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Theory, practice and research implications

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Metacognitive Instruction for Second Language Listening Development: Theory, Practice and Research Implications

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ABSTRACT

There has been a growing interest in and concern for the teaching of listening in the last 40 years. Looking back over the years, we can see how the emphases on teaching listening and the focus of listening instruction have changed. Although instructional practices were initially heavily influenced by models of the written language and a behaviourist approach, the focus has since moved to developing listening as a skill needed for constructing and communicating meaning. More recently, discussions about listening instruction have emphasised the role of strategy training and learner metacognition in facilitating comprehension. In this paper I discuss a metacognitive approach, drawing on understandings from educational research as well as second language listening studies. I explain its theoretical rationale and identify principles for carrying out metacognitive instruction, as well as outline general instructional objectives and learning activities for this purpose. Finally, I suggest possible research directions for examining the role of metacognition in second language listening and the relevance of metacognitive instruction to listening development.

Introduction and Background

Listening has for some time now been part of many language programmes (Brown 1987; Devine 1978; Dunkel 1991), but many second language (L2) listening scholars have asserted that it should be taught in a more theoretically-informed manner in the classrooms (e.g. Anderson and Lynch 1988; Buck 1995, Mendelsohn 1998; Vandergrift 2004). Brown (1987) observed that even when listening instruction began to receive attention in 1960s, it was heavily influenced by reading and writing pedagogy. Nevertheless, this began to change with Communicative Language Teaching (CLT) methodology, which emphasised the need to teach listening for effective oral communication. Brown further noted that three concepts had begun to inform listening instruction: 1) the difference between the spoken and the written language, 2) various dimensions of authenticity, and 3) the contextualisation of instructional tasks and language. The positive impact of these three concepts continues to this day.

More recent reviews of research by Rubin (1994), Lynch (1998), Vandergrift (2004), Flowerdew and Miller (2005) and Macaro, Graham and Vanderplank (2007) have drawn our attention to new evidence-based approaches to teaching listening in the last 20 years that are influenced by developments in linguistics and cognitive psychology. One of these is the metacognitive approach proposed by scholars such as Chamot (1995), Mendelsohn (1995, 1998) and Vandergrift (2004) which I will to discuss and expand later in this paper.

Table 1 Approaches to Listening Instruction

	Input	Instructional focus	Main learning activities	Dominant theoretical paradigms of learning and comprehension
50's-60's	Written texts read aloud slowly and clearly	Perception and decoding of sounds: phonemes, word stress and sentence-level intonation. Details contained in written passages read aloud.	Drills for discriminating sounds at word -and sentence-levels Dictation of written passages Answering comprehension questions based on listening passage	Behaviourist Bottom-up / linear processing of information
70's- 80's	Spontaneous spoken language and scripted texts with a degree of authenticity Face-to-face learner talk Expert speaker-learner interaction Authentic recordings	Information appropriate to the purposes (transactional or interactional) of the spoken texts	Practising core listening skills. Responding to spoken texts in socially and contextually appropriate ways (e.g. inferring attitude, taking notes, identifying details, etc.)	Interactionist/ sociolinguistic Top-down and context- driven interpretation
90's-present	Spontaneous spoken language and scripted texts with a high degree of authenticity Face-to-face learner talk	The use of listening strategies for enhancing comprehension and coping with problems	Practising core listening skills. Responding to spoken texts in socially and contextually appropriate ways Applying cognitive, metacognitive and social-affective strategies during listening Developing metacognitive awareness about L2 listening	Developing metacognitive awareness about L2 listening Interactionist/sociolinguistic Socio-cognitive models of comprehension

Table 1 shows the key phases in the evolution of L2 listening instruction, reflecting a deepening understanding of the construct of learner listening as a cognitive and communication skill within the field. Clearly, the phases are not distinct in reality, as old ideas do not automatically disappear overnight to make way for new ones. Moreover,

recommended practices are not always adopted in the classroom. Techniques used in the 1960s (for example, answering comprehension questions) were still found in classrooms and course books twenty years later when the CLT methodology was already popular in many places (Brown 1987).

My survey of some current course books and conversations with teachers revealed that these comprehension-based techniques have persisted even till today. For example, learners are still required to demonstrate their understanding of listening passages or video texts, albeit in new response formats, by choosing the correct answer from a number of options, writing summaries and using words from the listening input to complete sentences or text. One possible reason why this practice has persisted in spite of developments in language teaching methodologies is that the way listening is assessed in some high-staked public examinations has not really changed over the years. Nevertheless, in places where the influence of CLT is found in both teaching and assessment, we have seen more positive developments L2 listening instruction.

The CLT movement coincided with important theoretical developments concerning the constructive nature of text comprehension. These understandings can be seen in one of the key innovations during the CLT period, namely the role of pre-listening phases (Anderson and Lynch 1988; Underwood 1989; Ur 1984). Teachers were advised to include pre-listening activities to 'activate learners' *schemata*' (sets of knowledge structures stored in the long term memory). The activities would enable learners to use their prior knowledge to understand and interpret the meanings from text they would subsequently hear.

The CLT methodology foregrounds the importance of practising core listening skills, such as listening for details, listening for gist, predicting, listening selectively and making inferences. The main outcome of listening lessons, however, is typically the achievement of successful comprehension. With a focus on the product of listening, every activity becomes a test of the learners' listening ability. Although scholars have warned against using listening activities as a disguised form of testing (Sheerin 1987), this practice is in fact quite commonplace in many language classrooms even till this day.

Learners may become anxious because they have not 'done well' and may fear that they will be negatively evaluated by their teachers and peers. They work on improving their listening but many of them do not really know where to start other than to 'practise harder' on their own. They are unable to take control of their learning and do not know how to direct their extensive listening activities to achieve their learning goals. When they encounter problems, they also do not know how best to cope with them other than to 'listen harder'.

In the last 15 years we have seen many exciting ideas for teaching second language listening that are aimed at addressing these learner needs. The strategic approach works within a socio-cognitive paradigm to train learners in applying strategies in order to handle the demands of listening (Mendelsohn 1998). Teachers are advised to use techniques, such as teacher-modelling, to show learners the mental activities that they engage in to construct their understanding of listening texts. Modelling can be done through the teacher thinking-aloud about planning, monitoring and evaluating strategies (Chamot 1995), as well as demonstrating cognitive strategies of verifying informed

guesses (Field 1998). Teachers have also been encouraged to use pre-communication activities as a way of raising learners' awareness about listening processes (Buck 1995).

Vandergrift (2004) further proposed a metacognitive cycle to help learners integrate the use of strategies while listening. At specific stages in a lesson sequence, learners are prompted to use strategies to regulate their comprehension and achieve successful comprehension. The cycle includes important metacognitive processes such as verification and evaluation that effective learners engage in. These processes not only raise learners' awareness about strategy use, but also offer much needed scaffolding while learners are working with listening texts. Learners who successfully use these strategies to improve their comprehension will also experience an increase in motivation.

Teacher modelling and scaffolded listening practice in metacognitive processes are clearly valuable for helping learners *learn* how to listen. The techniques demystify the skills involved in successful listening by making implicit processes of skilful listeners explicit to novice listeners. Learners who want to practise 'harder' are shown tangible ways of managing their mental processes for listening. A limitation of current metacognitive approach, however, is that they tend to focus almost exclusively on using strategies for comprehend listening texts in class and does not go far enough in helping learners with other forms of learning to listen, both within and beyond the classroom.

What is needed, therefore, is an expansion of the current approach to engage learners in a wider range of metacognitive activities. Metacognitive learning activities should aim at deepening learners' understanding of themselves as L2 listeners and the demands and process of L2 listening, as well as teaching learners how to manage their comprehension and learning. I have argued elsewhere for the need to focus on a process-based approach to teaching listening (Goh 1997, 2002a). I refer to this as "metacognitive instruction", following the term's usage in educational psychology and instructional sciences. Metacognitive instruction for L2 listening development elicits and enhances learners' knowledge about learning to listen, as well as helps learners use effective strategies for managing their comprehension and overall listening development.

The Theoretical Basis for Metacognitive Instruction

At the heart of metacognitive instruction is the concept of metacognition which was introduced in cognitive psychology more than 30 years ago. The term was coined by John Flavell (1976, 1979) to refer to an individual's awareness of thinking and learning: what we are thinking, how we are thinking in relation to a learning task or situation and why we are thinking in a particular way. Metacognition also includes the ability to regulate these thinking processes. The following explanation by Flavell will help to illustrate this:

'Metacognition' refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, e.g. the learning-relevant properties of information or data. For example, I am engaging in metacognition (metamemory, metalearning, metacognitive-attention, metalanguage, or whatever) if I notice that I am having more trouble learning A than B; if it strikes me that I should double-check C before accepting it as a fact; if it occurs to me that I had better scrutinize each and every alternative in any multiple-choice type task situation before deciding which is the best one; if I sense that I

had better make a note of D because I may forget it. ... Metacognition refers, among other things, to active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective (Flavell, 1976, p.232).

Metacognitive awareness takes the form of experience and knowledge (Flavell 1979). Metacognitive experience is a feeling we have about our cognition, such as the feeling we have when we do not understand something, while metacognitive knowledge consists of our beliefs and knowledge about learning. Flavell defined metacognitive experiences as "any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise" (1979: 906). An example of this in L2 listening is when a learner is struggling with a word recognition problem and suddenly remembers a similar problem that he or she managed to solve in another listening event. Using the knowledge he or she has, the learner applies a similar strategy for solving the new word-recognition problem. Some metacognitive experiences, however, are fleeting and do not invoke any particular knowledge pertaining to learning. An example is when a learner feels a momentary sense of puzzlement and forgets or ignores it immediately.

Although individuals acquire metacognition through implicit socialisation with experts such as parents, older siblings, teachers, and even peers, there is a difference in each person's adequacy of knowledge and control (Veenman, Van Hout-Wolters and Afflerbach 2006). This is certainly true of second language learners. High proficiency EFL readers, for example, demonstrated better use of metacognitive strategies and richer metacognitive knowledge about the nature of reading in a second language (Zhang, 2001). Similar findings have also been reported in a number of studies for second language listeners (Goh 1998, 1999; O'Maley, Chamot and Küpper 1989; Young 1997, Vandergrift 1996, 1997; Young 1997).

Metacognition has been referred to as the "seventh sense" in learning (Nisbet and Shucksmith 1986) and many scholars have called for further in-depth investigation and systematic instruction in the classroom (Weinstein, Goetz and Alexander 1988). Recent discussion about multiple intelligences have also argued that metacognitive knowledge about strategies combined with self-monitoring can contribute powerfully to intelligent behaviour (Perkins 1995). Metacognition has been found to be one of the most reliable predictors of learning (Wang, Haertel and Walberg 1990) and the benefits of metacognitive instruction has been reported in different subject domains, such as Mathematics and Reading.

The construct of metacognition has been examined through many of its related components: beliefs, theory of mind, awareness, metamemory, higher-order skills, learning strategies, heuristic strategies, executive skills and self-regulation (Veenman et al. 2006). In the field of second language learning, Wenden (1987, 1991, 1998) first drew our attention to the enormous potential that the concept of metacognition had for understanding L2 learning. She also noted that several metacognitive terms had been used (sometimes interchangeably) in L2 discussion: beliefs, metacognitive knowledge, metacognitive skills, metacognitive strategies, learning strategies, comprehension monitoring and self-regulation. The proliferation of these terms indicate varying perspectives on the construct of metacognition and has resulted in a lack of consistency in the way metacognitive processes are conceptualised in the field of second language teaching and learning.

I am proposing a form of metacognitive instruction for L2 listening development that is based on the original definition of metacognition which combines metacognitive knowledge (Flavell 1979) and metacognitive strategies (Brown 1978). This combined approach captures the essential twin features of metacognition in learning, namely self-appraisal and self-regulation, and is one that has been accepted by most educational researchers investigating the construct of metacognition and the training of metacognitive skills (Paris and Winograd, 1990). Besides emphasising the importance of declarative knowledge in learning, such a definition also accounts for the current understanding about the executive functions of human cognition (Baddeley 2000). This definition has continued to find support within current scholarly efforts at developing a unified understanding of the concept of metacognition (Nelson 1996; Veenman et al. 2006).

My proposed methodology for metacognitive instruction is further situated within a broader framework that accounts for different cognitive and social processes in learning (Bruer 1998: 681):

- 1. Learning is an active, strategic and constructive process;
- 2. It follows developmental trajectories in subject-matter domains;
- 3. It is guided by learners' awareness and control of their mental processes;
- 4. It is facilitated by social and collaborative settings that value self-directed student dialogue.

This framework emphasises the constructive nature of learning and the important role that L2 learners play in the process of learning to listen. It takes into account learners' paths of development as they become more skilled at listening: beginning L2 listeners need to devote a great deal of attentional resources to processing words in streams of speech, but the process of perceiving aural input and interpreting meaning gradually becomes more automatised as they develop in their competence (Buck 2001; Hulstijn 2003; Rost 2002; Segalowitz 2003). Besides accounting for the role of metacognition in learning, this social-cognitive framework also underscores the cognitive and affective benefits of learners working together to explore ways of learning (Hancock 2004; McCafferty *et al.* 2006).

Metacognitive Instruction and L2 Listening

Metacognitive instruction can potentially heighten learners' awareness of their listening and learning processes and develop learners' ability to use appropriate strategies. Metacognitive instruction in reading has been shown to be beneficial particularly for weak first language readers (Pressley and Gaskins 2006) and some indications of its benefits have also been observed amongst weak second language listeners (Goh and Yusnita 2006). An exploratory study on the role of collaboration during listening tasks also shows a positive effect on young language learners' development of metacognitive knowledge about listening (Nathan 2008).

Research into metacognitive awareness about listening is still relatively new. Nevertheless, findings to date show that language learners demonstrate some degree of metacognitive knowledge about themselves as L2 listeners and the listening process (Goh 1997; Graham 2006; Sinanu, Palupi, Anggraeni and Hastuti, 2007) and this is true also of young learners (Goh and Yusnita 2006; Vandergrift 2002). Several recent studies also showed that metacognitive knowledge can be increased through classroom instruction

(Liu and Goh 2006; Mareschal 2007; Vandergift 2004). Two studies have also demonstrated a causal relationship between metacognitive instruction and statistically significant improvement in listening performance (Vandergrift 2007; Zeng, 2007)

How does learners' metacognitive knowledge about listening influence the outcome of their listening comprehension? One way in which this is possible is that it influences the manner in which learners approach the task of listening and learning to listen. Learners who have appropriate task knowledge about listening may plan, monitor and evaluate what they do, compared with those who approach listening in a random or incidental manner. Flavell argues for the positive effects metacognition has on learning in general:

I believe that metacognitive knowledge can have a number of concrete and important effects on the cognitive enterprises of children and adults. It can lead you to select, evaluate, revise, and abandon cognitive tasks, goals, and strategies in light of their relationships with one another and with your own abilities and interests with respect to that enterprise. Similarly, it can lead to any of a wide variety of metacognitive experiences concerning self, tasks, goals, and strategies, and can also help you interpret the meaning and behavioral implications of these metacognitive experiences (Flavell 1979: 908).

There is further evidence to suggest that language learners who are aware of the benefits of some listening strategies may also use these strategies to improve their listening comprehension during communication (Zhang and Goh 2006). Learners who are conscious of their own listening problems may also be motivated to find ways of addressing them.

Findings from the small number of studies reviewed here indicate that metacognitive instruction in listening can be beneficial in at least three ways: 1) It improves affect in listening, helping learners to be more confident, more motivated and less anxious; 2) It has a positive effect on listening performance; 3) Weak listeners potentially benefit the greatest from it. Clearly, more needs to be done to investigate the role of metacognitive instruction and examine factors that influence the effectiveness of such an approach. This is something I will return to in the last part of the paper.

Principles of Metacognitive Instruction

Research within and beyond L2 listening has consistently shown that even though metacognitive development can occur naturally through implicit socialisation with experts, it can be enhanced through explicit intervention and scaffolded learning experiences in the classroom (Veenman *et al.* 2006). The proposed metacognitive instruction framework comprises two key components of metacognition: metacognitive knowledge and metacognitive strategies.

Metacognitive knowledge

There are three dimensions of metacognitive knowledge (Flavell 1979). Each dimension addresses a specific area of declarative knowledge that L2 listeners should develop:

- Person knowledge: the way individuals learn to listen and the factors that influence one's own listening;
- *Task knowledge*: the nature and the demands of listening tasks;
- Strategy knowledge: effective ways to learn or accomplish a listening task

The categorisations of strategies by A.L. Brown (1978) have been applied successfully in L2 research and are useful considerations for developing greater self-regulation during listening and for general listening development:

- *Planning*: determining comprehension or learning objectives and deciding the means by which the objectives can be achieved;
- *Monitoring*: checking the progress of unfolding comprehension or overall listening development plans;
- Evaluating: determining the success of one's efforts at processing spoken input or the outcome of a plan for improving one's listening abilities.

Specific learning activities will have to be designed to help learners develop greater knowledge about the way various internal and external factors influence their own listening comprehension and learning processes. Through these activities learners will also learn about strategies for controlling and directing these processes themselves. The general instructional objectives for each component of metacognitive instruction are summarised in Table 2.

Veenman et al. (2006: 9) identified three key principles for successful metacognitive instruction:

- 1. Embedding metacognitive instruction in the subject matter to ensure connectivity.
- 2. Informing learners about the usefulness of metacognitive activities to make them exert the initial extra effort.
- 3. Prolonged training to guarantee the smooth and guaranteed maintenance of the metacognitive activity.

We can design two kinds of learning activity based on these principles (see Table 3).

The first is what I call *integrated experiential listening tasks*. These tasks enable learners to experience social-cognitive processes of listening comprehension as they are working on specific listening activities. These activities are mainly those they carry out using their course books or materials that their teachers have prepared, and the focus is typically on extraction of information and construction of meaning. By integrating everyday listening activities with metacognitive materials, we help learners become aware of various processes that are involved in L2 listening. In turn, they can learn to apply this knowledge to their listening development beyond the classroom, be it to explore their own self-concept as listeners, use appropriate strategies during listening or identify factors that influence their own performance in different listening tasks. Other types of integrated experiential listening tasks require more planning and direct commitment on the part of the learners. They are in the form of collaborative mini-projects which enable learners to co-construct metacognitive knowledge about listening as they work on the project.

The second type of activity is *guided reflections on listening*. The aim of these activities is to draw out learners' implicit knowledge about L2 listening and at the same time encourage them to construct new knowledge as they make sense of their own listening experiences. These reflections engage learners in not only thinking back to events that have taken place but also to plan ahead as a way of managing their own learning.

Table 2 General learning objectives for metacognitive instruction in second language listening

Metacognitive Knowledge

Person Knowledge

Develops better knowledge of self as an L2 listener:

- Examines personal beliefs about selfefficacy and self-concepts with regard to listening in a second language
- Identifies listening problems, causes and possible solutions

Task Knowledge

Understands the nature of L2 listening and the demands of the task of learning to listen:

- Experiences mental, affective and social processes involved in listening
- Differentiates different types of listening skill (e.g. listening for details, listening for gist, listening to infer information.)
- Analyses factors that influence listening performance (e.g. speaker, text, interlocutor, strategy)
- Compares and evaluates ways to improve listening abilities outside formal instruction

Strategy knowledge

Understand the roles of cognitive, metacognitive and social-affective strategies

- Identifies strategies that are appropriate for specific types of listening task and problem
- Demonstrates the use of strategies
- Identifies strategies that may not be appropriate for their learning style or culture

Metacognitive Strategies

Planning

Determines own listening (\blacksquare) and learning (\checkmark) goals and the means by which the objectives can be achieved:

- Previews main ideas
- Rehearses language needed for the task
- Identifies important parts of input to attend to
- ✓ Sets personal goals for listening development
- ✓ Seeks appropriate opportunities for listening practicing

Monitoring

Checks the progress of own comprehension while listening (\blacksquare) and general efforts at developing own listening ability (\checkmark).

- Checks understanding of message by drawing on appropriate sources of knowledge (e.g. context, factual, linguistic)
- Checks the appropriateness and accuracy of one's understanding against old and new information
- Considers progress of listening development in light of what has been planned
- ✓ Assesses chances of achieving learning goals.

Evaluating

Judges the success of own comprehension after a listening task (\blacksquare) and plan for developing own listening ability (\checkmark) .

- Determine the overall acceptability of one's understanding and interpretation of the message/information.
- Checks the appropriateness and accuracy of one's understanding against old and new information
- Assesses the effectiveness of strategies for learning and practice
- ✓ Assesses the effectiveness of one's overall plan to improve listening
- ✓ Assesses the appropriateness of learning goals set

Table 3: Metacognitive learning activities for second language listening development

Types of Metacognitive Instructional Task	Learning Activities	Descriptions	
A. Integrated experiential listening tasks	Metacognitive listening sequence ^l	A lesson sequence in which learners are guided at specific stages to orchestrate listening strategies for facilitating successful comprehension and participation in oral interaction, followed by personal evaluation of learning.	
	Self-directed listening	A set of prompts to guide learners in making pre-listening preparations, evaluating their performance and planning for future listening tasks.	
	Listening buddies	Learners work in pairs or small groups at regular intervals to select resources and identify strategies for their extensive listening practice.	
	Peer-designed listening programmes	Learners work in a small group to design a listening task for the rest of the class and in the process co-construct metacognitive knowledge about L2 listening.	
	Post-listening perception activities	Language-focussed activities conducted after a listening task to raise learners' awareness of phonological features that have affected their comprehension of the text.	
B. Guided reflections on listening	Listening diaries Anxiety and motivation charts	Using guiding questions to reflect on a specific listening experience, learners record their responses to issues related to the three dimensions of metacognitive knowledge. Learners draw diagrams to show the changes in their anxiety and motivation levels for various listening tasks they do in and outside class.	
	Process-based discussions	Small group or whole-class discussions that centre on the theme of learning to listen and related matters, such as useful social strategies in spoken interactions, ways of using internet resources and language-related problems in listening.	
	Self-report checklist	Learners evaluate their own knowledge and performance by referring to a list of pre-selected items of metacognitive knowledge about L2 listening.	

¹ Based on the original idea by Vandergrift 2003, 2004.

As reflection tasks can be repetitive and thus run the risk of being boring and tedious to learners after a while, a challenge for teachers is in designing new formats, identify areas of focus and determine pivotal points in a language course where these activities take place.

Both types of metacognitive learning activity can be used to encourage self-appraisal and self-regulation of comprehension and learning processes. They provide explicit guidance on how to listen and this is particularly useful for L2 listening. Each activity is delivered through a set of classroom procedures and the use of a wide range of learning materials. This is necessary to keep the metacognitive tasks fresh and appropriate for different types of listening comprehension and learning tasks (Goh in preparation). When learners listen, hearing and thinking processes happen 'inside the head'; the processes are not easily observed by others or even by the learners themselves. Metacognitive activities enable learners to uncover these processes and create scaffolded learning experiences where novices obtain guidance and support from experts. By making mental processes explicit and helping learners to monitor and evaluate their own development, we are also encouraging them to set more tangible comprehension and learning goals. When learners see the benefits they get from engaging in these metacognitive processes, they will be even more motivated to persist in their efforts to "work harder".

Finally, for metacognitive instruction to bear fruit, we should make it an integral part of the listening curriculum. Most of the activities suggested are simple and easily carried out, many of the smaller tasks are also 'recyclable'. We can therefore ensure that metacognitive instruction is sustainable throughout a language programmes More importantly, by varying and repeating some of these activities, we also develop in learners a habit of mind that is metacognitively alert and responsive to learning.

Research Implications

Metacognitive instruction has much to offer language learners, but there are issues that research can address so as to further clarify the role of metacognition in language development and help language educators design appropriate evidence-based curricula. I will outline these issues below:

1) The Construct of Metacognition in L2 Listening

There is a fairly substantial body of work on the role of metacognition in reading instruction (particularly in the first language), but the same cannot be said of listening. Nevertheless, listening research has benefitted from some of the core understandings emanating from reading research:

- a. Memory for text improves with the use of individual (single) strategies;
- b. Reading comprehension improves with the use of a repertoire of strategies;
- c. Direct explanation and modelling of improves comprehension;
- d. Direct teaching of metacognitive information increases strategy use;
- e. Development of strategy use takes much time and practice;
- f. There is value in teaching students how to self-direct and monitor comprehension;

- g. Students need to use what they know to understand new information;
- h. Many factors affect motivation, especially efforts made at using task-matched strategies;
- i. Competent thinking includes at least four major components: strategies, metacognition about strategies, world knowledge and motivation (Pressley and Gaskins 2006: 103-104),

Some of these understandings have been explored in listening, mainly through investigations into the role of prior knowledge, the use of listening strategies and the effectiveness of strategy training (see Macaro *et al.* 2007; Rubin 1994), but more research is needed, particularly in areas that have not been previously examined. There are currently only a small number of studies that examine metacognitive instruction in L2 listening. Although the results from these studies have been encouraging, we need to further understand specific ways in which metacognition improves listening comprehension and long-term listening development. There is a need to understand how contextual, learner and cultural factors may influence learners' knowledge and willingness to adopt strategies, the metacognitive instructional process and its outcome.

Listening comprehension ability has been found to be positively correlated with overall language achievement (Feyten 1991), but we know very little about the relationship between metacognition in listening and metacognition in language learning. Are the two also positively correlated? It would also be useful to find out whether metacognition is specific to listening development or general to L2 learning. Answers to these questions can inform educators on the way metacognitive instruction in language learning is best approached. If metacognition of language learners is general by nature, some form of generic instruction would be useful (Wenden 1991). Learners can then transfer their knowledge and strategies to new skills and areas of language learning. If, however, metacognition in L2 listening is a specific construct, then separate metacognitive instruction for listening would be more advantageous. Another related issue is the relationship between metacognition in L2 listening and metacognition in reading, another receptive skill. Are the two positively correlated? If they are, should metacognitive instruction in listening be combined with reading?

Research should also explore implications of the developmental process of cognition for L2 listening. Cognitive and educational psychologists tell us that individuals go through clear developmental stages, starting with theory of mind in the early and preschool years. Preschoolers may also demonstrate simple metacognitive skills if the tasks are interesting and pitched at the children's level of understanding (Whitebread, 1999). More sophisticated types of planning, monitoring and evaluating, a function of cognitive development and schooling, normally emerge from only about the age of eight to ten (Flavell, Miller and Miller 1993). How does this process of mental development influence metacognitive development in L2 listening and other areas of language learning? What are its implications for metacognition in young L2 learners in particular? How should instruction for young learners who are still developing metacognitively be differentiated from instruction for adult learners? There are indications that lower primary school pupils can observe their own use of listening strategies (Gu, Hu and Zhang 2005) and verbalise their metacognitive knowledge about listening (Goh and Yusnita 2006). It is agreed, however, their metacognition is

less developed than adult learners'. A question about metacognitive development which may also be valuable to L2 learning in general is: do the three dimensions of metacognitive knowledge develop at the same time or does is there a developmental trajectory? Are all three dimensions of metacognitive knowledge equally amenable to instruction?

2) Teachers, Learners and Instructional Processes

Metacognitive instructional research within and beyond the field of L2 listening has reported benefits for learners such as improved confidence and performance, but how much of this is understood or accepted by teachers who play a pivotal role in the instructional process? To what extent is metacognitive instruction facilitated or hampered by the teacher's own knowledge and attitudes? The issue of teacher capacity is certainly worthy exploring. Berne (1998) drew attention to knowledge about pedagogical theory and teacher preparedness as a factor in implementing new methods for teaching listening. Brown, (1987) also noted that innovative ideas for teaching listening from forward-looking scholars such as Rivers (1968, cited in Brown 1987) did not have a significant impact on day-to-day instructional processes and course books at that time. The chasm between research and practice is not unique to listening instruction. Better research does not guarantee more informed practice. Nevertheless, teacher educators can encourage teachers and teachers-in-training to have greater ownership of innovative practices. One way to do this is by engaging them in action research to explore some of the benefits of metacognitive instruction for themselves. For example, teachers can investigate the use of selected activities and materials for enhancing their own practice and improving their students' listening ability and motivation.

Metacognitive instruction in listening has centred mainly on explicit strategy training (O'Malley, Chamot, Stewner-Manzanares, Russo and Küpper 1985; Thompson and Rubin 1996; see also Macaro *et al.* 2007). More recently, new ideas for embedding strategy training within listening tasks have been proposed. Vandergrift's (2004) metacognitive cycle which inspired the metacognitive listening sequence activity proposed in this paper is one such example. There is, however, a need for greater diversity in metacognitive activities so as to address a wider range of learner needs in L2 listening development. The activities proposed in this paper are an attempt to increase the options for teachers. These activities have been used successfully in language classrooms while selected ones have also been used in research studies. Their relative effectiveness has yet to be compared, however.

Are there activities that are more effective at increasing learner metacognition? Comparisons across listening tasks can be made to help educators determine the extent to which differentiations are needed. Evidence on how these activities can be productively differentiated according to learning contexts and learner needs would also be helpful to teachers when considering all the options. A question that could be further explored is whether some of these activities lend themselves better to certain kinds of learning styles. For example, would the anxiety and motivation chart appeal more to visual learners and could therefore encourage these learners to make an extra effort at planning and evaluating their learning?

Although all language learners possess some metacognitive knowledge and skills, the amount and nature of what they know are not the same. Some learners also suffer from metacognition deficiency: availability deficiency and production deficiency (Veenman, Kerseboom and Imthorn 2000). Learners with an availability deficiency possess inadequate metacognitive knowledge and skills, while those with production deficiency are unable to apply their knowledge and skills because of a number of affective and task constraints (Veenman *et al.* 2006). This has been found to be true of L2 learners in listening and across the various language skill domains. This distinction clearly has implications for the way metacognitive instruction is planned and conducted. For example, research can help determine instructional procedures that enable availability-deficient learners to benefit from peers who possess richer knowledge and skills.

Another pertinent issue is how we can best describe or assess changes in learner metacognition resulting from instruction. One common method that researchers have used is the analysis of listening diaries, retrospective verbalisations, interview transcripts and group discussions. In addition to qualitative analysis of texts, questionnaires with high internal consistencies have also been used (Goh 2002b; Zhang and Goh 2006). A recently developed instrument, "Metacognitive Awareness Listening Questionnaire (MALQ)" (Vandergrift, Goh, Mareschal and Tafaghodatari 2006) has been used with nearly 1,000 learners from various countries. The instrument consists of 21 items that have been validated through rigorous statistical processes. It has high internal reliability and at the same time is easy for language learners to understand and use. (A modified copy of the questionnaire for classroom use is found in Appendix A.) Several studies have used the instrument successfully to measure learners' change in metacognitive awareness (Mareschal 2007; Zeng 2007). The questionnaire can be administered retrospectively, that is immediately after a listening task, or at any time during a listening course, depending on its purpose. Besides being a research instrument, the MALO can also be used as a teaching tool for raising learners' awareness about L2 listening. One fruitful area of research is to compare learners' self-reports in questionnaires with other sources of qualitative data such as diaries and interviews. Another is to examine the effect such a instrument has on improving learner metacognition in listening.

Another question researchers can examine is the relationship between metacognition and individual differences. Vandergrift (2005) found a positive correlation between metacognitive knowledge and motivation to learn to listen, while Zhang and Goh (2006) reported that learners' strategy knowledge has a positive correlation with learners' perceived strategy use. Gender was not found to have a significant effect on strategy knowledge for listening (Goh 2002b). Other questions that could be explored further include: What relationship does metacognitive knowledge have with cognitive styles, learning preferences, intelligence and language proficiency? How do these differences influence metacognitive development of L2 listeners?

Metacognitive knowledge often reflects some deep-seated beliefs that learners have and these (sometimes incorrect) beliefs are often resistant to change (Veenman *et al.* 2006: Wenden 1991). To examine the effectiveness of metacognitive instruction, we can examine the extent to which beliefs can be modified. For example, in terms of person knowledge, can L2 listeners with a negative self-concept develop a more positive image of themselves as L2 listeners? Further, does following up guided self-

reflection with teacher input and other kinds of learning activities make a difference to learners' performance? Liu and Goh (2006) found that it was useful to follow up a lesson based on a metacognitive listening sequence (where strategy training takes place) with process-based discussions in class. Goh and Yusnita (2006) observed that learners also benefited when the teacher followed up process-based discussions with learners reflecting through listening diaries.

Another question that is worth examining is what metacognitive knowledge and strategies learners demonstrate with regard to assessment of listening? How is learner metacognition about listening affected by testing and non-testing situations? Do generic test-taking strategies such as eliminating the least likely answers from possible options precede comprehension strategies? Tsui and Fullilove (1998) found that weak listeners who could not process text accurately because of poor word-recognition skills relied heavily on top-down processing. In spite of this, some of the candidates selected answers that were not contextually appropriate. It would be instructive therefore to explore the metacognitive knowledge and listening strategies of learners when they are confronted by different situations where they need to demonstrate listening comprehension.

Learners' comprehension is often affected by poor lexical segmentation and word recognition skills, and some scholars have called for a greater emphasis to be given to a 'bottom-up' approach to teaching listening (Field 2003; Hulstijn 2003). While this type of practice is clearly needed, there is a potential risk of learning becoming decontextualised and some teachers returning to drills involving sound discrimination. One way to address this is to integrate perception activities with normal listening activities as in the post-listening perception activity. After learners have completed a comprehension or communication task based on a listening text, they revisit the text to focus on phonological features of words in context. Research could be carried out to examine the effects of post-listening perception activities on learners' improvement in bottom-up processing skills and overall comprehension.

One of the guiding principles of metacognitive instruction is that learning is effective when students collaborate and co-construct knowledge through talk. To date, there have been few attempts at finding out whether collaborative learning can increase learners' metacognitive knowledge. Nathan (2008) has found some encouraging results amongst young learners who collaborated during a listening activity, but she also noted several problems that affected learning. It will be important to examine whether internal factors such as competition, disinterest and motivation could negatively affect learners' collaboration in accomplishing listening tasks, and more importantly, in co-construction of metacognitive knowledge.

Conclusion

In reflecting on teaching listening in the new millennium, I have deliberately avoided a discussion of the role of new technologies. Instead I have revisited the concept of metacognition and made a case for a more comprehensive approach to helping L2 learners develop metacognitive processes that could improve their listening. I believe that if teachers are equipped with knowledge and understanding of how learning to listen can take place, they will be in a good position to incorporate and evaluate the

many technological innovations we have today. It will also help some to reappraise their role as *teachers* of listening. The use of new media can make lessons on listening relevant to the changing communication needs of learners. Sound theoretical and pedagogical concepts, nevertheless, will continue to be the bedrock of second language instruction. Learning to listen in a language that one is not familiar with is hard work. Language learners, like all novices, need to be guided and supported in their efforts to achieve success. Fortunately, there is much that language teachers can do in this regard. Indeed, listening instruction has come a long way since the time when learners had to listen to written texts read aloud slowly and do comprehension exercises. With the current attention given to teaching and researching L2 listening and our increasing knowledge about human cognition, we can certainly look forward to seeing many exciting developments in the field in the next forty years.

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Appendix A

Self-report items on metacognitive awareness about L2 listening (based on the original MALQ by Vandergrift *et al.* 2006; used with the publisher's kind permission)

1	2	3	4	5	6	For each item, write the number that shows what you think
Strongly agree	Agree	Partially agree	Partially disagree	Disagree	Strongly disagree	

- 1. Before I start to listen, I have a plan in my head for how I am going to listen.
- 2. I focus harder on the text when I have to understand it
- 3. I find that listening in English is more difficult than reading, speaking or writing in English
- 4. I translate in my head as I listen
- 5. I use the words I understand to guess the meaning of words I don't understand.
- 6. When my mind wanders, I recover my concentration right away.
- 7. As I listen I compare what I understand with what I know about the topic.
- 8. I feel that listening comprehension in English is a challenge for me
- 9. I use my experience and knowledge to help me understand.
- 10. Before listening, I think of similar texts that I may have listened to.
- 11. I translate key words as I listen.
- 12. I try to get back on track when I lose concentration.
- 13. As I listen I quickly adjust my interpretation if I realize that it is not correct.
- 14. After listening, I think back to how I listened, and about what I might do differently next time
- 15. I don't feel nervous when I listen to English.
- 16. When I have difficulty understanding what I hear, I give up and stop listening.
- 17. I use the general idea of the text to help me guess the meaning of the words that I don't understand.
- 18. I translate word by word as I listen.
- 19. When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.
- 20. As I listen, I periodically ask myself if I am satisfied with my level of comprehension.
- 21. I have a goal in mind as I listen.