			

Results indicated that definition of specific listening tasks was generally determined by a learner's understanding of the nature of listening and the task type concerning selected listening materials. An example of such perceptions was the belief that "the dictation task is far more difficult than a MCQ task" (LA1). This reflected the participants' understanding of task demands or the difficulty level of different task types.

7.2.2. Goal setting and planning

The HAs and LAs differed considerably in goal setting and planning in their overall listening development or when approaching specific listening tasks (Table 5 and Table 6).

Table 5 Implementation of weekly SRL listening plans

	Average times of repeated listening	Time spent on listening (minutes)
High-achieving	3.77	123
Low-achieving	2.1	34

Table 6 Learners' multi-dimensional listening purposes

			HA1	HA2	LA1	LA2
Submissions			18	14	10	10
Listening purpose		Finish assignment	0	0	7	6
	Behavioural	Entertain	0	1	2	3
		Form habit	2	2	0	0
		Remember/Know	5	10	4	8
	Cognitive	Understand	5	2	1	3
		Apply	2	2	1	0
	Metacognitive	Manage attention	2	1	0	0
		Develop ability	15	9	1	0

LAs expressed explicitly the strong desire to get appropriate grades to pass the national CET4 test. In contrast, although passing CET4 was also mentioned by the HAs, they were more focused on deep understanding of tasks, mastering skills, and self-improvement. In line with their distinct goal-orientations, the learners planned their listening development in quite different manners, and the implementation of listening plans also varied considerably. As shown in Table 5, while LAs spent only 34 minutes per week on learning to listen, HAs invested almost four times more in this effort (123 minutes). Likewise, for each listening task, HAs tended to listen to it about four times. HA1 even reported that for a difficult listening task the text was repeated seven times. In contrast, LAs listened to it only two times, regardless of the difficulty level of the tasks. Such a considerable difference in planning for and implementation of listening plans between the high- and low-achievers was consistent with their differing goal-orientations. HAs benefitted more from the SRL approach as they were prepared to invest more and they also adhered more faithfully to their learning plans. Group interview data also revealed that LAs' much poorer investment in listening could have been caused by their relatively lower level of confidence, as they were weaker in their listening to start with (Goh & Zeng, 2014). As in the excerpt below, LA1 had clearly prioritized the learning of other skills as a result of this.

Excerpt 1

My listening is poor. I don't think I can improve very much in half a year's time so I spent more time on preparing the reading section and writing section of the CET4 test. (LA2)

Such significantly different degrees of investment in listening either in overall time spent (frequency) or in repeated listening (repetition) would have contributed to HAs' higher scores (30%) on the CET4 listening test (Vandergrift & Goh, 2012).

HAs and LAs also differed considerably in implementing action plans while carrying out specific listening tasks. Listening is a goal-directed strategic behavior and a purposeful process, in which the listening purpose drives the comprehension process (Goh, 2002; Goh & Zeng, 2014; Rost, 2005). Different listening purposes would therefore affect the comprehension process, as the analysis of the SRLP protocols concerning the multidimensionality of listeners' purposes for specific recordings revealed. Following Pintrich (2001), these dimensions are behavioral, cognitive, and metacognitive.

As can be seen in Table 6, the two low achievers tended to set more behavioral and cognitive goals for specific listening tasks, while the two high achievers clearly perceived more demanding cognitive purposes and metacognitive purposes of listening. For LAs with a performance-oriented approach, finishing the assignments seemed to be their top priority, either because they were required to do so or they did not want to be considered inferior in the class. They also listened to English songs or movie clips for relaxation and entertainment, indicating their preference for less demanding listening tasks. In contrast, the two high achievers explicitly pointed out they were trying to cultivate a good learning habit through regular listening training. Although they also listened to English songs and watched English movies in their spare time, they reported to have chosen more demanding listening materials for intensive listening from their textbooks and original CET4 listening test papers, demonstrating their mastery-orientation.

It is possible that these two stronger listeners felt they had the ability to manage these more demanding listening tasks and were setting up challenges for themselves while the less able listeners preferred to choose easier ways of practicing their listening. While this seems like a logical thing to do, it is also possible that the two LAs had missed out on opportunities to develop their listening further. This factor combined with a lower frequency of practice and fewer repetitions of listening would have contributed to their slower progress.

In addition, LAs' cognitive learning purposes were limited to knowing and understanding, with knowing or remembering taking up the highest percentage of occurrence. In contrast, HAs not only set goals for more exposure to aural input and deeper understanding and comprehension of gist and details, but they

also tried to apply their linguistic knowledge and what they got from the oral texts to improve their dictation skills. Dictation takes up a little less than 30% of the CET4 listening test and is also the weakest listening skill for Chinese EFL listeners (Jin, 2005). HAs' resolution to overcome this listening difficulty and more self-initiated investment in dictation exercises were evidence of their much higher cognitive goals in listening.

7.2.3. Strategy enactment

The strategy enactment pattern of high achievers showed considerable differences from that of low achievers either in the frequency of strategy use or in the way specific cognitive or metacognitive tactics operationalize strategies used (Table 4). It should be noted that the reported use of listening tactics and strategies based on participants' retrospection for each listening task was not necessary in tandem with the actual use in listening learning and the 44 listening tactics included in our checklists were illustrative and not exhaustive. Furthermore, due to the limited sample size ($n = 4$), no statistical measures were adopted here to determine the significance level of strategy deployment. Instead, the occurrences of cognitive and metacognitive strategy use for each participant were counted and ranked accordingly.

Research in both learner strategy for language learning and L2 listening highlighted the significance of strategy development for listening success and L2 acquisition (Goh & Zeng, 2014; Vandergrift, 2003b; Wenden, 2002). The fact that six cognitive tactics and eight metacognitive tactics were jointly used by all participants was strong evidence of the similarity and convergence of Chinese EFL listeners' strategy use preference in approaching listening tasks or developing listening proficiency. In line with what has been reported by Goh (2002), the four participants reported an average 64% of use of inferencing strategy, using contextual clues and familiar content words or drawing on knowledge of the world to help them bridge gaps in their understanding, which stressed the key role that prior knowledge played in learner comprehension. As such, these listening tactics can be prioritized and highlighted in strategy instruction in listening classes to promote learners' higher level of awareness and future use. Furthermore, all participants reported they had never used the strategy of noticing how information is structured, for example, the presence of discourse markers. This finding has strong implications for listening pedagogy in China. Specifically, familiarizing Chinese EFL learners with various genre types and corresponding meta-discourse markers and rhetorical devices assumed greater importance in teaching listening. Thus, genre-based teaching intended to promote listening discourse comprehension should thereby be prioritized in listening classes.

However, we found a marked difference in cognitive strategy enactment as reflected by the frequency/occurrence of participants' perceived strategy use. First, HAs used four cognitive strategies, up to one third more often than LAs. This might help explain HAs' higher level of strategy awareness and stronger ability in deep level processing and tackling listening comprehension problems.

Second, HAs reported relying heavily on the visualization strategy of mentally displaying the shape or spelling of key words while listening, which was only occasionally used by LAs. Chinese EFL learners frequently mentioned the importance of the size of their vocabulary in relation to their learning, as observed by Zhang (2010). Hence, the considerable difference identified here might have been caused by learners' varied vocabulary size in general and word recognition or spelling abilities in particular.

Third, the finding that the strategy occurrence of mental translation for HAs was almost 30% lower than that of LAs might indicate HAs' much improved awareness of the detrimental effect of this strategy and fruitful efforts in restricting its use while listening. Or it might have resulted from their greater level of automaticity in processing lexical chunks. The finding is consistent with L2 listening literature (e.g., Vandergrift et al., 2006).

Finally, the high- and low-achievers differed in operationalizing the fixation strategy, which involves focusing attention on understanding a small part of a text. Compared to Las, who frequently tried to memorize/repeat the sounds of unfamiliar words, HAs were more engaged with memorizing words or phrases for later processing, indicating their stronger ability in matching the sound of words with their forms as well as engagement in deep level processing to construct meaning during listening (Field, 2008).

Similarly, there were also more differences between HAs and LAs in how the metacognitive tactics were enacted. First, the frequency disparity of metacognitive strategy use between HAs and LAs was even greater compared to that of their cognitive strategy use. The much higher frequency of metacognitive strategy use for HAs was in line with L2 listening literature claiming that skilled listeners revealed using about twice as many metacognitive strategies as their less-skilled counterparts, primarily in comprehension monitoring (Goh, 2002; Vandergrift & Goh, 2012). It also helped explain HAs' stronger ability to self-regulate their listening learning as well as their greater degree of progress in listening performance in the SRL case study.

Second, HAs reported 42% more use of pre-listening preparation strategies such as previewing contents, which underscored the key role that preparation strategies played in listening success (Goh, 2002; Rost, 2005). The three pre-planning preparation tactics not only covered learners' mental and emotional preparation to reduce anxiety and enhance confidence but also included actions

to pre-process the content semantically and phonologically. In this sense, HAs were far better prepared mentally and emotionally for achieving success in listening tasks as compared to LAs.

Third, the much higher level of strategy use in directed attention and selective attention suggests that HAs tended to monitor attention and avoid distractions by concentrating hard and continuing to listen in spite of difficulty. Moreover, HAs managed to pay particular attention to familiar content words and listen for gist to secure satisfactory comprehension. Such strategy use disparity between HAs and LAs in both attention strategies is consistent with L2 listening research (Goh, 2002; Rost, 2002; Vandergrift et al., 2006) claiming that attention strategies are mainly adopted by higher ability listeners and are believed to be essential for second language listening success.

Fourth, while HAs frequently tried to notice intonation features to help them in comprehension, LAs seldom did so. Specifically, HAs were found to have paid particular attention to pronunciation and intonation for better oral English through reading-aloud in the mornings and active participation in after-class English activities.

Lastly, while HAs tended to use another two types of selective attention strategies, which were to listen to specific parts of the input and to pay attention to visuals and body language for video texts, LAs reported never using these tactics. Listening has been proven highly demanding and very much memory consuming for Chinese EFL listeners (Wang, 2002). Thus, it is especially important that LAs learn to focus on specific parts of input and discard irrelevant or less important information to achieve satisfactory understanding. In the same vein, it is also important that they are able to capitalize on visuals and body language to compensate for their limited knowledge of the target language for better comprehension of video texts or in face-to-face communications with native speakers.

7.2.4. Metacognitive adaptation

High-achieving listeners engaged in varied and more sophisticated metacognitive adaptation, either for immediate change or for long-term listening development, compared to Las, who appeared to have restricted themselves to simple and limited forms of immediate and long-term metacognitive adaptations, as indicated in Table 7.

L2 listening research has well attested to the benefits and significance of evaluation after listening (Goh & Zeng, 2014; Rost, 2002; Vandergrift et al., 2006). As reported, the four participants showed marked difference in making long-term metacognitive adaptation for listening development. Although both high- and low- achievers tended to make metacognitive changes to reduce anxiety, regulate attention, and take down more notes to compensate for the limited working

memory, HAs also reported having engaged in other essential metacognitive adaptations for long-term listening development, which were not reported by LAs.

Table 7 HAs and LAs' metacognitive adaptation in listening based on the listening guide protocols

	High-achievers	Low-achievers	Adaptation
Immediate metacognitive adaptation for specific listening task	• Need to consult the dictionary to get to know some words and expressions involved in such games (HA1).	N.A.	Vocabulary
	• Take down those unclear parts and then consult the dictionary afterwards to make clear their pronunciations (HA1).	N.A.	Pronunciation
	• Could listen according to scripts and try to find some patterns (HA2).	• Scripts are helpful for repeated listening (LA2).	Listening scripts
Long-term metacognitive adaptation for listening development	• Often neglect to use these strategies while listening and I should learn to use these strategies more (HA1).	N.A.	Strategy use awareness
	• Calm down and do not be anxious if I can't catch the listening (HA1). • Try to reduce listening anxiety (HA2).	• Try to relax while listening (LA2). • Should prepare well before listening (LA1).	Reduce anxiety
	• Very important to focus attention while listening (HA1). • Understand more when I stay focused (HA2).	• Should focus more as I often get distracted (LA1). • Just can't concentrate on the task (LA2).	Attention
	• Very important to predict the content based on the title (HA1). • Guess according to common sense knowledge (HA1). • Quite important to predict before listening (HA2). • Sometimes the content could be predicted through test item choices (HA1). • Predict using the test items (HA1). • Try to train ability to preview the test items quickly (HA1).	N.A.	Prediction and previewing test items
	• Impossible to catch every sentence so key points are important (HA1). • Impossible to understand every part even if I want to (HA2). • Should focus on key points (HA1). • Try to catch sensitive and key details while listening (HA2).	N.A.	Theme and key points

• For the inferential test items, I need to grasp the main theme and key sentences (HA1).		
• Pay attention to some questions related to the theme and pay attention to several sentences in the beginning of the text (HA1).		
• Learn to catch the main theme of the text (HA1).		
• Learn to catch key sentences to improve accuracy (HA2).		
• Should take down more notes in case I forget what I've heard (HA1).	• Taking down more notes as it is helpful (LA2).	Note-taking
• Train my dictation ability consciously after class (HA1).	N.A.	Dictation
• Should learn to link what I hear to related questions while listening (HA2).	N.A.	Association

Note. N.A. = means not available from the data

Results showed that HAs possessed stronger strategic awareness in listening and they decided to learn and use more strategies in listening tasks. This is supported in one of HAs' SRLP protocol, as indicated in Excerpt 2.

Excerpt 2

I often neglect to use these strategies while listening and I should learn to use these strategies more. (HA1)

In addition, HAs were more aware of the value of prediction for listening success and tended to preview test items to get themselves better prepared before listening. Given the limited working memory and weak word recognition skills of Chinese EFL listeners (Zheng & Li, 2002), effective prediction and previewing test items or questions before listening, which is what HAs did in our study, seemed to have contributed the lion's share of learners' listening success.

Furthermore, HAs stressed the importance of the theme and key points of the oral texts. Unlike LAs, HAs would "pay attention to some questions related to the theme and pay attention to several sentences in the beginning of the text," as one high achiever put it. Therefore, the ability to grasp the theme and key points to guarantee overall comprehension and to solve inferential questions or test items appeared to well distinguish HAs from LAs.

Finally, HAs reported having made another two metacognitive adaptations for listening development, which were not found in LAs' listening protocols. One was to train the dictation ability and the other was to develop association skills. First, improving dictation ability directly addressed the urgent need to pass CET4 listening test, where dictation takes up almost 30% of the total

listening score. Second, active association across the comprehension process to link what has been heard to questions demonstrated HAs' dynamic assessment of their level of comprehension. It appears that LAs have much to learn from HAs in applying these two metacognitive adaptations to enhance their listening ability.

8. Conclusion

This study adopted a self-regulated learning (SRL) approach for developing L2 listening in independent settings. It helped to extend the current classroom-based, process-oriented discussions of L2 listening instruction into one that focuses on learner-oriented, self-regulated learning activities. It also provides evidence for the validity of transferring the theoretical construct of self-regulated learning to the area of second language acquisition, as first proposed by Oxford (1999) and explicated in Oxford (2011, 2017). This concept was further emphasized by Dörnyei and associates (Dörnyei & Skehan, 2003; Hornstra, van der Veen, Peetsma, & Volman, 2013; Tseng, Dörnyei, & Schmitt, 2006). At the same time, by adopting a metacognition-inclusive SRL framework, we were able to examine the use of strategies and how they can benefit language learners in self-directed listening activities.

As argued by Vandergrift and Goh (2012), strategy instruction during class time and listening practice after class need not be mutually exclusive. We demonstrated that listening teachers in China could use carefully designed metacognitive tools to help learners plan and prepare well for listening tasks, check and monitor comprehension, and evaluate strategic efforts in listening process in independent settings.

Finally, our study took the research on skilled listeners further by identifying distinct and differing developmental paths of self-regulatory skills in L2 listening for learners with different achievement levels. This research evidence was especially helpful for less skilled listeners to reflect on their poor performance in specific self-regulated learning phases. Listening teachers can also capitalize on the limited listening class time to offer individualized instruction for low achievers. As such, it was expected that low achievers' self-regulatory skills in listening could be greatly enhanced along the way for them to become skilled listeners.

Our study was limited in its scope as the proposed SRL approach focused primarily on examining listening as an individual cognitive entity and the developmental paths of learners with different achievement levels. Future research on self-regulation in SRL in L2 listening should include an examination of the affective and social aspects of the skill. In addition, research is needed in which both the constructive nature of learning and the important role that L2 learners play in the social process of learning to listen could be equally emphasized. How

teacher scaffolding or support can be integrated into the SRL approach, as well as how their on-going interaction with learners in an SRL program can help learners achieve more progress in listening also merits further research.

Furthermore, research that would contribute to fuller understanding of metacognition and self-regulated learning in L2 listening both within and beyond the classroom is warranted. Whether different listening task types exert a differential influence on learner's growth in metacognition and listening performance also appears to be an area requiring further research. Additional research is also needed to combine others' ratings (such as teachers' and peers') and self-ratings to produce comprehensive assessment of listeners' metacognition and self-regulated learning. Lastly, it should also be cautioned that the interpretation and discussion are based on feedback from two cases (two high achievers vs. two low achievers) only. Therefore, the generalizability of the findings is very much limited to the context where the case study was carried out.

In spite of this, the study can offer some practical insights for consideration. Firstly, L2 listening development outside class can benefit from a teacher-supported self-regulated learning approach. Instead of asking students to just "listen more," teachers can provide tools to support their learning endeavors. These tools, such as the SRLP, can help learners articulate their plans and chart their progress. More able listeners may be more motivated to adopt such an approach, and the weaker ones who want to master their listening would also be likely to invest more time and effort in it. Although this study showed that it was the higher-achieving students who benefitted more and were more engaged, teachers should not exclude weaker listeners from a teacher-supported self-regulated approach. They could use the two cases in this study to illustrate the importance of taking charge of one's listening development by engaging in and being committed to self-regulated learning beyond the classroom. Learners who are mainly motivated to pass examinations, however, may not fully appreciate the rationale for such an approach, as they may see it as taking away time from other language learning activities. Teachers would therefore need to decide for themselves whether or not it is necessary to complement their classroom instruction with such extensive listening activities. More importantly, they would need to be convinced themselves that their learners can benefit from such an approach, as this study has shown, and motivate their learners to invest time and effort in this form of extensive listening that can bring about longer term benefits in listening development.

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