A Holistic Metacognitive Approach to EFL Listening and towards a Model of a 'Good' Listener: A Mixed-Methods Study

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Abstract

Metacognition is increasingly being credited as an influential factor in learning to listen in an L2. Some studies on metacognition, however, fail to show any link between metacognition and L2 listening. Furthermore, most of the existing studies investigated either strategy use or metacognitive knowledge as an amenable component of metacognition; a very few studies have explored metacognition from a holistic perspective. Therefore, this study fills this gap by exploring EFL listeners' both strategy use and metacognitive knowledge, particularly looking into differences between the less successful listeners (LSLs) and the more successful listeners (MSLs).

An explanatory mixed methods design was used to elicit data from EFL undergraduate learners majoring in English at public universities in Bangladesh. Data were collected in two phases over a period of 14 weeks: elicitation of quantitative data on perceived strategy use via an EFL Listening Strategy Questionnaire (EFLLSQ) from 395 students at seven universities was followed by elicitation of qualitative data on task-based, on-line strategy use via think aloud protocol, and metacognitive knowledge via semi-structured interview from a subsample of 15 LSLs and 15 MSLs.

Findings suggest a link between learners' listening comprehension and metacognition, and significant and considerable differences between the LSLs and the MSLs. Triangulation of strategies tapped via three tools suggests the think aloud technique as the most sensitive and suitable one. Finally, synthesis and triangulation of: (a) MSLs' strategy use; (b) MSLs' metacognitive knowledge, and (c) both LSLs and MSLs' perceptions of what makes a 'Good' Listener (GL), suggests a tentative model of a holistic GL. The study, therefore, argues that there is a positive link between metacognition and listening comprehension, and the metacognitive model of a GL can be used as a checklist in the context of the continuum of listening development for understanding listeners' metacognitive awareness and metacognition in action.

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Dedication

This PhD thesis is dedicated to my beloved parents,

Professor Md Ali Hossain & Mrs Momtaz Begum.

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Author's Declaration

I, Tasnima Aktar, declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References. The work in this thesis has not previously been published other than presentations at the following conferences and meetings:

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Chapter 1 Introduction

1.1 Introduction

The present study was an exploration of tertiary-level English as a Foreign Language (EFL) learners' metacognition in Second/Foreign Language (L2) listening. To understand learners' metacognition in L2 listening holistically, the study explored both of the amenable components of metacognition - learners' metacognitive knowledge (MK) about L2 listening and their metacognition in action, i.e., strategy use (see Vandergrift & Goh, 2012). To this end, a mixed methods design was devised to explore the relationship between learners' perceived strategy use and listening comprehension, and the differences between two listening ability groups in their task-based on-line strategy use and their MK about L2 listening. Perceived strategy use was elicited from a larger group of participants via a listening strategy questionnaire in Phase I of the study, and task-based, on-line strategy use and MK were elicited from a subsample of participants via think aloud protocol and semi-structured interview respectively in Phase II. The study revealed a positive link between listeners' metacognition and listening comprehension, and also showed significant and considerable differences between the two listening ability groups. The study, finally, provided a tentative model of a 'Good' Listener (GL) as delineated by the triangulation of more successful listeners' (MSLs)[1] strategy use and MK, and both the MSLs and the less successful listeners' (LSLs) perceptions of what makes a GL.

In the following sections, this chapter presents the rationale of the study (Section 1.2), the aims and research questions of this study (Section 1.3), the significance of this study (Section 1.4), and finally outlines the structure of the thesis (Section 1.5).

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[1] Participants scoring more than 9 out of 20 discrete marks in the listening test were tagged as MSLs, and participants scoring less than 9 were tagged as LSLs. See Chapter 3, section 3.3.2.1 for further information.

1.2 Rationale

The rationale of the study involved both a research rationale – a gap within the literature, and a context rationale - contextual necessity. In Section 1.2.1 below, an overview of the research rationale is presented, a detailed discussion of which is found in Chapter 2. Section 1.2.2 discusses the context rationale in detail.

1.2.1 Research Rationale

In L2 learning, the role of listening as a language skill is pivotal. The importance of listening skill was first perceived with the emergence of the Audio-lingual Method, before which all the teaching methods were basically concerned with reading and writing skills. After that, Hymes' communicative competence, contrary to Chomskyan linguistic competence, offers a paradigmatic perspective to language learning and teaching, which focuses on the 'rules of use,' that is, on social context (Hymes, 1972). It is in this view that listening gains importance, where the focus is on the communicative use of language; communicative competence becomes the goal of language learning. Over the last few decades with the new wave of communicative competence in language teaching, there arose an increasing awareness of the significant role of listening in communicative skills (Rivers, 1981). From the 1980s through to the 1990s, research highlighted the critical, integrative role that listening plays in language acquisition (Brown & Yule, 1983; Færch & Kasper, 1986; Feyten, 1991; Rost, 2001). With this emergence of the Communicative Language Teaching (CLT) approach, listening began to be seen as a prominent language skill; it finally earned 'its rightful place' (Vandergrift & Goh, 2009, p. 395). In CLT, however, listeners still face challenges (Field, 2008a; Vandergrift & Goh, 2012). One of the reasons is often neglecting listening in favour of speaking where listening is often "the sleeping partner in the business of oral communication" (Vandergrift & Goh, 2012, p. 8). Listening is still not actively taught

(Clement, 2007); in the name of teaching it is mostly assessed rather than taught for the processes used to achieve comprehension (Field, 2008a; Goh, 2010; Graham, 2017; Graham, Santos & Vanderplank, 20011).

Listening is a complex cognitive skill (Field, 2008a; O'Malley & Chamot, 1990; Rost, 2011; 2001; Vandergrift & Goh, 2012) and L2 listeners face numerous difficulties. Listening is a highly automatic process (Field, 2004), taking place in real time, which entails the necessity of automatic processing (Buck, 2001). Unlike reading, listening is never recursive, rather transient in nature (Field, 2008a). The obvious and important difference between spoken and visual word perception is "that spoken words are present only very briefly, whereas a written or printed word is there in front of you for however long you want to analyze it" (Harley, 2008, p. 258). This makes segmenting stream of speech an arduous task. These factors also create a sense of anxiety in the L2 learner (Arnold, 2000). Furthermore, listeners have to make meaning out of the spoken text received, by suppressing irrelevant information and mapping with context and prior knowledge (Harley, 2008). That is, listening involves various real-time bottom up and top down processes. As such, listening is the skill that L2 learners feel least comfortable with (Graham, 2006). This eventually has become the most difficult skill to learn and to make progress in (Graham, 2011; Graham & Macaro, 2008; Vandergrift, 2004).

It is, however, learner-oriented instruction that emphasises teaching learners how to listen. A considerable amount of research has also taken place on learner-centred teaching of listening which has called for a strategy-based approach to listening instruction (see Chamot, 1995; Macaro et al., 2007; Mendelsohn, 1994; Vandergrift, 2007). Thus, listening strategies once treated as Cinderella of communication strategies (Vandergrift, 1997a) now receive much recognition in a learner-centred approach to listening. Finally, a metacognitive approach to teach listening was proposed by Goh (1997, 2008), Vandergrift (2004, 2007),

and Vandergrift and Goh (2012). This metacognitive approach focuses on what listeners can be aware of and what they can do to help themselves listen better when engaging with aural input and meaning making. This entails both being aware of the processes and factors involved in listening i.e., metacognitive knowledge and how to manage them i.e., use of strategies (Vandergrift & Goh, 2012).

Within the metacognitive framework, metacognitive learning activities aim to deepen learner understanding of themselves as L2 listeners, raise greater awareness of the demands and processes of listening, and teach learners how to manage their own comprehension and learning (Vandergrift & Goh, 2012, p. 12). Thus, holistic metacognition receives greater attention in the metacognitive approach, which emphasises both MK and strategy use of a listener. However, existing listening strategies research is not conclusive and also needs to be explored in different EFL/ESL contexts with different learner levels (Macaro et al., 2007), and studies on MK about L2 listening is a young field (Vandergrift et al., 2006). Most importantly, studies looking into L2 listeners' metacognition from a holistic perspective, comprising both MK and strategy use, are very limited. More attention has to be given to the processes involved; how learners should listen and comprehend information, how to process the listening input, and manage and control themselves (Vandergrift & Goh, 2012). My study aimed to fill this broad research gap.

1.2.2 Context Rationale

It was necessary to devote this section to setting the scene for the current study in detail whilst reserving the research rationale in detail for the literature review chapter (see Chapter 2). The EFL context is Bangladesh is different from other EFL contexts, even in Asia. Unlike EFL contexts in China, Japan, Taiwan, EFL learners in Bangladesh have significantly less exposure to listening to English outside the classroom and on screen.

Therefore, the EFL context in Bangladesh is a very "input-poor" context (see Zhang, 2001). Due to students' limited exposure to spoken English and limited teaching of English pronunciation, Bangladeshi students face problems in English grapheme- phoneme distinction and consequently fail to decode the target spoken language, even though they know the words in written form (Akter, 2005; Maniruzzaman, 2008). Moreover, English being a stress-timed language, unlike syllable-timed Bengali language, creates pronunciation problems amongst Bangladeshi learners (Maniruzzaman, 2006; 2008), hence listening seems to be a challenging skill for them (Maniruzzaman, 2008). Maniruzzaman (2006) observed Bengali speaking EFL learners' decoding problems arising from L1 interference which may hinder their acquiring expected auditory skills. Because of less exposure to listening in English and their attitude towards English listening, their use of strategies to manage incoming text and making meaning out of it may also be characterised by this specific context. There is empirical evidence that strategies are context-specific and nationality is a major factor influencing the use of learning strategies (Hsiao & Oxford, 2002). Therefore, the EFL context of Bangladesh merits investigation.

This section discusses four main points regarding the EFL context in Bangladesh which is relevant to the present study. First, it discusses the Language History of the People's Republic of Bangladesh; second, prevalent compulsory EFL education; third, English education and teaching listening in higher education; and fourth, researching listening in EFL Bangladesh.

1.2.2.1 Language History in the People's Republic of Bangladesh

With the emergence of Bangladesh as an independent country in 1971, the mother tongue Bengali enjoys high esteem and the status of being the only state, official language, as Bangladesh (formerly East Pakistan) fought for its mother tongue in 1952 (Banu & Sussex,

2001). The nation observes 21 February as Mother Language Day, which eventually became International Mother Language Day in 1999. As such, Bangladeshi people have a strong attachment to Bengali language; therefore, after its independence the first President Sheikh Mujibor Rahman declared Bengali as the only state language and asked that Bengali be used in every sector of life- in the major domains of administration, education, law, and the media (Banu & Sussex, 2001; Imam, 2005). Later, as stated by the Ministry of Establishment (1987), Bengali was strictly prescribed to be used for record keeping, laws, legal actions and proceedings in government offices, courts, and in official and semi-official correspondences, except for some foreign relations and autonomous institutions affecting the use of English in those domains (Banu & Sussex, 2001; Ministry of Establishment, 1987). According to the Ministry of Establishment (1987), if anyone puts forward an appeal to any of the institutions mentioned in any other language than Bengali, it will be considered illegal. Any other language, therefore, gets very little opportunity to be practised.

1.2.2.2 Compulsory EFL Education

English as a foreign language (EFL) is learnt and taught for 12 years, from grade 1 to grade 12, as a compulsory subject in the educational system of Bangladesh (Brunfaut & Green, 2017; Hamid & Baldauf, 2008; Rahman & Rahman, 2012). The education system in Bangladesh consists of three principal stages: primary, secondary, and tertiary/higher education. Higher/tertiary education is offered by public and private institutions such as universities, and colleges. Parallel with mainstream formal education, students can also choose to study at Madrasahs that offer Islamic religious education. There are government supported and private educational institutions at all educational levels (Middlehurst & Woodfield, 2003, p. 4).

English education is compulsory in both primary and secondary education systems. Primary education starts from the age of 5 to 10 for Grades 1 to 5. Secondary education has three divisions - junior secondary (Grades 6 - 8), secondary (Grades 9 - 10) and higher secondary (Grades 11 - 12), offering three certificates: the Junior School Certificate (JSC); the Secondary School Certificate (SSC); and the Higher Secondary School Certificate (HSC). At present, primary and secondary students have to face four national examinations for their certificates: the PSC, JSC, SSC, and the HSC. None of these certificate examinations assesses EFL learners' proficiency in terms of the four skills. EFL learners are only assessed on their reading and writing skills, not the remaining two skills - listening and speaking - in the two terminal and the final examinations of the year. A range of English-medium schools typically funded and operated privately also exist, that until recently were not officially registered with the Government's Ministry of Education (Middlehurst & Woodfield, 2003). Middlehurst and Woodfield also state that these schools have grown significantly in response to market forces and demand, and the number of students increased by 12% in 2000. The curricula offered in these schools are British, and students prepare for their General Certificate of Education (GCE) O and A Levels.

EFL teaching and learning has gone through many changes within the short span of the country's independence, for example from the Grammar Translation Method (GTM) to the Communicative Language Teaching Approach (CLTA) (Hamid & Baldauf, 2008). Communicative English in the form of a textbook called English for Today was introduced into secondary level education (starting at Grade 6) by the National Curriculum and Textbook Board in 1996. The goal of this curriculum was to promote communicative competence, as students lacked the expected communication skills needed for real life communication, due to long-existing, traditional GTM (Hamid & Baldauf, 2008).

Although the goal of the on-going curriculum, prescribed by the National Curriculum and Textbook Board (NCTB) is communicative competence, to obtain proficiency in all four basic language skills - listening, speaking, reading and writing - Bangladeshi EFL learners' performance in EFL is 'far from satisfactory' (Hamid & Baldauf, 2008; Roshid, 2009), particularly in listening and speaking skills more than the other two skills. The reasons are many as to why these two skills are often overlooked. To understand this we need to look back to the prevailing education system in Bangladesh. Amongst others, one crucially obvious reason is not implementing CLT principles in the classrooms, although teachers are supposed to do so (Hamid & Baldauf, 2008; Rahman & Rahman, 2012; Roshid, 2009; Yasmin 2009). Although the Ministry of Education has been trying to implement the CLT approach in Bangladesh for more than a decade through teacher training and textbook writing projects like the English Language Teaching Improvement Project (ELTIP) and others, there has been no obvious improvement in the English teaching-learning process (Rahman & Rahman, 2012). A significant factor for not implementing CLT principles in the classrooms is the on-going assessment system of English (Brunfaut & Green, 2017; Podder, 2010); very little evidence is seen in the practice and assessment of listening and speaking skills (English in Action, 2009; Brunfaut & Green, 2017).

Recently, Ministry of Education, Bangladesh aims to introduce continuous assessment of listening and speaking skills and with this aim, Brunfaut and Green (2017) conducted a recent baseline research, which investigated the current practices and perceptions on English listening and speaking assessment in Higher Secondary Schools (locally named colleges, immediate before tertiary level). The study suggested that the majority of English language teachers in Higher Secondary schools are not ready yet to implement a system of continuous assessment of their students' English listening and speaking skills, and problems were also at the level of the curriculum, schools and their facilities, and learners. The researchers also

cautioned that there is a risk of negative washback due to the limited weighting currently attributed to listening and speaking in the high-stakes final exams, the restricted range of test formats and assessment criteria in those exams, and the lack of clarity of the assessment criteria (p, 77). The study, thus, reported that several educational, linguistic, pedagogic, practical, professional, and technical factors currently inhibit the implementation of effective assessment of listening and speaking in English.

As such, the on-going situation is not very optimistic about introducing assessment of the listening skill in pre-higher education level, and which can again be one of the main demotivating factors for not teaching the skill in the school classroom. This situation accounts for poor listening proficiency among EFL learners in Bangladesh, even in their tertiary levels and this causes problems whilst listening to teachers' lectures (Alam & Sinha, 2009), although English (including four language skills) is offered as a compulsory subject in many disciplines including English at tertiary level since 1990 (Rahman, 2005), however with limited practice of listening skill (Khan, 2000). However, recently a separate module on listening and speaking (e.g., Communication Skills: Listening and Speaking, Basic English Language Skills: Listening and Speaking) is being offered in the first year of tertiary level, particularly among students majoring in English at many public as well as private universities, and it is mainly from tertiary level that the students are explicitly exposed to teaching of listening and some form of assessing of the skill.

1.2.2.3 Teaching Listening in Higher Education

Tertiary level education in Bangladesh offers an English module in the first year of a BA programme for any subjects, although this fundamental module often encompass reading, writing, grammar or vocabulary elements, not all four macro skills. Sometimes, such module on English language introduces the listening skill as a component. However, for BA in

English, a number of universities offer modules e.g., Basic English Language Skills, English Language, and Communicative Skills: Listening and speaking, which has a component of listening, like a sleeping partner of speaking (see Vandergrift & Goh, 2012). These modules are usually offered in the first year of a Bachelor Degree in English. Although minimally, tertiary level EFL learners in English receive teaching of listening, and sometimes they are also assessed on the skill. However, with limited exposure to and practice of teaching in pre-higher education, these students face numerous problems whilst listening to teachers' lectures, seminars and talks, communicating in the classroom, understanding instructions and carrying out tasks (Alam & Sinha, 2009; Chaudhury, 2011; Hedge, 2001).

The EFL learners' problem with listening is partially historical, as they have not been taught the skill before on the grounds that listening is not tested in the examinations and it is difficult to teach and test listening in the context of large classes with almost no logistical support (Alam & Sinha; Podder, 2010). As a result students, even after their graduation, cannot communicate well in English and the average English language skill level of university students in terms of communicative function is equivalent to that which is set by the Government for students in grade seven (Imam, 2005). As listening is a much neglected skill from the beginning to date, there has been less motivation amongst EFL learners. Compared to other skills, the listening level of the students are very poor (Alam & Sinha, 2009; Imam, 2005).

At the tertiary level, however, proficiency in listening is deemed important. Majoring in English demands students to be well equipped with communicative competence, along with linguistic competence. It is because at the tertiary level English education, listening to teachers' lectures and comprehending them, and interacting with teachers and peers in English are very important. Therefore, training second language learners in listening to English is particularly important at the tertiary level, because they need to comprehend the

language of classrooms and lecture halls (Alam & Sinha, 2009; Hedge, 2001). Moreover, the importance of listening, as an integrative skill, is also increasingly being recognised; listening competence is important for learning language through comprehensible input (Alam & Sinha, 2009). As such, listening is an important macro skill and almost a pre-condition of the other three macro skills. Besides higher study in the country, students are also going for foreign degrees and competing in global education. Therefore, to equip learners with necessary listening proficiency in order to cope with the higher education system home and abroad, effective teaching of listening is imperative.

Many of the universities are now giving more attention that listening needs to be learnt and taught, and practised and assessed along with other skills, and offer a listening component in the EAP curriculum (e.g, Chaudhury, 2011). However, the learning and teaching of listening should be done in an efficient way that will ease and motivate the learning and teaching of it and will eventually make the teaching-learning effective (Alam & Sinha, 2009). To this end, both the learners and teachers need to be aware of a myriad of processes involved in listening so that a better teaching and learning experience takes place, and in this case metacognition- being aware of the processes involved i.e., metacognitive knowledge about EFL listening and use of strategies to handle and manage them, can help in learning to listen.

1.2.2.4 Researching Listening in Bangladesh

Despite the importance of listening at the tertiary level for students majoring in English and the problems they face in the classroom, research on the EFL listening of Bangladeshi learners is scarce. A few of the studies e.g, Alam and Sinha (2009), Abedin, Majlish and Akter (2009) were conducted on tertiary level listening; however, both of them were in private universities context. To my knowledge, only study done at a public university

is Chaudhury (2011) which studied listening whilst investigating English needs of Humanities students at Dhaka University. The teaching-learning environment and students' experience as well as their educational and economic backgrounds might be differentiating factors in English listening experience from those in public universities.

Both the above-mentioned studies at private universities have, however, some limitations whilst the study in a public university context devoted partial attention to listening. Alam and Sinha (2009) is a descriptive study, and based on their own perceptions and observations, they pointed out some listening problems of tertiary students majoring in English. They also proposed a methodological framework to enhance listening; however, the framework was basically based on existing literature of other contexts. Abedin, Majlish and Akter (2009) is an empirical study and reported on findings of a questionnaire designed to collect data on a few aspects of problems from both students and teachers from about 10 private universities. The questions elicited MCQ data e.g., reasons of the problem the students face in listening to teachers' lecture, are content/ pronunciation/ poor listening skill/ all. Little is known regarding the listening processes and problems, from such a study of six closed questions, mostly of external factors e.g., logistic support, way of delivering lecture, including listening skill in the curriculum. Besides lack of rigour, the study is not primarily let alone an in-depth study on listening difficulties listeners face in listening. Whilst investigating English needs of Humanities students at Dhaka University, Chaudhury (2011) found that students' abilities including in listening, fell short of the required proficiency level. Whilst more than 50% students were of average listening ability, many of the students are weak at different listening sub-skills: 25% students weak at carrying out instructions or directions, 26.6% students weak at understanding seminars and talks.

It seems that there are only a few studies in a private university context and almost no studies in a public university context in Bangladesh which gave whole attention in exploring

the listening behaviour of tertiary level EFL learners. Therefore, little is known about public-university EFL learners' perceptions of EFL listening and their approach to process and comprehend listening. As an EFL teacher at a public university, I have observed how learners struggle in listening to their teachers' lecture as well as in a listening (and speaking) module, recently offered. Their poor performance in the continuous and year final assessments intrigues me to look into their problems in depth and try to find potential ways to overcome those problems. Meanwhile I collaborated on a paper on learning strategies (Islam & Aktar, 2011) which also inspired me to dig deeper into learner metacognition. I had an urge to learn on a larger scale what listening strategies are at the disposal of tertiary level EFL learners majoring in English, how they approach listening and process and comprehend the incoming text, and their belief and perceptions of EFL listening, which can provide an insight into learners' perceptions and approach to listening and eventually inform teaching and learning of listening in an EFL context. To address this issue and fill the existing gap in an EFL context of Bangladesh, the present study sought to explore tertiary EFL listeners' metacognition in L2 listening; the relationship between listening comprehension and off-line and on-line listening strategy use, and learners' MK about EFL listening in the "input poor" EFL context of monolingual Bangladesh.

1.3 Aims and Research Questions

The aim of this study was to address the gap in the literature in relation to tertiary EFL learners' metacognition in L2 listening by exploring their strategy use (offline and online) and metacognitive knowledge. Unlike existing studies, in which researchers have approached metacognition in an L2 by researching either strategy use or metacognitive knowledge, the aim of this study was to approach metacognition holistically. To achieve this overarching aim, the study targeted the following objectives: a) exploring the relationship between

perceived strategy use and listening comprehension of a larger groups of participants; b). exploring the differences between LSLs and MSLs in their task-based, online strategy use; and c) exploring LSLs' and MSLs' perceptions of a GL and of themselves as listeners. In order to operationalise these objectives within the overarching aim of understanding metacognition holistically, the following research questions were formulated:

- RQ1. Is there any relationship between tertiary-level EFL learners' perceived strategy use and their listening comprehension in the context of Bangladesh?

- RQ2. Are there any differences between less successful listeners and more successful listeners in their task-based, on-line listening strategy use?

- RQ3. What perceptions do the less successful listeners and more successful listeners have of EFL listening?

1.4 Significance of the Study

The significance of the study primarily lies in its adding knowledge to existing metacognition research in L2 listening. This study makes several original contributions; theoretical, methodological, and contextual. One of the main contributions is that the study fleshes out a tentative model of a GL from a holistic metacognitive perspective. The significance of the study is discussed below.

This study adds knowledge to the theory of learning to listen. Most of the previous research has tried to understand learning to listen either through exploration of learners' strategy use or their metacognitive knowledge. The present study attempted to gain an insight into learning to listen by exploring metacognition holistically- both the metacognitive knowledge and the strategy use of a particular group of listeners. The study thus revealed a greater insight into learners' listening processes, all the factors involved in the listening

process and the ways to approach a listening task. The study also showed that listeners' metacognition could be limited by lack of insufficient linguistic knowledge. Insight into holistic metacognition could inform the learning and teaching of L2 listening.

Numerous strategy researchers have emphasised GL strategies by exploring successful/ effective/ skilled listeners' strategies (e.g., O'Malley et. al., 1989; Vandergrift, 2003b), and a few research studies on metacognitive awareness have revealed what makes a GL by exploring successful/effective/skilled listeners' metacognitive knowledge, particularly strategy knowledge (e.g., Imhof, 1998; Vogely, 1995). As such, the studies have included a partial metacognitive approach to reveal a model of a GL; either a GL's strategy use or metacognitive knowledge. Very few studies (e.g., Goh, 1998) have investigated high-ability listeners' metacognitive awareness by looking at both MK and metacognitive strategy use (not all categories of strategies). However, Goh (1998) did not attempt to synthesise high-ability listeners' MK and metacognitive strategy use to see what a high-ability listener looked like as whole. Moreover, she did not explore learners' perceptions of a GL. Therefore, the present study has merits in its development of a holistic model of a GL from a metacognitive perspective.

This study makes a methodological contribution as well. Triangulation of strategies collected via three data collection methods uncovered that think aloud data and interview data are, to a great extent, in congruence; however, the questionnaire data failed to corroborate those collected via think aloud protocol and interview. Therefore, the study revealed that both think aloud protocols and interviews are more sensitive tools than questionnaires for tapping into learners' strategies. However, between the think aloud protocol and the interview, the think aloud protocol attempts to tap into online mental processes whilst learners are performing a listening task and reveals their thought processes in solving listening problems. Thus, think aloud protocols try to capture task-based, actual strategy use through

introspection. It is therefore argued that a think aloud protocol is the most sensitive and the best strategy data collection tool so far. Thus the rigor of the study was enhanced. Very few studies have used three different tools to investigate students' strategies.

The study's originality also lies in its exploration of metacognition in L2 listening in the novel EFL context of Bangladesh, a monolingual country where languages other than the mother tongue enjoy less importance. It is also an EFL context where the opportunity to hear English is very much limited, except for in the academic domain.

1.5 Structure of the thesis

This thesis consists of eight chapters, including the current chapter, Chapter 1 - Introduction. The remainder of the thesis is structured as follows.

Chapter 2 presents the conceptual framework this thesis is based on (in Sections 2.2, 2.3, 2.4, and 2.5) and a review of the relevant studies the present study is guided by (in Sections 2.6, 2.7).

Chapter 3 concentrates on the research methodology employed to answer the proposed research questions in two phases of the study. It explains the research paradigm chosen and research approach and design appropriate to addressing the research questions (in Sections 3.2, 3.3, and 3.4). Sections 3.4 to 3.7 discuss the pilot study, the researcher's stance, ethical considerations and problems encountered whilst conducting this study.

Chapters 4, 5, and 6 report on the results and findings in response to the three research questions investigated in the two phases of the study. Chapter 4 presents the results and findings of listening strategy questionnaire and listening test data from 395 participants in response to RQ1. Chapter 5 presents the results and findings of the task-based, online listening strategy use of a subsample of participants comprised of 15 LSLs and 15 MSLs to

address RQ2. Chapter 6 analyses interview data on the groups' perceptions of a GL and of themselves as listeners to answer RQ3.

Chapter 7 extends the analysis by interpreting and discussing the main findings in Chapters 4, 5, and 6 in relation to existing literature. The first part (Sections 7.2, 7.3, 7.4 and 7.5) offers a discussion of the findings in Chapters 4, 5, and 6, by interpreting and locating them in the existing literature. The second part (Sections 7.6 and 7.7) presents triangulation of the findings: triangulation of strategy data, and triangulation of MSLs' strategy use and MK and both groups' perceptions of a GL, towards a tentative model of a GL.

Chapter 8 concludes the thesis by reiterating the focus explained, summarising the key findings, and highlighting the original contributions of the study (in Sections 8.1, 8.2 and 8.3), and acknowledging the limitations and discussing implications of the study, and outlining directions for future research (in Sections 8.4, 8.5 and 8.6).

1.6 Conclusion

This chapter has given an overview of the study in Section 1.1, presented the rationale of the study in Section 1.2, articulated the aims and research questions in Section 1.3, and discussed the significance of the study in Section 1.4. Finally, how the whole thesis is structured is outlined in Section 1.5. The next chapter, Chapter 2, presents the conceptual framework and guiding literature of the present study.

Chapter 2 Conceptual Framework and Guiding Literature

2.1 Introduction

L2 listening is a complex cognitive skill to learn (O'Malley & Chamot, 1990; Rost, 2001), however, metacognition has the potential to enhance L2 listening (e.g., Goh & Taib, 2006; Graham & Macaro, 2008; Thompson & Rubin, 1996; Vandergrift & Tafaghodtari, 2010). For the last four decades, L2 listening has attracted the attention of a great deal of researchers for its being a critical skill in acquiring an L2, at the same time as for the complexities of the skill to be learnt and taught. However, only recently, has a learner-centred, process-based approach emphasised the important role of metacognition in L2 listening. Review of existing literature reveals that more research is needed to understand the nature of the relationship between metacognition- holistically with its components of metacognitive knowledge and strategy use (Goh, 2008, Vandergrift & Goh, 2012) - and L2 listening. More studies are needed in different contexts (Graham et al., 2011; 2008; Vandergrift, 2003b), with different measurement tools (Macaro et al., 2007), amongst different kinds of learners (Macaro et al., 2007, Vandergrift, 2003b) which will reveal the role of metacognition in learning to listen.

The aim of this chapter is to provide the conceptual foundation for listening comprehension; processes involved in L1 and L2 listening (in Section 2.2) and role of metacognition (Section 2.3) with its principal components of strategy use and metacognitive knowledge (in Sections 2.4, 2.5), and to situate this current research in the context of existing studies (in Sections 2.6, 2.7). This is not an exhaustive review of existing literature in the field of listening comprehension, metacognition, metacognitive knowledge and strategy use, rather a general overview of the processes involved in listening comprehension and the

learning of it, and specific literature closely related to and which guided this study and informed the research gaps to be addressed in this study.

2.2 Processes Involved in Listening

Listening is a complex cognitive skill (Field, 2008a; O'Malley & Chamot, 1990; Rost, 2011; 2001; Vandergrift & Goh, 2012) in which a bundle of related processes are put in action (Lynch, 2002, p.193) in order for knowledge construction, not only reception of the incoming information (Rost, 1990, p.3). Unlike reading, listening is never recursive (Field, 2008a). The difficulty which is unique to listening as a mode of input processing is that spoken words are present very briefly whereas a written word is there for forth and back interpretation (Harley, 20008). Thus, listening being a highly automatic process (Field, 2004) and taking place in real time entails the necessity for automatic processing (Buck, 2001). Listening involves processes including speech perception and word recognition (see Harley, 2008), decoding and meaning building (Field, 2008a), and perception, parsing, and utilisation (Anderson, 2010). Whilst Harley (2008) elaborates on processes or mechanism in understanding speech based on perception theory, Field (2008a) and Anderson (2010) discuss listening comprehension processes based on process approach to listening and cognitive theory respectively, with overlapping ideas. The processes involved also reveals associated problems in and factors affecting listening. Although the fundamental cognitive processes in L1 and L2 comprehension are similar (Færch & Kasper, 1986), there lie some important differences between L1 and L2 listening comprehension. Whilst sections 2.2.1 and 2.2.2 elaborate on processes involved in understanding speech and listening comprehension respectively, section 2.2.3 discusses differences between L1 and L2 listening comprehension.

2.2.1 Processes involved in understanding speech

To understand speech, the processes involved are speech perception and word recognition. Speech perception is about how we identify or perceive the sounds of language, whilst spoken word recognition is about the higher level process of recognising the words that the sounds make up (Harley, 2008). Word recognition can happen in three phases: initial contact (with lexicon), lexical selection (accumulation until one lexical entry is selected), and word recognition (word is recognised just before the complete word is heard) (Frauenfelder & Tyler, 1987).

Two of the basic types of model of word recognition are the cohort model and the TRACE (Harley, 2008). In both models, word recognition happens in three stages. The central idea of the cohort model, proposed by Marslen-Wilson and Welsh (1978; Marslen-Wilson,1989), is whilst hearing speech we set up a cohort of possible items as candidates of the target word, and then gradually items are eliminated until left with target one. For example, when we hear /t/ alone there are many possible words, gradually the number of candidates is reduced from /tr/ to /tresp/ and finally the cohort is reduced to only one unique word /trespass/ at the point called uniqueness point. Three stages of this model are access stage, selection stage, and integration stage; the first two stages are pre-lexical and third one is post-lexical (see Figure 2.1 below). This model emphasises the bottom-up nature of the word recognition and context affects only the integration stage as in the updated version of the model (e.g., Marslen-Wilson, 1989). The TRACE model is, however, an interactive model of spoken word recognition (McClelland & Elman, 1986) in which processing happens in three levels of features, phonemes, and words. This model emphasises the role of top-down processing (context) in word recognition; lexical context can directly assist acoustic-

perceptual processing, and information above the word level can directly influence word processing (Harley, 2008, p. 273).

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┌─────────────────────────────────────────────────────────────┐
│                        Access Stage                          │
│  (perceptual representation used to activate lexical items,   │
│         thus generating a candidate set of items; the cohort )│
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│                      Selection Stage                         │
│             (one item only is chosen from this set)          │
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│                     Integration Stage                        │
│  (in which the semantic and syntactic properties of the       │
│                 chosen word are utilized)                     │
└─────────────────────────────────────────────────────────────┘
```
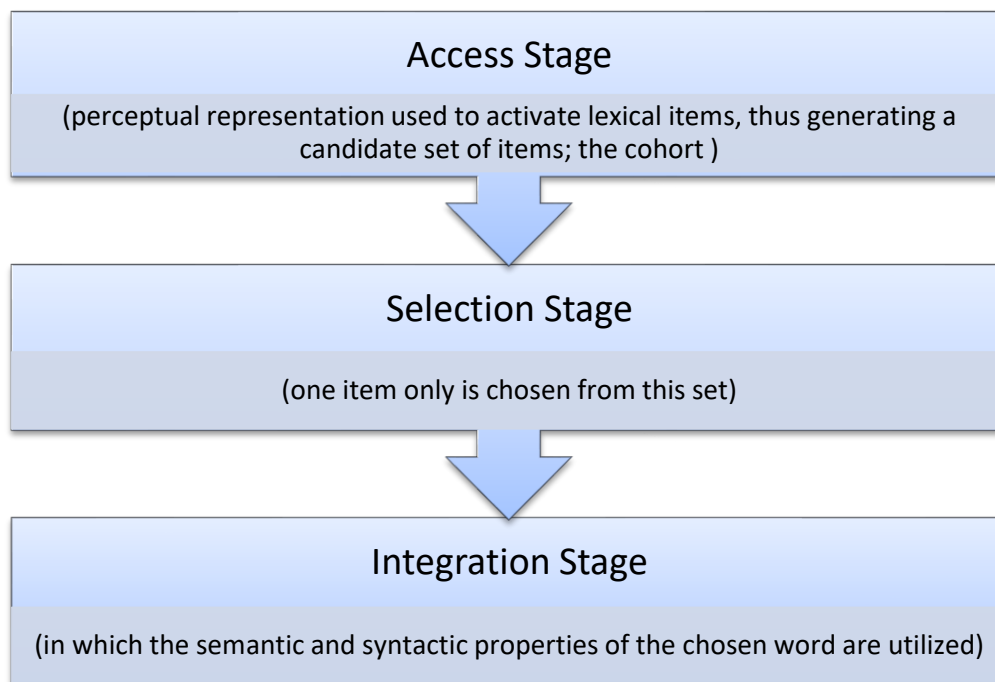
Figure 2.1: Cohort model of word recognition (Marslen-Wilson, 1989)

Although the models seem to offer the stages as linear, in reality they are iterative. In three stages of word recognition, even knowing the word may help identifying the constituent sounds (Harley, 2008). In word recognition process, however, lexical access is the point at which all the information about a word-phonological, semantic, syntactic, and pragmatic-becomes available following its recognition. Then follows integration which is the start of the comprehension process proper, where the semantic and syntactic properties of the word are integrated into the higher level sentence representation (Harley, 2008, p.265).

There is, however, no easy segmentation of words into component sounds as words into letters, sounds and even whole words tend to run into one another (Harley, 2008). The acoustic properties of phonemes vary with the context they are in (Harley, 2008), and they also vary acoustically depending on the speech rate (Miller, 1981). For example, the "b"

sounds in the "ball", "bill", "able", and "rob" are acoustically distinct; this sort of acoustic variability makes phoneme identification a complex task (Harley, 2008). This complexity arises due to the two main features that act as major constraints on theories of speech perception (Miller & Jusczyk, 1989). These features are due to the lack of identity between the acoustic and phonemic levels of language. They are segmentation and invariance problems (Harley, 2008). According to Harley (2008), the invariance problem is that the same phoneme can sound different depending on the context in which it occurs. For example, the /I/ phoneme takes a nasal quality in words such as "pin" and "sing". This is the co-articulation effect in the process of assimilation. The segmentation problem is that sounds run together and cannot easily be separated. For example, in normal speech the strings "I scream" and "ice cream" sounds indistinguishable.

Given such nature of spoken language, two types of strategies are developed to segment the spoken text. Going beyond the "possible-word constraint", we need to segment speech bearing in mind that natural speech leaves parts of syllables unattached to words (Norris et.al., 1997). Second is the metrical segmentation strategy. Whilst segmenting speech by identifying stressed syllables is called stress-based segmentation (e.g., in English), segmenting speech by detecting each syllable is called syllable-based segmentation (e.g., French) (see Harley, 2008). It depends on which language the listener is exposed to.

2.2.2 Listening comprehension processes

Listening comprehension goes beyond simply word recognition and speech segmentation; it also includes meaning making by utilising whatever linguistic and non-linguistic knowledge is available to the listener. "Listening comprehension is the result of an interaction between a number of information sources, which include the acoustic input, different types of linguistic knowledge, details of the context, and general world knowledge,

and so forth" (Buck, 2001, p.3). Anderson (2010) and Field (2008a) offer a nice presentation of comprehension processes, which however also overlaps. Whilst Anderson offers a three-phase model of listening comprehension- perception, parsing, and utilisation, Field's is of two phases- decoding and meaning building. Whilst perception corresponds to decoding, parsing and utilisation together correspond to meaning building, roughly. This perception or decoding, however, corresponds to word recognition, which has already been elaborated in the Section 2.2.1. Therefore, the remainder of this section will give more focus on meaning building in listening comprehension.

Comprehension phases as defined by Anderson (2010) correspond to those in Field (2008a): Anderson's perception and utilisation may correspond to Field's decoding and meaning building respectively and parsing seem to be in-between decoding and meaning building, roughly. As defined by Anderson, "the perceptual processes encode the spoken (acoustic)" (p. 358) and attention is focused on the oral text and the sounds are retained in the short-term memory and the process is bottom-up. Field similarly defined decoding as "translating the speech signal into speech sounds, words and clauses, and finally into a literal meaning" (p.125) which is associated with the bottom up process of listening. In Anderson, in final phase utilisation, listeners use "the mental representation of the sentence's meaning" (Anderson, 2010, p. 358) by using existing knowledge stored in the long-term memory and in *schemata,* or interconnected networks of concepts like mental models. Meaning building for Field (2008a) is also adding to the bare meaning decoded by relating it to the context and co-text, and it is associated with the top-down process of listening (Field, 2008a). However, in between perception and utilisation, Anderson recognises another interim phase connecting the first and third phases. Parsing by Anderson is "the process by which the words in the message are transformed into a mental representation of the combined meaning of the words" (Anderson, 2010, p. 358), which depends on the learner's knowledge of the language, general

knowledge of the topic, and how the information is presented (Richards, 1983) and can be both bottom-up and top-down (Vandergrift & Goh, 2012). Therefore, parsing seems to be the transition between decoding and meaning building. However, listening being very much an online activity thus so immediate, it cannot proceed in neat steps (syllables into words, words into phrases, etc.); the phases are interrelated and recursive and can happen concurrently during a single listening event (Call, 1985; O'Malley et al., 1989). As the listener goes along to represent what she hears, she constructs mental models (Harley, 2008; Buck, 2001) and continuously updates a mental model reiteratively and at a point the mental model provides a context that helps interpret the next part of the text (Buck, 2001).

The sources of decoding and meaning building are three- input, linguistic knowledge, and context (Field, 2008a, p.126). Input (speech stream or the signal) refers to the sounds reaching the ear of the listener; and the syllables, words and clauses that those sounds represent. Linguistic knowledge is the knowledge of the sounds, vocabulary and grammar of the language. Context involves any information within and beyond the text. Input and linguistic knowledge are sources of decoding whilst context of meaning building (Field, 2008a). Field argues that a problem in decoding might be caused by a gap in the learner's knowledge of vocabulary or grammar, or by a weakness in the learner's listening skills. In the latter case, the learner might hear a word or grammar pattern that she knew but might not recognise it when it occurred in natural continuous speech, also due to mismatch between grapheme and phoneme representations, which, in turn, may stem from lack of enough useful exposure to the language (Bonk, 2000). The link between linguistic knowledge and L2 listening comprehension is also evidenced in research (e.g., Bonk, 2000; Mecartty, 2000; Staehr, 2009).

Context, however, includes (a) general knowledge and personal experience which the listener provides; (b) knowledge of what has been said so far in the conversation (co-text)

(Field, 2008a). This evidence is instrumental in meaning building; however, it also contributes to decoding (Field, 2008a). For example, "a listener who hears the word 'dessert' in a talk about camels might assume that the speaker mispronounced 'desert' " (Field, 2008a, p131). Thus, context and co-text perform two distinct functions: they enrich the raw meaning of the utterance and make it relevant to the current situation; they provide extra evidence that assists the decoding process (Field, 2008a).

There has, however, been disagreement about the extent to which language learners with limited vocabulary and grammar are able to make use of context and co-text (Field, 2008a). One established view (e.g., Osada, 2001) is that their attention is so focused upon the effort of decoding unfamiliar sounds and words that they have little left to spare for wider considerations. On the other hand, Tsui and Fullilove (1998) revealed that the successful listeners were much better at answering test items without falling back on world knowledge because their decoding skills were good. This suggests that the less successful listeners may be more dependent upon context to compensate for their insufficient decoding skills. In an empirical study in reading skill, exploring the relationship between ESL learners' depth of vocabulary knowledge and their ability to derive word meaning from context, Nassaji (2006) found a significant link between vocabulary knowledge and lexical inferencing strategy use and showed that those who had stronger depth of vocabulary knowledge used certain types of lexical inferencing strategies more effectively than those who had weaker depth of vocabulary knowledge, and depth of vocabulary knowledge made a significant contribution to inferential success, over and above the contribution made by the learner's degree of inferencing strategy use. Therefore, the ability to make use of contextual clues in inferencing depends to, a large extent, on having an adequate knowledge base, in this case a threshold of vocabulary knowledge (Nation, 1993). However, although around 3,000 word families is a

crucial threshold in reading (Nation, 1993), what is a certain threshold of vocabulary/linguistic knowledge in listening is still to be known (Vandergrift & Goh, 2012).

Listeners, thus, use two types of declarative knowledge interactively to identify the meaning of propositions: in bottom-up process, information is derived from perceptual sources and linguistic knowledge; in top-down process, information is gained from contextual sources and real world knowledge (Field, 2004; Flowerdew & Miller, 2005; Howard, 1985; Richards, 1983; Rost, 2006; Vandergrift & Goh, 2012). Therefore, an "*interactive – compensatory mechanism*' (italics original) comes into play in listening; however, these two sources of knowledge, bottom up and top-down, also might act in a "*confirmatory*" manner when listening is relatively problem-free (Field, 2004). Therefore, the interaction of top-down and bottom-up processes is likely to be both compensatory and confirmatory (Graham & Macaro, 2008, p. 749).

The two operations of decoding and meaning building, however, give rise to two very different types of difficulty (Field, 2008a). Problems related to segmentation have been discussed in Section 2.2.1. The problem of meaning building also relates to how efficiently the learner handles the information extracted and makes sense of it (Field, 2008a). There are individual differences in comprehension abilities (Harley, 2008) and less skilled comprehenders are less able to integrate meaning across utterances maybe by drawing fewer inferences (Oakhill, 1994) or inferencing unsuccessfully. Prior knowledge also affects inferencing. Skilled comprehenders are better able to suppress irrelevant and inappropriate material (Gernsbacher, 1997) and this helps overcome interference from irrelevant information, thus also creates attentional capacity for processing the gist (Harley, 2008).

Therefore, successful listening comprehension takes place when both higher level and lower level processing interact as necessary. Hypotheses formed through higher-level processing may often influence subsequent speech perception (Swinney, 1979); however,

construction of the meanings of propositions in a text must necessarily involve some amount of lexical recognition and access (Bonk, 2000). Metacognition, here, offers understanding of both higher and lower level processes and skills involved in listening through gaining metacognitive knowledge and using strategies to manage and comprehend incoming text.

2.2.3 How L2 listening is Different from L1

The processes involved in L1 listening are also applicable to L2 listening comprehension as the fundamental cognitive processes in L1 and L2 comprehension are similar (Færch & Kasper, 1986); however, there lie some important differences between L1 and L2 listening. The native and non-native listeners do not rely on the same cues in speech processing (Andringa et al., 2012). Studies in SLA suggest that L2 learners rely more on top-down cues in listening than native speakers (e.g., Field, 2004). Most importantly, whereas processing in our first language is mostly implicit, effortless, and automatic, L2 listening demands conscious and explicit attention and understanding of the speech stream (Vandergrift & Goh, 2012). L2 processing seems to be more difficult for a number of reasons, including amount of linguistic knowledge, segmentation problems, and demand on meaning building processes, and affective factors.

Linguistic knowledge is an important factor in both L1 and L2 listening; however, L2 listeners' comprehension is comparatively more reliant on linguistic knowledge. In a noise metaphor, Field (2008a) postulates that the absence of noise whilst listening to a lecture hall allows listeners to feel a high degree of confidence in their ability to decode what is said. There will be little reliance on external evidence e.g., context and co-text. By contrast, in a pub, the listeners need to draw more heavily on context and co-text because of the high level of noise. However, this 'noise' in an L2 context is different: "it is created by the sections in the text that the listener cannot decode because of problems of word recognition or lack of

linguistic knowledge" (Field, 2008a, p. 135). As seen in Andringa et al (2012), although knowledge was the most important predictor of success in listening comprehension; differences in knowledge explain variation in success in listening comprehension between the non-native and native groups, to such a large extent. This finding also confirms the beliefs and empirical findings about the role of linguistic knowledge in L2 listening (e.g., Mecartty, 2000; Vandergrift, 2007).

A bilingual's segmentation strategy is determined by their dominant language i.e., L1 (see Cutler et. al., 1992) and tries "listening to a second language through the ears of a first" (Cutler, 2000, p. 1). As such, L1 speakers of e.g., English tend to listen to L2 e.g., French using stressed based metrical segmentation strategy in L1 instead of a syllabically based segmentation strategy in L2 (Cutler, 2000; Goh, 2000; Graham, 2006; Vandergrift, 2007). This intrusion creates problems in successful segmentation and slows their ability to process the incoming text. L2 listeners also face boundary problems due to elision, assimilation etc. These cross-linguistic differences make L2 speech segmentation an arduous task (Flowerdew & Miller, 2005) as "it is harder to determine which bits of the acoustic blur that hits … ears are the beginnings and ends of words" (Brown 1996, p. 2). Thus, L2 listeners frequently face perception problems due to segmentation difficulties (see Goh, 2000). However, efficient bilinguals are able to discard ineffective segmentation processes and use some other, more general, analytical processes instead (Cutler, 2000; Cutler et al., 1992). Research suggests that listeners can use a number of different cues: semantic, lexical, and prosodic cues to help them segment a sound stream into meaningful units (Vandergrift & Goh, 2012).

Many meaning-building processes may be fully established in the learner's L1; however, they may not be applied in L2 listening because of the additional attention that has to be given to decoding unfamiliar sounds and words (Field, 2008a). In the case of the inexperienced L2 listener, listeners' limited ability to recognise the words or limited

vocabulary against which to make a match, or even the listener's lack of confidence in the matches she makes can affect their meaning-building (Field, 2008a). The meaning building processes, such as use of 'context' and knowledge sources, deriving and integrating meaning employed by an L1 user, do not guarantee L2 users' use of them in L2 processing; therefore it does not mean that L2 listener need not to practise meaning building since they are already employed in L1 (Field, 2008a). Field posits that the learner's inclination to transfer processes from L1 to L2 is inhibited by the unfamiliar nature of the L2 listening experience. Firstly, the listener has to lend much greater effort to decoding, which diverts attention that would normally be given to meaning building. Secondly, the limited listening expertise of the learner means that the amount of information derived from decoding is likely to be much less than it is in the L1. These two factors lead the novice listener to feel that the experience of L2 listening demands a very different type of processing from L1 listening (Field, 2008a). Meaning building, therefore, needs to be practised just as decoding does.

Due to such nature of L2 listening, a number of affective factors also affect L2 listening. Since L2 listeners lack expected automaticity of processing due to unfamiliar spoken text, insufficient linguistic knowledge, making the meaning quickly, and so on, they struggle to cope with the listening text as it goes. L2 speech rate seems to be fast because of lack of automaticity (Buck, 2001).These create a sense of anxiety in the L2 listener (Arnold, 2000) hence it is the skill L2 learners feel least comfortable with (Graham, 2006). It is a source of frustration for learners which also affects their motivation and self-efficacy (Graham, 2011, p. 113). As such, listening has become the most difficult skill to learn and make progress with (Graham, 2011; Graham & Macaro, 2008; Vandergrift, 2004).

To address these issues related to listening, metacognition can offer an important role. This is one of the ways of helping L2 listeners to manage the spoken text explicitly through metacognition. Explicit listening demands conscious awareness of the processes involved

and taking action accordingly. Metacognition refers to that awareness of the cognitive processes involved in listening comprehension and the ability to regulate their cognitive processes by using their metacognitive knowledge (Vandergrift & Goh, 2012). When listeners exercise metacognitive awareness about L2 listening, they are able to orchestrate the cognitive processes more efficiently and effectively by keeping conscious control of the process (Vandergrift & Goh, 2012). Research evidence indicates that skilled listeners show frequent use of metacognitive strategies and skilful orchestration of strategies (see Vandergrift, 2003b) and their metacognitive knowledge explains variance in L2 listening comprehension (see Vandergrift et al., 2006). Thus, metacognition suggests a holistic approach to L2 listening comprehension: knowing the cognitive and other processes involved in listening and by managing these.

2.3 Metacognition

Listening comprehension is successfully accomplished when listeners manage to control comprehension processes that occur at different levels in different ways. Metacognition refers to "listener awareness of the cognitive processes involved in comprehension" (Vandergrift & Goh, 2012, p. 23), and their ability to oversee, regulate, and direct these processes (Goh, 2008). Proficient listeners are able to control or regulate these processes through their use of MK (Vandergrift & Goh, 2012, p. 23). As claimed by Vandergrift et al. (2006), approximately 13 percent of variance in listening achievement can be explained by metacognition. There is a general consensus amongst researchers in the fields of second language comprehension and learning, that metacognition enhances thinking and comprehension (Wenden, 1998).

Metacognition has been defined and applied in different ways by different authors and researchers; however the underlying understanding is that it is the ability to think about our

own thinking, and to think about how we process information for a purpose and the way we do it (Vandergrift & Goh, 2012, p. 83-84). Metacognition coined by Flavell (1979) is the cognition of cognition i.e, thinking of thinking. As illustrated by Flavell (1976):

> '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)

Metacognition has, therefore, been used to refer to both knowledge about cognition and the regulation of cognition (O'Malley & Chamot, 1990, p. 95). Knowledge about cognition includes applying thoughts about the cognitive operations of oneself or others, whilst regulation of cognition includes planning, monitoring, and evaluating a learning or problem-solving activity (Brown & Palincsar, 1982). Flavell (1979), in fact, talks about four cognitive enterprises: (a) metacognitive knowledge, (b) metacognitive experiences, (c) goals (or tasks), and (d) actions (or strategies). By metacognitive knowledge, Flavell means, "that segment of your (a child's, an adult's) stored world knowledge that has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions, and experiences" (p. 906). Metacognitive experiences are "any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise" (Flavell, 1979, p. 906). The remaining two are the functions and actions. By strategies, Flavell seems to mean metacognitive strategies only, as the control dimension of metacognition. However, strategy use is

eventually strategy knowledge in action; therefore, it can be the use of all types of strategies as illustrated by Vandergrift and Goh (2012).

The metacognitive framework proposed by Vandergrift and Goh (2012) draws on three components of metacognition: metacognitive knowledge (knowing), metacognitive experience (sensing), and strategy use (doing) (see Figure 2.2 below). Metacognitive experience can influence the development of metacognitive knowledge, and the selection and use of strategies. Metacognition is in action when learners show awareness of gaps in comprehension and take immediate action, such as orchestrating the use of selected strategies to bridge the gaps (Vandergrift & Goh, 2012, p. 92).
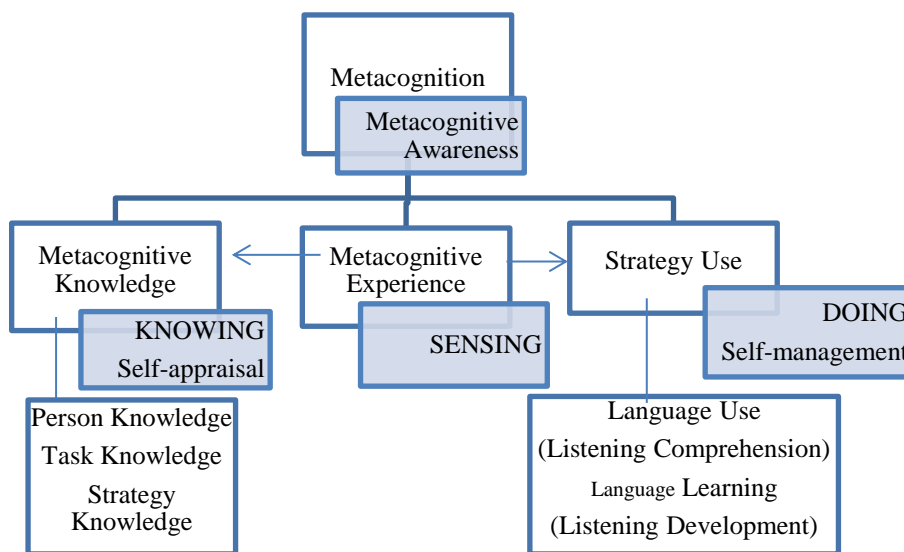
Figure 2.2: A Metacognitive framework for three components of metacognition (Vandergrift & Goh, 2012, p. 85)

Out of the three components of metacognition, experience is "an involuntary response," whereas knowledge and strategy are "amenable to instruction" (Vandergrift & Goh, 2012, p. 101). My study is concerned with the amenable two components –

metacognitive knowledge and strategy use. In my study, I use the term 'strategy use' to refer to the use of all categories or types of strategies, as advocated by Vandergrift and Goh (2012), not to metacognitive strategies only, as maintained by some researchers (e.g., Goh, 1998a, O'Malley & Chamot, 1990).

Vandergrift and Goh (2012) underscore the belief that metacognition, focusing on learner engagement with self-regulation, self-direction, and self-awareness along with strategy use, has not received due attention in instructional approaches over the past five decades. This could be because of a lack of evidence of how learners perceive listening processes and process them for successful comprehension. Therefore, more research is needed to understand how learners' beliefs and perceptions, and action on metacognition, can inform the teaching of learning to listen. That said, metacognitive exploration of the cognitive processes involved in listening is important. Every language teacher needs to have a clear understanding of the processes involved in listening, in particular how strategies can be used to manage efforts to comprehend, and know how to harness the potential for learning inherent in every student, with a view to helping them achieve success in developing their listening and overall language proficiency (Vandergrift & Goh, 2012). In this regard, a metacognitive framework seems to be a comprehensive framework, which can help listeners improve L2 listening competence by enhancing learners' cognitive processes, utilisation of sources of knowledge, and strategies for successful listening, at the same time help them manage different cognitive and affective variables that can influence listening success (Vandergrift & Goh, 2012, p. 83). MK and strategy use, the two dimensions of metacognition, are elaborated on in Sections 2.4 and 2.5 below. However, since this study was designed to explore listeners' strategy use prior to exploring their metacognitive knowledge, an attempt has been made to present a discussion on language learning (listening) strategies first and then on MK.

2.4 Language Learning (Listening) Strategies

Since language learning or listening strategies have the potential to enhance learning (e.g., Graham & Macaro, 2008, O'Malley et al., 1985; Thompson & Rubin, 1996; Seo, 2000) an interest in LLS research has increased over time and research has examined a wide variety of issues related to learner strategies (Berne, 2004). A great body of initial research tried to define, classify, and identify LLS. Early strategy research tried to understand what a Good Language Learner (GLL) was, and to identify the LLSs of GLLs. One of the initiators of LLS research was Rubin (1975) who posited that the differential success of SL/FL learners suggested a detailed examination of what strategies successful language learners employ. So, she conducted a descriptive study based on her experience as a teacher and identified some techniques and approaches termed as strategies employed by a good language learner (GLL). Naiman, Frohlich, Stern, and Todesco (1978) conducted another early, empirical study of GLLs, with the premise that if GLLs showed any differences in their learning processes, these could be transferred to 'bad' learners. These GLL researches claimed that successful learners use strategies frequently and have a wide range of strategies, including 'difficult' and 'sophisticated' ones (Grenfell & Macaro, 2007, p. 15).

Strategy has been defined in a myriad different ways by different researchers; it was quite interchangeably called, "operation, routine process, procedure, action, tactic, technique, plan, and step" (Macaro, 2006, p. 324), before researchers converged on the term 'strategies' (Grenfell & Macaro, 2007, p.13). Researchers (e.g., Macaro, 2006; O'Malley & Chamot, 1990; Oxford, 1990; Rost, 2002) have tried to define and classify learner strategies in different ways depending on their goals and purposes, and their particular conceptualisations of how strategies work. Although numerous definitions and classifications are available in strategy research, only few of which are based on concrete theoretical frameworks.

A popularly quoted author on LLSs, Oxford (1990) defined LLSs as, "steps taken by students to enhance their own learning" (p. 1). She further defined LLSs more comprehensively in the following way:

> [Language] learning strategies are operations employed by the learner to aid the acquisition, storage, retrieval, and use of information…specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations (Oxford, 1990, p.8).

As posited by Oxford (1990), the purpose of LLSs is to aid not only acquisition of the language, but also for the use of information. Moreover they are specific actions, the goals of which are to make learning easier, faster, more enjoyable, and more effective and so on.

O'Malley and Chamot (1990), widely quoted for LLSs and particularly for listening strategies, defined learning strategies as, "the special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information" (p.1). They are "complex procedures that individuals apply to tasks; consequently, they may be represented as procedural knowledge which may be acquired through cognitive, associative and autonomous stages of learning" (O'Malley & Chamot, 1990, p. 52). Thus, they tried to identify learning strategies in these three stages of skills acquisition theory by Anderson (2010, 1985).

According to Macaro (2006), a strategy is a "conscious mental activity… applied in pursuit of a learning goal, which is transferable to other situations or tasks" (Macaro, 2006, p. 328). Dörnyei (2005) also added the idea of goal-oriented, intentionally invoked, and effortful behaviour in strategy use and the concept of 'appropriateness' for an individual learner or for a learning task.

In terms of listening strategies, Rost (2002) defined them as, "conscious plans to manage incoming speech, particularly when the listener knows that he or she must compensate for incomplete input or partial understanding" (p. 236). Many of the language

strategies are basically common to all language skills; however, there are some strategies specific to a particular language skill. Rost's definition here focuses on strategies aimed at listening comprehension.

From the above definitions, there is no doubt that language learning or listening strategies are conscious mental processes and actions. When strategies are no longer used consciously they cannot be called "strategies"; learners are required to have metacognitive awareness of their use of strategies and an awareness of their approach to the cognition of processes, and to manage the spoken input in order to comprehend and respond appropriately and successfully (Cohen, 1998). "Unlike skills, which are automatic processes that make little or no demand on processing capacity, strategies are controlled processes that require conscious attention in their deployment, modification, and orchestration" (Vandergrift & Goh, 2012, p. 91). Strategies are special ways of processing information, which can be explained through information processing theory in cognitive psychology (O'Malley & Chamot, 1990). Anderson's (1985, 2010) three-phase model of perception, parsing, utilisation is also supported by other researchers of listening, for example, O'Malley et al. (1989), and Goh (2000). Their findings indicated that the mental processes students used in listening comprehension paralleled three theoretically-derived phases of the comprehension process. Griffiths (2013) also undertook a theoretical analysis of the strategy concept, addressing Dörnyei and Skehan's (2003, p. 610) criticism of strategy research often being carried out in a "theoretical muddle", and concludes that strategies are basically a cognitive phenomenon, a view developed at length by O'Malley and Chamot (1990).

The frequently used strategy taxonomies are, however, Oxford's (1990), and O'Malley and Chamot's (1990) classifications. Oxford's (1990) strategy classification is one of the most popular taxonomies in the strategy literature; however, O'Malley and Chamot's

(1990) classification, based on the cognitive theory of language learning, is widely used in the particular skill of listening. O'Malley and Chamot showed a correspondence between the mental processes identified in cognitive theory and the strategic processes described in the learning strategies literature, defining strategies as falling into the three different categories of metacognitive, cognitive, and socio-affective strategies.

Adopting Rubin's (1981) direct/ indirect distinction, Oxford (1990) initially classified strategies into two broad categories: direct and indirect strategies. She then divided each of these broad categories into further categories as shown in Figure 2.3 below. These six categories are the corresponding subscales in her ESL/EFL1990 version of the SILL.

```
                    Leangauge Learning
                        Startegies
          ┌─────────────────┴──────────────────┐
   Direct Sartegies                      Indirect Startegies
  ┌──────┬──────┬──────┐            ┌──────────┬──────────┬──────────┐
Memory  Cognitive Compensation  Metacognitive Affective  Social
Strategies Strategies Strategies  Strategies  strategies Strategies
```

Memory Strategies	Cognitive Strategies	Compensation Strategies	Metacognitive Strategies	Affective strategies	Social Strategies
Creating mental linkages	Practising	Guessing intelligently	Centring your learning	Lowering your anxiety	Asking questions
Applying images and sounds	Receiving and sending messages	Overcoming limitations in speaking and writing	Arranging and planning your learning	Encouraging yourself	Cooperating with others
Reviewing well	Analysing and reasoning		Evaluating your learning	Takng your emotional temperature	Empathising with others
Employing action	Creating structure for input and output				

Figure 2.3 Oxford's (1990) language learning strategy classification

O'Malley and Chamot (1990) believed that language entails active and dynamic mental processes, and thus offered a three-part strategy taxonomy based on the cognitive theory of language learning and their own strategy research findings. Within the framework of cognitive theory, O'Malley and Chamot classified language learning strategies into three important categories based on the nature and function of the strategies, as shown in Figure 2.4 below.
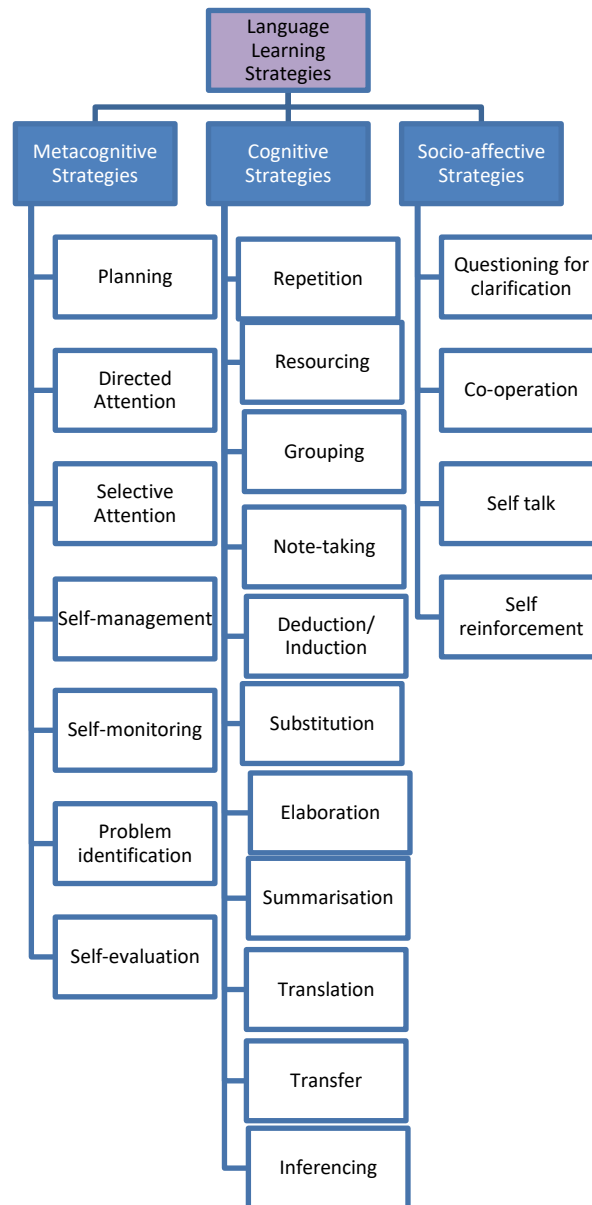
Figure 2.4 O'Malley and Chamot's (1990) Language Learning Strategy Classification

Two classifications by Oxford and O'Malley and Chamot show similarities in the subcategories but they are grouped as different categories. Both classifications have metacognitive strategies, cognitive strategies, social strategies and affective strategies.

However, O'Malley and Chamot grouped social strategies and affective strategies together as socio-affective strategies. The other two - memory strategies and compensation strategies are strategies put in cognitive strategy category by O'Malley and Chamot. In fact, it is not convincing to group some strategies as compensation strategies whilst some other can be compensatory as well e.g., social strategies in communication, and even metacognitive strategies. Therefore, O'Malley and Chamot's classification seems to be more convincing and with clearer boundaries. O'Malley and Chamot defined these major strategy categories in the following ways:

> Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned.
>
> Cognitive strategies involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task.
>
> Social and affective strategies involve interacting with another person to assist learning or using affective control to assist a learning task.
>
> (O'Malley & Chamot, 1990, p. 137-139)

Although there is "not complete agreement on…how they [strategies] should be defined, demarcated, and categorized: and whether it is -or ever will be – possible to create a real, scientifically validated hierarchy of strategies" (Oxford, 1990, p. 17), O'Malley and Chamot's strategy taxonomy was at least developed based on cognitive theory and information processing in cognitive science, and has been trialled and validated in numerous language learning strategy research, particularly in terms of listening skills (e.g., Graham et al., 2008; 2011; O'Malley et al., 1989; Vandergrift, 1997b, 1998, 2003b).

My study largely follows O'Malley and Chamot's (1990) and Rost's (2002) definition of language learning/listening strategies with O'Malley and Chamot's classification taxonomy, which is based on the theoretical framework of cognitive psychology developed

by Anderson (1985). However, my study does not attempt to incorporate the three-phase model of comprehension for strategy identification. Anderson's (2010, 1985) model of the three stages of comprehension is not universally accepted. Firstly, it does not explain all the strategies required for solving all problems whilst learning or listening in these three stages. Secondly, the three stages are not mutually exclusive and therefore cannot be linear; rather they can be recursive and even parallel (Graham et al. 2008). Therefore, despite the influence of Anderson's cognitive theory on my study, I decided not to identify listening strategies according to the three phases of comprehension as proposed by Anderson. O'Malley and Chamot's (1990) classification scheme accords with learners' cognitive systems and has been widely applied in previous studies (Dong, 2016). For the present study, which looked into metacognition in L2 listening, a cognitive approach to listening strategies was deemed necessary; therefore, O'Malley and Chamot's (1990) classification fitted well with the current study.

2.5 Metacognitive Knowledge

Alongside insights into listeners strategy use, gaining insights into their perceptions about listening is needed. Gaining insights into learners' perceptions and beliefs about L2 listening is an important first step (Goh, 1997; Graham, 2006) for teachers and students to address the problems they experience (Graham, 2006), perceptions of strategies can influence their use of strategies (Zhang & Goh, 2006), this can also directly influence the process and even the outcome of their learning (Goh & Taib, 2006). Importantly, these insights can provide us with a better and clearer picture of the cognitive complexities that differentiate good and poor learners (Wenden, 1987).

Language learners have their definite beliefs and knowledge of how language is learned (Wenden, 1991), and their awareness of these beliefs and knowledge is termed

metacognitive knowledge (MK) (Flavell, 1979; Goh, 1997). According to Flavell (1979), MK consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprises. There are three major categories of these factors or variables—*person, task,* and *strategy (*p. 2, italic original*).* This typology was first applied by Wenden (1991, 1998) in language learning research, and subsequently verified by Goh (1997, 1998) in listening research.

Flavell (1979) coined the term metacognition and defined MK as a part of metacognition. In Flavell's (1979) model of metacognition, MK was defined as, "primarily knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprises" (p.2). In listening, MK is the learners' beliefs about themselves as listeners, their problems and difficulties, their knowledge of the nature, demands or goals of the listening task, and their knowledge of strategic procedures to approach the task (Goh, 1997, 1998a). Flavell's model provides a typology of MK, namely: person knowledge, task knowledge, and strategy knowledge. Flavell (1979) defined these three constituent parts of MK - person, task, and strategy knowledge, in the following way respectively:

> The person category encompasses everything that you could come to believe about the nature of yourself and other people as cognitive processors. It can be further subcategorized into beliefs about intra-individual differences, inter-individual differences, and universals of cognition.

> One subcategory of the task category concerns the information available to you during a cognitive enterprise… Another subcategory includes metacognitive knowledge about task demands or goals.

> As for the strategy category, there is a great deal of knowledge that could be acquired concerning what strategies are likely to be effective in achieving what sub-goals and goals in what sorts of cognitive undertakings.

> (Flavell, 1979, p. 2)

Following Flavell (1979), Wenden (1991) maintained that person knowledge encompasses what language learners have come to believe about themselves and others as learners; task knowledge refers to what learners know about the purpose, demands and nature of the tasks at hand; strategy knowledge refers to learners' perceptions or beliefs about strategies that are effective in facilitating learning and achieving goals in specific situations.

The three components of MK have also been elaborated on by Vandergrift & Goh (2012). According to them, person knowledge is the knowledge of "the cognitive and affective factors that facilitate one's own listening comprehension and listening development" (p. 87). An individual's person knowledge determines his or her self-concept. For example, a language learner who often experiences listening problems in interactive listening may therefore try to avoid such situations. Task knowledge includes knowledge of the purpose and nature of the listening task, of the task demands and of when deliberate effort is required (p. 87). This also includes, "knowing about features of different types of spoken texts, such as the respective discourse structures, grammatical forms, and phonological features of words and phrases as they appear in connected speech" (p. 86), all of which have also been identified by Goh (1997, 1999). Vandergrift and Goh define strategy knowledge as, "knowing which strategies can be used to accomplish a specific goal, be it achieving comprehension or in improving one's listening ability" (p.87). Further, they distinguish strategy knowledge from strategy use; the former is limited to knowing about strategies and the latter refers to the use of strategies. Learners store these three kinds of knowledge about cognition in their long-term memory (Flavell, 1979; Vandergrift & Goh, 2012).

Following Flavell (1979), Goh (1998a) maintained that person knowledge consists of at least three kinds of belief: beliefs about intra-individual differences or knowledge about oneself as a learner; beliefs about inter-individual differences, or knowledge about how one compares with others; beliefs about the universals of cognition, or the laws of human

learning. Similarly, O'Malley and Chamot (1990) and Wenden's (1991) stated that person knowledge refers to knowledge of one's own cognitive processes and those of others. Although these definitions focus on both the intra-individual differences and inter-individual differences as aspects of person knowledge, previous studies however did not observe both of the aspects of person knowledge explicitly in their research; they basically looked into intra-individual differences i.e, the listener self as person knowledge. Contrarily, person knowledge in my study includes a listener's belief both about him/herself and of a GL, thus observing both of these aspects of person knowledge in my study: listening self knowledge and GL knowledge. My study thus explores listeners' beliefs about both intra-individual differences and inter-individual differences along with cognitive processes involved in listening.

There, however, seems to be some overlaps between e.g., task knowledge and strategy knowledge, because learners need to know what strategies to apply in order to accomplish a task (Wenden, 1991; Goh, 1997). Following Goh (1997), learners' perceptions that are related to strategy use are categorised as strategic knowledge. There are also some overlaps between person knowledge and task knowledge, because learners' perceptions of their obstacles in listening such as speed, pronunciation and vocabulary knowledge are also factors that affect listening; therefore knowledge of these can be categorised as task knowledge. In this study, to avoid any confusion and repetition, the decision is taken to merge 'obstacles to listening comprehension' e.g., speed, pronunciation, vocabulary, grammar etc., with 'factors affecting listening' since they best relate to the listening task, therefore, should be under task knowledge. I also follow Goh's (2000) definition of comprehension problems and include them under person knowledge. These problems are not external and internal characteristics that impinge on understanding but "these are real-time processing problems, directly related to cognitive procedures that take place at various stages of comprehension" (Goh, 2000, p. 2).

Therefore, these problems will not overlap with those difficulties or factors that are the causes of listening comprehension problems.

My study on metacognitive knowledge was thus informed by the original model by Flavell (1979) and influenced by Wenden (1991, 1998) and Goh (1997, 1998, 1999), to a great extent. Goh provided me with many of the further classifications of each of the three categories of MK, as discussed in Section 3.3.2.4.2, Chapter 3.

2.6 Guiding Literature on Metacognition-Strategy Use and Metacognitive Knowledge

Metacognition has the potential to enhance listening comprehension (Goh & Taib, 2006; Graham & Macaro, 2008); however, we are not yet confident about the underlying strength or nature of the relationship between metacognition and EFL listening comprehension. The aim of the present study was to explore this relationship by attaining a holistic metacognitive understanding of how L2 listeners with different listening abilities listen. This was done by investigating L2 listeners' metacognition as knowledge and action. This holistic metacognitive approach is needed, because success in L2 listening cannot entirely depend on either metacognitive knowledge or strategy use alone. L2 listeners involve themselves in both knowing and doing metacognition in order to be successful in L2 listening.

On the one hand, the critical role of listening in L2 learning and on the other hand, its complex, cognitive nature have led to the development of diverse research areas in listening, including listening comprehension processes and the ways of learning to listen. Existing literature suggests the important role of metacognition in learning to listen. These studies have investigated a plethora of issues concerning metacognition; broadly speaking, listening strategy use and metacognitive knowledge about L2 listening.

Existing research on listening strategy use has concentrated on patterns of listening strategy use by L2 learners, the differences between more successful/ effective versus less successful/ effective listeners, and the relationship between listening strategy use and listening proficiency (e.g., Graham et al., 2008; 2011; O'Malley et al., 1989; Serri et al., 2012; Teng, 1998; Vandergrift, 2003b). However, this body of research has been inconclusive in revealing the relationship between strategy use and listening proficiency. Moreover, listening proficiency or successful listening has not always been measured using standardised tools (Macaro, Graham, & Vanderplank, 2007). Therefore, the relationship between successful listening and strategy use needs to be explored more rigorously (Macaro et al., 2007). Furthermore, more research needs to be conducted in different SL/FL contexts with different age groups, and L1 and L2 languages (Vandergrift, 2003) due to the context-specific nature of strategies, with a view to identifying what types of strategies can be important for instruction with a particular set of learners. Moreover, a number of studies have been conducted on different aspects of MK (e.g., Goh, 1999, 2000; Graham et al., 2008; 2011; Graham, 2011; Vandergrift, 2002; 2005; Vogely, 1995); however, research exploring all three components of MK and the differences between the two listening ability groups in their MK is very limited. The area of MK has, in fact, been of recent attraction to researchers of metacognition (Vandergrift et al., 2006). Most importantly, only a very few studies (e.g., Goh, 1998a) have looked into L2 listeners' metacognition from a holistic perspective, considering both MK and strategy use – knowledge and action (Vandergrift & Goh, 2012). Therefore, my study was an attempt to address this broad research gap, with a view to attaining a holistic understanding of how L2 listeners listen, with particular focus on the relationship between metacognition and listening comprehension in a novel EFL context in Bangladesh.

The following sections examine studies closely related to two main components of metacognition: strategy use and metacognitive knowledge. Whilst in Sections 2.6.1and 2.6.2 relevant studies on listening strategy use elicited via offline and online measures are analysed, in Section 2.6.3 relevant studies on MK about L2 listening are analysed, thus revealing the research gaps the present study aimed to address.

2.6.1 Studies on the relationship between perceived, off-line listening strategy use and listening comprehension

Although the majority of research on off-line listening strategies has employed the Metacognitive Awareness Listening Questionnaire (MALQ) (Vandergrift et al., 2006), a small number of studies have used a variety of other questionnaires to measure off-line strategy use (as opposed to strategy knowledge; see Section 2.6.3). These studies on perceived listening strategy use using off-line measures looked into the relationship between perceived strategy use and listening proficiency across two broad paradigms. The first line of studies investigated the differences in the pattern of use of listening strategies, between more successful/more effective/more skilled listeners and that of less successful/less effective/less skilled listeners (e.g., Chao, 1996; Fujita, 1985; Teng 1998). The second line of studies explored the relationship by testing the correlations between listening strategy use and listening proficiency (e.g., Chao, 1996; Liu, 2008; Serri et al., 2012; Teng; 1998). Many of them found a positive relationship, i.e., the differences between the two listening ability groups revealed significant positive correlations between strategy use and listening proficiency; however, some failed to find any. Therefore, the studies were inconclusive. Moreover, these studies suffer from a number of methodological problems, which undermine confidence in their findings. The problems include mainly: a) the lack of standardised measures to test listening proficiency, b) the lack of a valid listening strategy questionnaire.

As such, more studies of the relationship are called for (Macaro et al., 2007; Oxford et al., 2014).

Among the studies (e.g., Chao, 1996; Fujita, 1984; Liu, 2008; Serri et al., 2012; Teng, 1998) who tried to find a correlation between strategy use and listening proficiency, some studies, for example, Serri et al. (2012) did not find any positive correlation between the two variables. Serri et al. (2012) surveyed 40 upper-intermediate TEFL undergraduate Iranian students using a listening questionnaire adopted by Liu (2008) who adapted it from Vandergrift (1997), which had 34 items, and an IELTS listening test. The results found no significant relationship between strategy use and listening performance. They tried to justify this non-significance as the participants never having been instructed to use these strategies, the lack of good rapport between the learners and the teacher, and the learners' level of proficiency. However, Vandergrift (1997b) did not develop a questionnaire or validate it; rather it was a checklist which Liu (2008) used, and then Serri et al (2012) used it without being critical and justifying its validity and reliability for their participants. This validity issue of the questionnaire could be the possible reason behind the non-significance. Furthermore, Serri et al.'s (2012) sample size was small, which might not have been able to produce the significance; moreover, the study lacked robust interpretations of methodological choices and results.

Among the studies that revealed a positive relationship between strategy use and listening performance, some of them, however, did not use a standardised or direct measure of listening comprehension, some of them employed questionnaires which were not rigorously constructed, trialled, and validated.

Studies that have used a listening strategy questionnaire which was not rigorously constructed or validated are Teng (1998) and Liu (2008). Teng (1998) investigated 51 EFL university students in Taiwan via a strategy questionnaire based on Oxford's (1990) SILL

and a listening comprehension test with 20 multiple choice question items. It is, however, dubious why Teng (1998) used a t-test for analysing strategy categories and a chi-square test for individual strategies when eliciting categorical data with the same strategy questionnaire using a Likert-scale. The sample size was also small. Besides, she elicited listening strategies via the SILL questionnaire, which was developed for language learning strategies in general and not specifically validated for eliciting listening strategies, so some of its items might not be applicable for the specific skill of listening.

As mentioned earlier, Liu (2008) adapted the listening strategy questionnaire mainly from Vandergrift's (1997b) inventory of listening strategies. Liu tried to validate the questionnaire by piloting it with 20 students and by checking its reliability (α=.92). Liu reported on the relationship between. ANOVA results of 101 Taiwanese university EFL learners' listening strategy use and their IELTS score revealed a statistically significant difference between their strategy use and attainment levels. Although three of the strategy categories reached significance, the degree of influence within the groups was different. In their use of metacognitive strategies, advanced learners and lower intermediate learners differed significantly from one another. In their use of cognitive and social/affective strategies, advanced learners were significantly different from upper and lower intermediate learners. In terms of individual strategies, more effective listeners were significantly different in their use of planning, monitoring, evaluation, and elaboration strategies. However, Liu's (2008) participants were heterogeneous in terms of the subjects they were studying; therefore, there could have been other confounding variables that might have affected the relationship. Moreover, although the questionnaire was based on a listening strategies inventory, it was developed from only one inventory and not a validated and trialled questionnaire itself.

There are, however, researchers like Fujita (1984) and Chao (1996) who tried to develop a listening strategy questionnaire by trialling and validating it in different phases.

They elicited data on strategy use from a larger sample of participants (Fujita 802 participants and Chao 229), and found a significant relationship between strategy use and listening proficiency. Fujita developed a listening strategy questionnaire from reading communication theory, message perception, GLL strategies, listening strategies and personal experience of observing written notes during listening comprehension exercises. Chao developed the questionnaire based on the results of research into learning strategies and listening strategies (Bacon, 1992; Carrell, 1989; O'Malley & Chamot, 1990; Vogely 1995). Whilst Fujita's questionnaire had 68 items and adopted a 6 point Likert-scale, Chao's questionnaire had 70 items and adopted a 5 point Likert scale. Fujita trialled the questionnaire in her second study and a factor analysis revealed limited factors due to the limited number of strategy items, as perceived by her. Chao trialled her questionnaire in a pilot study and found a Cronbach alpha of .87.

Both Fujita (1984) and Chao (1996) ran factor analysis on the data collected from actual studies and revealed important findings. Fujita (1984) identified six factors involved in listening comprehension: self-confidence; focus/search for meaning; recall notes; attention to form, self, and others; active participation; prior experience and language study. Three of the six factors discriminated between more and less proficient listeners: self-confidence in listening comprehension; focus/search for meaning; and active participation. Chao (1996) also revealed a positive relationship between strategy use and listening comprehension. Factor analysis identified five factors used interactively by effective listeners: functional, self-management, macro-conceptual, micro-perceptual, and social strategies. More proficient students used more frequent metacognitive strategies and students with previous experience in an English-speaking country were able to make inferences and guess more frequently than less effective listeners or those who had no travel experience.

Although Fujita (1984) and Chao (1996) found differences between successful and less successful listeners in their strategy use, their success in listening was measured by an immediate recall protocol in Chao's study (1996), and by a listening narration in Fujita's study (1984). Chao's recall protocol might have inhibited actual listening performance due to memory load. No details about the listening test items were found in Fujita's study, except its being a listening narration; therefore this leaves concerns regarding standardisation of the measure. Further, Chao's (1996) Chinese and Fujita's (1984) Japanese EFL contexts are comparatively richer than the input-poor EFL context of Bangladesh.

Further studies are, therefore, deemed important to understand the nature of the relationship between listening strategy use and listening performance, with standardised and valid, reliable measurement tools, and with a large sample of participants from a variety of different EFL/ESL contexts across the globe. To this end, my study attempted to explore the relationship between learners' perceived use of listening strategies elicited via an EFLLSQ developed mainly from taxonomies by O'Malley and Chamot (1990) and Vandergrift (1997), and their listening comprehension in an internationally standardised IELTS test (see Chapter 3), amongst a comparatively large sample of 388 tertiary EFL learners in the novel EFL context of Bangladesh (see Chapter 1).

2.6.2 Studies on task-based, on-line listening strategy use

Contrary to the small number of studies of perceived, off-line strategy use elicited via a strategy questionnaire, a considerable number of studies have tapped into task-based, on-line strategy use elicited via think aloud protocols to understand the differences between more successful/ effective/ skilled listeners and less successful/ effective/ skilled listeners. Although many of these studies have revealed significant differences between the two listening ability groups, some of them have failed to show any (e.g., Peters 1999; Young,

1996). These conflicting findings can largely be attributed to a lack of methodological standardisation and robustness. A review of existing literature reveals that on the one hand, many of the studies did not measure the 'successful' listening by exploiting any standardised tools; on the other hand, many of them left no information as to whether they trained their participants for such an experiment in uncovering the covert mental processes and strategies via thinking aloud protocols (Macaro et al., 2007). In addition, some studies were more focused on a quantitative analysis of think aloud protocols, some other on qualitative analysis, often of a few representative samples. Moreover, these on-line strategy use studies also dealt with different age groups, proficiency levels, and different L2s, amongst participants with different L1s in different EFL/ESL contexts, which might also explain the differences in findings, as strategy use is context-specific and therefore demands context-specific investigation.

The studies that failed to show significant differences between the two listening ability groups in their task-based, on-line strategy use were Peters (1999), and Young (1996). Peter's (1999) longitudinal study found no link between strategy use and listening proficiency. Over a period of one year, Peters (1999) investigated eight primary-level students enrolled in an intensive French programme to explore any changes in strategy use, with data elicited monthly via think aloud protocols, and found no noticeable differences between more and less efficient learners' frequency of strategy use. Whilst Peters' study elicited strategy use by a more systematic tracing of strategy development using task-based strategy elicitation methods, the method of analysis is not clear; the total strategy use of each proficiency group may be attributable to perhaps just one or two learners (Graham et al., 2008). Young (1996) investigated the listening strategy use of 20 university-level Chinese ESL students in Hong Kong. She also found no considerable quantitative differences between the two listening proficiency groups and listening proficiency was not linked to strategy use.

In listening to unfamiliar passages, more successful listeners used more metacognitive strategies whilst less successful listeners relied more on word level. However, she did not used any test to measure students' listening proficiency, rather used students' self-rated listening proficiency, thus raising validity and reliability issues of the measurement of listening proficiency. Moreover, she recruited a small sample size, and who themselves were more motivated. Peters (1999), however, found qualitative differences between the two listening ability groups in their strategy deployment; a significant change in inferencing strategies and 'plannification', which decreased in the later part of the investigation. In this regard, Peters argued that these strategies had become automatic by the second phase, and thus no longer accessible to report.

Amongst the studies are some earlier studies e.g., Murphy (1985), and Henner Stanchina (1987) which exploited a think aloud technique. Murphy (1985) found that effective listeners were more open and flexible, using more strategies and a greater variety of different strategies. The effective listeners engaged in more active interaction with the text and used a wider variety of strategies that interconnect like "links in a fence" (Murphy, 1985, p. 38). By contrast, less effective listeners concentrated too much on the text or on their own world knowledge, or they elaborated on the text information too late in the listening process. Henner Stanchina (1987) first called attention to the importance of metacognitive strategies in effective listening comprehension. Effective listeners are constantly elaborating and transforming what they hear, use their stored knowledge and expectations to generate hypotheses on a text, integrate new material into their ongoing interpretations, make inferences to fill gaps, evaluate their understanding, and revise their hypotheses when necessary and are able to recognise failure in comprehension. However, these earlier studies were not able to precisely name or classify many of the strategies they identified and

distinguish between metacognitive strategies and cognitive strategies, since a systematic taxonomy of language learning strategies had not yet been sufficiently developed.

A major study of on-line strategy use was carried out by O'Malley et al (1989). Based on the cognitive theory of listening and strategy processing, the study identified the strategies the students used in different phases of comprehension and revealed the differences between effective and ineffective listeners. An initial statistical analysis, a Mann-Whitney U test, indicated significant differences ($p<.05$) between effective and ineffective listeners in self-monitoring, elaboration, and inferencing. In subsequent qualitative analysis, these strategies also emerged as playing an important role in assisting listening comprehension. The effective listeners made use of both top-down and bottom-up processing strategies, whilst ineffective listeners became embedded in determining the meanings of individual word. Successful listeners appeared to decide what to attend to when, how to maintain attention, and how to redirect it when distracted. They tended to approach texts globally, by inferring meaning from context and effective self-questioning. They also related what they heard to their world knowledge and personal experience. On the other hand, less successful listeners were easily 'thrown off' when they encountered anything unknown, tended to segment what they heard on a word-by-word basis, and made fewer connections between new information and their own lives (Vandergrift, 2003). O'Malley et al. (1989) found that the mental processes students used in listening comprehension paralleled three theoretically-derived phases of the comprehension process: perceptual processing, parsing, and utilisation, as proposed by Anderson (1985). However, categorising all the strategies students use during listening might not be always possible into the three comprehension phases of Anderson, moreover, Anderson's three-phase model is not universally accepted because of its linear process. Furthermore, the teachers with assistance from the researchers tagged students as effective of less effective; no listening test was administered to measure learners' listening performance

objectively. Moreover, O'Malley et al.'s small sample of 11 ESL students might raise questions regarding the robustness of the study.

A series of investigations on the differences between the two listening ability groups were conducted by Vandergrift (e.g. 1997b; 1998; 2003b) amongst high school learners of French. In Vandergrift (1997b), the results discussed in the light of the information-processing theory indicated clear differences in strategy use by listening ability and proficiency level, with an overall increase in total number of strategies reported by listening ability. The use of metacognitive strategies, such as comprehension monitoring, problem identification, and selective attention, appeared to be the significant factor distinguishing the successful listeners from the less successful listeners. A qualitative analysis of representative protocols reinforced the quantitative results by pointing to the integral role of metacognitive strategies and showed differences in the use of prior knowledge, quality of inferencing, prediction skills, and monitoring. Vandergrift (1998) also revealed that the more skilled listeners were two times more metacognitive in their listening process. Here, a qualitative analysis revealed differences in the depth of processing, the strengths of predictions, and the stability of the conceptual framework established by the more skilled listeners.

Vandergrift's (2003b) study, one of the major studies on on-line strategy use, attempted to develop a model of a skilled listener based on the differences in strategy use between skilled listeners and less skilled listeners. Using a think-aloud technique adapted from O'Malley et al. (1989) and Rankin (1988), he tapped into the more covert processes and strategies involved in listening. He examined the types of listening strategies 36 learners used and the differences in strategy use by more skilled and less skilled learners, by analysing their protocols both quantitatively and qualitatively. ANOVA results showed significance differences in the use of the category of metacognitive strategies, as well as in some individual strategies. Skilled listeners tended to use metacognitive strategies such as selective

attention and comprehension monitoring more often, to use more effective combinations of cognitive strategies such as elaboration and inferencing, and to be generally more flexible in their use of strategies. These differences were reinforced by a qualitative analysis of the representative protocols.

These studies (Vandergrift, 1997b; 1998; 2003b), however, have their limitations. Vandergrift's (1997b, 1998) studies have the main limitation that they define participants' listening proficiency in a subjective way, which has led to validity concerns. Moreover, Vandergrift's participants are young learners of French, in high school whose listening processing and strategy use might be different from those of adult learners at tertiary level.

Studies using a different approach to strategy identification and operationalisation were conducted by Goh (2002, 1998b). Goh made a distinction between strategies and tactics, with the term 'strategy' referring to a general approach and 'tactic' meaning a specific action or step (Goh, 1998b, p. 124). She examined Chinese ESL learners' listening strategies and the tactics that operationalised these strategies, a number of tactics within individual strategies. Besides revealing tactics for two new strategies, Goh (2002) identified altogether 44 listening tactics. Comparison of the two participants' retrospective protocols found that although they used many similar strategies, the higher ability listeners demonstrated more effective use of both cognitive and metacognitive tactics. Goh (1998b) revealed that the higher ability listeners used more strategies and tactics than the lower ability ones, and the former were also able to vary their application of tactics within each strategy. Both groups used more cognitive strategies and tactics than metacognitive ones; however, the lower ability listeners were particularly poor at using them. However, it seems that Goh's operationalised tactics are, in fact, individual strategy items in other studies. For example, Goh's tactic of, "using prior knowledge to draw inferences" under cognitive strategy, is O'Malley and Chamot's (1990) 'world elaboration' under the elaboration strategy under the cognitive strategy category.

Moreover, Goh (2002)'s interpretation of tactics is also parallel to qualitative analysis of the way of deploying strategies in other studies. However, Goh (1998b) did not show any qualitative differences of strategy use, and qualitative exploration of two participants in Goh (2002) is not sufficient to reveal the dynamics of difference between two listening ability groups' strategic processing.

Longitudinal studies conducted to investigate the differences between two proficiency groups at two points in time include Graham et al. (2008) and Peters (1999), and they did not find any changes in strategy use at two points in time. As previously discussed, Peters (1999) found no noticeable quantitative but qualitative differences between more and less efficient learners over a period of one year. Graham et al. (2008) examined the development of strategy use over six months of two lower-intermediate learners of L2 French at a secondary school in England. They were a consistently high scoring and a low scoring listener, on the basis of their scores on a recall task completed after listening to short passages at two points in time. Qualitative data were collected on the learners' strategy use at two points in time, whilst completing a multiple-choice listening task. The results showed a high degree of stability of strategy use over the time period, with pre-existing differences between the high scoring and low scoring learner persisting. There were strategy differences between Alan, a high scoring learner and Sue, a low scoring learner at both points in time. Sue's strategy use consisted largely of prediction of lexis, writing visual prompts and selective attention, which for her meant listening out for particular words. Alan, in contrast, seemed to be willing to acknowledge the provisional nature of his interpretations when he was in doubt. He double-checked and questioned his interpretations, thus employing a number of metacognitive strategies. Selective attention became automatised with time. However, the study's sample size was very small to draw any convincing conclusion on the differences between high and low scoring listeners' strategy use.

Analyses of the protocols of university students learning Spanish, Bacon (1992a, 1992b) concluded that more successful students used a variety of strategies, flexibility in strategies, motivation, self-control, maintaining attention, and effective use of background knowledge. Although monitoring appeared to be used equally by successful and less successful listeners, the successful listeners were more realistic in evaluating their comprehension. However, these studies were more focused on the male-female distinction and their approaches to text types, not revealing in detail how the two listening ability groups processed the text whilst using strategies.

The studies discussed above are, however, diverse in their analyses of the think aloud protocols. Some studies, e.g., Goh (1998b) and Bacon (1992a, 1992b), focused more on quantitative analysis of the protocols, whilst some, e.g., O'Malley et al. (1989), focused more on qualitative analysis. Again, many of these studies, e.g., studies by Vandergrift, performed qualitative analysis of the representative protocols only, often by comparing one more successful and one less successful listeners' protocols. It seems the other protocols were overlooked. However, O'Malley et al. (1989) attempted to analyse the protocols of the participants theme wise, with evidence from any protocols as needed. Arguably, both quantitative and qualitative analyses of all protocols need to be equally examined for a better and clearer understanding of the whole picture. Not only what strategies but how strategies are employed by these learners is important (Graham et al., 2008; Griffiths & Oxford, 2014; Vann & Abraham, 1990).

Again, 'successful' listening has been defined and measured in quite different ways by different investigators (Macaro, Graham, & Vanderplank, 2007), and many of them are not transparent in their think aloud data generation process. Different measures used by different researchers include national or international tests, standardised or non-standardised tools, and objective or subjective measures of listening proficiency. Studies such as Goh

(1998b) used a national listening proficiency test, Peters (1999) used a whole range of tests including multiple-choice tasks, Vandergrift (1997b, 1998) qualitatively by the researcher via the analysis of the participants' verbal protocols. Studies not using standardised measurement tools raise validity and reliability concerns; moreover, the variety of measures makes it difficult to compare and assess the overall impact of strategy use on listening success (Macaro et al., 2007). Furthermore, although O'Malley et al. (1989), Young (1996), Peters (1999), and Vandergrift (1997b, 1998, 2003) trained their participants in how to think aloud, no information is available about most other think-aloud studies regarding this training (Macaro et al., 2007).

My study was partly inspired by O'Malley et al. (1989) and Vandergrift (1997b, 2003b), especially the way data were generated (using think aloud procedures) and analysed (against the taxonomies provided by them). However, unlike O'Malley et al. (1989), my study aimed to equally weigh both quantitative and qualitative analyses of the protocols. Unlike qualitative analysis of the representative protocols in Vandergrift's (2003b) study, my study included a thematic analysis of all the protocols, as also tried by O'Malley et al. (1989). However, I tried not to identify listeners' strategy use against the three-phase model of comprehension by Anderson (2010, 1985), as identified by O'Malley et al. (1989) for two main reasons: for not reflecting all the strategies the students report and the model not being universally accepted because of its linear process. In contrast to the young secondary school participants in Vandergrift's (1997b, 2003b) and O'Malley et al.'s (1989) studies, my study involved strategy use amongst adult undergraduate-level participants (see in Chapter 3). In addition, participants' L1 and target language in Vandergrift, and the SL context of learning were different from this current study, in which adult learners with an L1 of Bengali were learning English (also see Chapter 1) in the novel EFL context of Bangladesh (see Chapter 3).

2.6.3 Studies on metacognitive knowledge about L2 listening

Although studies on L2 learning strategies are a major strand of second language research, recent research interest has focused on language learners' MK (Vandergrift et al., 2006; Zhang, 2001). Flavell's (1979) typology of MK, a well-known and widely adopted model in cognitive and educational psychology, was introduced and verified by Wenden (1991; 1998) in L2 learning. L2 learners' MK of language learning can offer us important information about their conceptualisations of the language-learning process (Wenden, 1998). Inspired by Wenden (1991, 1998), a number of studies have explored MK about L2 listening, its relationship with listening proficiency and other variables e.g., motivation, strategy use, self-concept. Numerous studies have been conducted with foci on a myriad of aspects of MK-person knowledge such as self-efficacy (Graham, 2011); motivation (Vandergrift, 2005); problems during listening (Goh, 2000); and task knowledge, such as factors affecting listening (Goh, 1999). These aspects of MK have been explored by using different elicitation tools and in different SL/FL contexts with different age groups. Although a number of studies on MK have been conducted by exploiting the MALQ (Vandergrift et al., 2006) to basically understand L2 learners' listening processes in terms of person and strategy knowledge, very few studies (e.g., Goh, 1997; 1998a) have looked into listeners' MK in a systematic manner, with all its three components. Goh (1998a) and Altuwairesh (2013) tried to show differences in MK of two listening ability groups, but only in a limited scope. More in-depth exploration of MK about L2 listening are needed, particularly studies on the MK of different listening ability groups, to understand their differentiating beliefs and awareness, which will eventually inform us about the relationship between MK and listening proficiency.

2.6.3.1 Studies on different aspects of metacognitive knowledge

Studies that have investigated different aspects of MK have usually looked into person knowledge or task knowledge under MK. These studies inform us about, either learners' person knowledge in terms of learners' problems (e.g., Goh, 2000), their motivation (e.g., Vandergrift, 2005), self-concept and self-efficacy (e.g., Graham, 2011), and perceptions of GLs (good listeners) (e.g., Vogely, 1995); or learners' task knowledge in terms of factors affecting listening positively or negatively (e.g., Goh, 1999). Studies on task knowledge have involved factors affecting listening comprehension and development. These studies have provided important information regarding particular aspects of the MK of a set of listeners; however, we cannot have a full understanding of those listeners' overall MK and how different aspects of MK interact within those listeners.

2.6.3.1.1 Studies on aspects of person knowledge.

These studies have investigated learners' perceptions and awareness of different aspects of person knowledge, such as learners' comprehension problems when listening, their motivation, self-concept, self-efficacy and confidence, and their perceptions of a GL. These studies seem to suggest that learners are aware of what they do when listening, what problems they encounter when listening, and what makes a GL, even though they may not be able to act on that knowledge. If this was true, then learners would be able to evaluate their own listening performance and articulate what their needs were.

Studies that have dealt with listeners' perceptions of comprehension problems are few. From a cognitive perspective, Goh (2000) identified 10 problems that 40 tertiary level Chinese ESL learners faced whilst listening, by using diaries along with interviews and immediate retrospective verbalisation. Goh (2000) identified these problems using Anderson's (1995) 3-phase model of listening comprehension. Five of the problems corresponded to the perception phase of listening, three to the parsing phase of listening, and

two to the utilisation phase of listening. Goh also observed that both more and less proficient listeners experienced similar problems; however, there were differences in the degree of cognitive constraints experienced by each group. Moreover, less proficient listeners appeared to have more low-level processing problems than their counterparts. Whilst exploring French listeners' perceptions of their success or lack of it, Graham (2006) also found that students struggled with making out individual words in a stream of spoken French and making sense of any words that have been identified or understood which seem to be problems in perception and utilisation. Further research is needed to explore the comprehension problems faced by the students from different contexts (Berne, 2004).

Since studies including the above ones reveal that listening is a source of frustration to learners and an area in which it seems difficult to make progress, boosting self-efficacy can help listeners minimise the frustration (Graham, 2011). This also inspired Vandergrift's (2005) study on motivation. Vandergrift (2005) found a positive correlation between MK and motivation to learn to listen. Students reporting a greater use of metacognitive strategies also reported more motivational intensity. Graham (2011) argued that self-efficacy, broadly defined as the belief in one's ability to carry out specific tasks successfully was crucial to the development of effective listening skills, and that listening strategy instruction had the potential to boost self-efficacy. A number of other studies (e.g., Bandura, 1997; Chen, 2007; Mills et al., 2006) also revealed that listening proficiency was positively linked with self-efficacy and negatively with anxiety, and anxiety was linked to low self-efficacy and opined that one's sense of efficacy can control or dismiss apprehensive emotions that account for anxiety. Given the important role of self-efficacy, insights into self-concept and self-efficacy of listeners with different listening ability in the same EFL context may inform teaching.

Although there are several studies on good language learners (GLLs) e.g., Rubin (1975), Naiman et al. (1978), little is known about GL. A small number of studies (e.g.,

Vogely, 1995) have also looked into learners' perceptions of a GL and compared learners' perceptions of their listening selves with those of the GLs. Vogely (1995) surveyed "what makes a 'good' listener" via Metacognitive Awareness Strategy Questionnaire (MASQ). All of the subjects seemed to know what made a GL, but they differed in the evaluation of their own strategy use. Although most of the learners recognised what were effective top-down and bottom-up strategies, a significant number of them did not report using those strategies. The study also indicated that the subjects were confident listeners; however, their self-evaluations could reflect an unrealistically high level of confidence. However, Vogely investigated learners' perceptions of a GL with some predefined strategy items only, and often these perceptions might not have been well-reflected, due to the nature of questionnaire. More in-depth studies are therefore needed to explore listeners' perceptions of GLs along with themselves as listeners.

2.6.3.1.2 Studies on aspects of task knowledge

There are studies (e.g., Boyle, 1984; Goh, 1999) that have looked into factors affecting L2 listening as revealed by learners' self-report data, which inform listeners' task knowledge. Despite many common factors, some factors were specific to a particular set of participants in particular contexts.

Whilst Boyle (1984) interviewed students who had just completed their secondary school on the factors that affect their listening, Goh (1999) examined awareness of the factors affecting listening amongst tertiary-level Chinese ESL learners. The factors reported in Boyle (1984) included practice opportunities; educational level and background; general ability in English; vocabulary; ability to attend and concentrate; speaker's production; speed; motivation and attitude; content; TV/radio listening habits; family background; interest; reading habits; note-taking ability; sex of the listener; memory; and general intelligence. Goh identified twenty factors under five categories of characteristics: text, listener, speaker, task,

and environment. Two listening ability groups were compared, and it was found that degree of awareness about factors was linked to listening ability. The majority of the high-ability listeners reported twelve factors whereas the low-ability group reported only four.

Although the above studies highlight the factors affecting listening, they might not be applicable in other contexts with different L1s and EFL contexts. Different factors might weigh more heavily in different situations; therefore, it would be unwise to be prescriptive for other second or foreign language situations (Boyle, 1984) and research should be carried out with those particular languages, of differing degrees of difficulty, of those contexts (Rubin, 1994).

2.6.3.2 Studies using mainly MALQ to look into listeners' metacognitive knowledge

A number of studies have explored learners' metacognitive awareness of L2 listening by using the elicitation tool, the Metacognitive Awareness Listening Questionnaire (MALQ), constructed by Vandergrift et al. (2006), on the basis of the theoretical framework of metacognition and through a rigorous validation process. Many of these studies have found evidence for a statistically significant relationship between students' metacognitive awareness and L2 listening comprehension. However, a recent study by Wang and Treffers-Daller (2017) found a very weak correlation between listening comprehension and metacognitive awareness ($r=0.19$), and no significant correlations between strategy knowledge of the MALQ and listening comprehension. Moreover, the MALQ is not able to elicit data on all three components of MK of person knowledge, task knowledge, and strategy knowledge. The first four factors in the MALQ measure the MK of strategic behaviours related to the regulation of the listening process, whilst the fifth measures learners' person knowledge (Goh & Hu, 2014, p.5). Therefore it produces a partial picture of those learners'

MK. Moreover, questionnaire survey studies seem to lack the strength of in-depth, qualitative study.

Studies e.g., Goh and Hu (2014), Vandergrift et al. (2006) found positive correlations between learners' metacognitive knowledge about L2 listening and listening proficiency. When constructing and validating the MALQ, Vandergrift et al. (2006) were able to show a positive correlation between a score in the MALQ and listening test scores (the correlation coefficient, r= .36, p < .001). Further regression analysis also reinforced this relationship that metacognitive knowledge significantly predicted participants' listening scores (F = 65.74, *p* < 0.001). This indicated that 13% of the variance in the participants' listening performance could be explained by their awareness of the L2 listening process. Amongst Chinese ESL learners, Goh and Hu (2014) revealed that their metacognitive awareness accounted for 22% of the variance in listening performance and listening performance is significantly related to directed attention and problem solving strategies.

Studies e.g., Baleghizadeh and Rahimi (2011), and Wang and Treffers-Daller (2017) explored the relationship between listening comprehension and MK, along with other variables like motivation, language proficiency, and vocabulary. Baleghizadeh and Rahimi (2011) found a statistically significant correlation between the metacognitive strategies elicited via the MALQ and listening performance in the TOEFL, along with significant correlations between listening performance and intrinsic motivation, and metacognitive strategy use and motivation. Wang and Treffers-Daller (2017) revealed that although listening comprehension is moderately correlated with vocabulary size and linguistic proficiency, it is very weakly correlated with overall metacognitive awareness (r=0.19) and person knowledge, not with strategy knowledge.

The above studies are important empirical evidence of the relationship between MK and listening performance; however, they are inconclusive in their results and the MALQ can

only provide a partial understanding of the MK. Moreover, these studies cannot reveal in-depth learners' trajectories of MK about L2 listening. Therefore, in-depth, qualitative exploration collecting verbal reports of listeners' holistic MK from their own voices is necessary.

2.6.3.2 Only a few in-depth studies investigating MK holistically

A small number of studies (Goh, 1997; 1998a) have investigated in-depth all three components of the MK of a particular set of learners. Amongst these, Goh (1998a) further explored differences between the two listening ability groups. It seems that Goh (1998a) could report only in less detail on how differently LSLs and MSLs perceive the listening processes and themselves as listeners in the latter part of the MK study. Therefore, little is known about the two listening ability groups' perceptions of what makes a 'good' listener and the listening processes.

Using listening diaries along with interviews and think aloud protocols, Goh (1997, 1998a) reported on the beliefs and knowledge L2 listeners held. Goh (1997), in fact, reported on the preliminary findings of Goh's (1998a) PhD research. From an analysis of the diaries of 40 ESL learners, it was found that many of the listeners had clear ideas about three aspects of listening: their own role and performance as second language listeners; the demands and procedures of second language listening; and strategies for listening, which were analysed against the three components of MK according to Flavell (1979). Goh (1998a) further compared the MK of two listening ability groups (of 8 high and 8 low-ability listeners). The high-ability listeners reported almost twice as much MK as low-ability listeners and showed rich metacognitive knowledge, especially factors affecting comprehension, methods for developing listening, useful tactics under strategies, and shortcomings in popular comprehension strategies. The study recommended that, for learners to become better

listeners, they needed to develop greater metacognitive awareness of learning to listen. The main strength of the study was that it used three different data elicitation tools to look into learners' metacognitive knowledge. However, Goh's (1998a) sample size was comparatively small (16= 8+8) in terms of making a strong claim in revealing differences between two listening ability groups on a myriad of aspects of metacognitive knowledge. Moreover, the study was conducted in an SL context, which offers more exposure to the target language than that of a FL context like Bangladesh with very 'input-poor' environment.

2.7 Research Rationale and Formulation of Research Questions

The existing body of research reveals research gaps in terms of L2 listeners' metacognition - strategy use and MK. Very few studies (e.g., Goh, 1998a) have attempted to examine listeners' metacognition from a holistic perspective, which includes both the knowing and doing of it; i.e., MK and strategy use. None seem to take place in the EFL context of Bangladesh, a novel EFL context to conduct a study on metacognition in L2 listening. To fill this important, broader research gap, I formulated three research questions to address three separate but connected research gaps emerging from reviewing relevant literature. To be specific, my study aimed to answer the following research questions:

- RQ1. Is there any relationship between tertiary-level EFL learners' perceived strategy use and their listening comprehension in the context of Bangladesh?

- RQ2. Are there any differences between less successful listeners and more successful listeners in their task-based, on-line listening strategy use?

- RQ3. What perceptions do the less successful listeners and more successful listeners have of EFL listening?

2.8 Conclusion

This chapter evaluated relevant previous studies on the theoretical constructs in L2 listening and listening comprehension, the role of metacognition in learning to listen, and relevant empirical studies on metacognition (on listening strategy use and metacognitive knowledge) in L2 listening and argues that gaps in current literature exist. Although there is a general consensus that listening is the most important but most difficult skill to learn, the literature reviewed in this chapter reveals that listening is a skill that is under-researched compared to other language skills. Moreover, studies of the role of metacognition in L2 listening are even more rare. The existing body of research on metacognition reveals research gaps in terms of L2 listeners' strategy use and their metacognitive knowledge about L2 listening. However, to better understand the cognitive complexities that distinguish learners of different listening abilities, we need to study not only learners' strategic processes during listening comprehension, but also their MK of L2 listening (Goh, 1998a, p. 439). As argued by Graham (2006), gaining insights into the beliefs about L2 listening held by learners is an important first step for teachers who wish to help their students address the problems they experience (p. 179). Moreover, there is empirical evidence (e.g., Zhang & Goh, 2006) to support the positive relationship between MK (strategy knowledge) and strategy use. However, very few studies have looked into L2 listening from a holistic metacognitive perspective, which includes investigation of both MK and strategy use - knowledge and action – amongst the same cohort of learners. My study was, therefore, an attempt to fill this broad research gap whilst exploring a novel EFL context of Bangladesh, where no research on metacognition in L2 listening appears to have been done to date.

Chapter 3 Methodology and Research Design

3.1 Introduction

In this chapter, a detailed description of the methodological issues and research design of this study are provided. The study employed a mixed-methods design and was conducted in two phases. This chapter includes the rationale for choosing pragmatism as the research paradigm and explains the research approach appropriate to addressing the research questions in section 3.2. Section 3.3 includes the research design in terms of the methods for the quantitative Phase I and the qualitative Phase II within each phase respectively, with descriptions of the participants and the sampling strategy used, the data collection instruments and procedures, the methods for data analysis, the validity and reliability of the quantitative phase, and the trustworthiness of the qualitative study. The report of pilot study is discussed on in section 3.4. After that, in sections 3.5, 3.6, and 3.7 the researcher's stance and possible sources of bias, the ethical considerations for conducting the study, and the problems encountered whilst conducting this study are discussed. Finally, the chapter ends with the conclusion in section 3.8. Prior to presenting all these step by step, the research questions are reiterated below.

Reiterating the Research Questions

The current study was designed to seek answers to the following research questions:

- RQ1. Is there any relationship between tertiary-level EFL learners' perceived strategy use and their listening comprehension in the context of Bangladesh?

- RQ2. Are there any differences between less successful listeners and more successful listeners in their task-based, on-line listening strategy use?

- RQ3. What perceptions do the less successful listeners and more successful listeners have of EFL listening?

3.2 Research Paradigm and Approach: Pragmatism and Mixed-Methods Design

In this study a pragmatic, mixed-methods design was adopted to address the research problem of understanding holistically metacognition in L2 listening.

Pragmatism is a third methodological stance, which is open to multiple worldviews, whilst constructivism and positivism create meaning from two different worldviews from the realist and idealist point of views respectively. Pragmatism rejects these traditional philosophical dichotomies of realist vs. idealist ontology, and subjective vs. objective epistemology (Coe, 2012). The great strength of pragmatism in social science research methodology is its emphasis on the connection between epistemological concerns about the nature of the knowledge and technical concerns about the methods that we use to generate the knowledge (Morgan, 2008). The current research design employed a pragmatic view of the world to address different research questions to investigate metacognition in L2 listening, and collected both quantitative and qualitative data. By combining both methods within the same study, the aim was to increase the strength of this study, to allow for the collection of both self-report and verbal data, as well as a more complete analysis of data both quantitatively and qualitatively (Tashakkori & Teddlie, 2003).

In order to address target the research questions reiterated in section 3.1, the research design in this study was conducive to Explanatory Design, also called Explanatory Sequential Design (Creswell & Plano Clark, 2007). This is a two-phase mixed methods design

(Creswell & Plano Clark, 2007), the overall purpose of which is to provide qualitative data that helps explain initial quantitative results (Creswell et al., 2003). There are two variants of Explanatory Design - the Follow-up Explanations Model and the Participant Selection Model (Creswell & Plano Clark, 2007, p.72); the former places emphasis on quantitative data (hence QUAN) and the latter places emphasis on qualitative data (hence QUAL). My study, however, combined both models and emphasised both QUAN and QUAL: QUAN Phase I and QUAL Phase II. This was because this study a) sought to follow-up on explanations of the strategy results of Phase I in Phase II, b) selected 30 participants for an in-depth exploration of strategy use and MK in Phase II based on the listening test results of the 388 participants in Phase I, and c) gave equal weight to both the quantitative results of the larger group of participants' perceived strategy use in Phase I and the qualitative results of the task-based, on-line strategy use and MK about L2 listening of a subsample of participants, in order to equally emphasise all three research questions in the two phases. Therefore, this study employed a combined model, as seen in Figure 3.1 below:
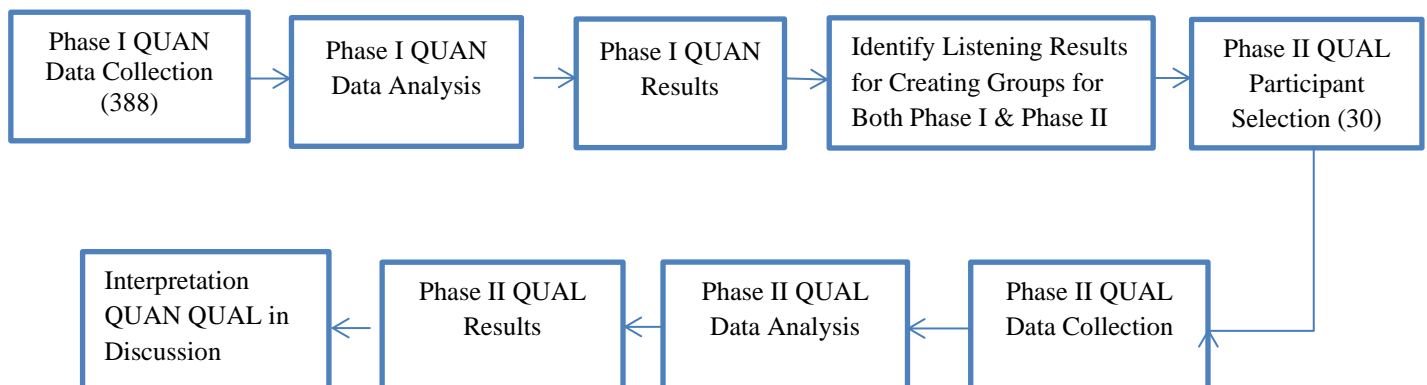
Figure 3.1 Explanatory design employed in this study

3.3 Research Design

Within the mixed- methods design, quantitative data were collected from a larger group of participants via questionnaire and listening test, and subsequently analysed quantitatively in Phase I. Qualitative data were collected from a subsample of participants via think aloud protocols and semi-structured interviews, and analysed quantitatively and qualitatively in Phase II. The overall research design employed for this mixed-methods study is displayed in Figure 3.2 below. The following subsections shed light on the detailed methods employed in the two phases of the study.
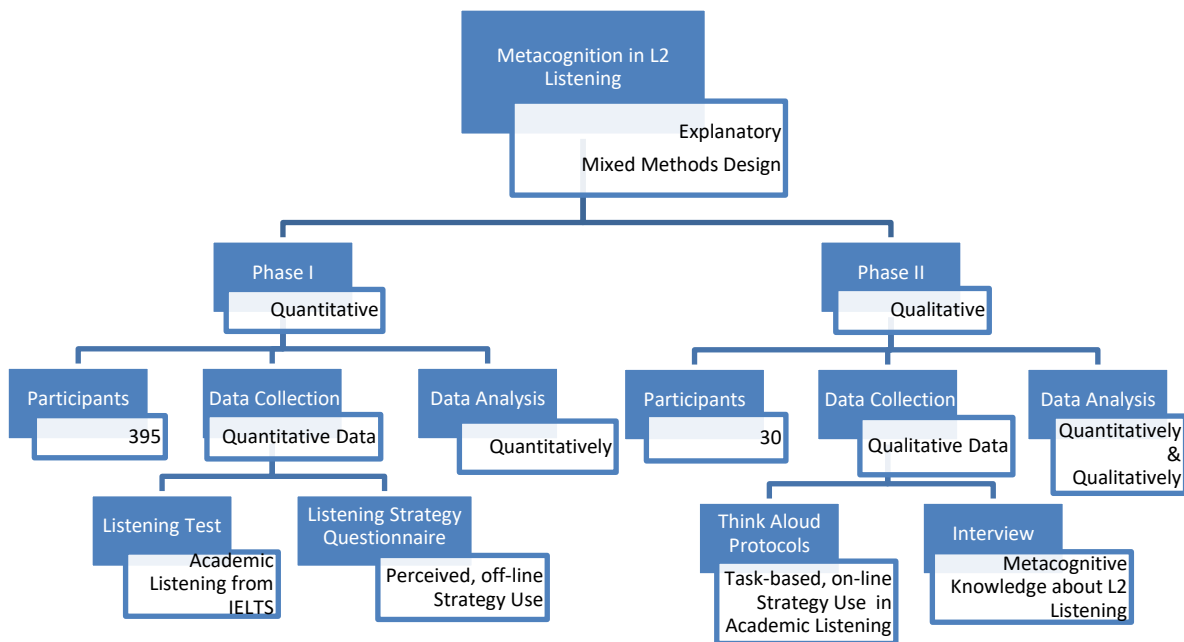
Figure 3.2 Research design for this study

3.3.1 Methods for Phase I

Phase I was a survey study involving a larger group of 395 participants from seven public universities that offer BA (Honours) in English. The data collection methods used for this phase were an EFL Listening Strategy Questionnaire (EFLLSQ) (see Appendix 3A) and

a listening test (Appendix 3B). Data were analysed quantitatively using statistical packages in SPSS version 24. The methods for Phase I are presented in detail in the following sections.

3.3.1.1 Participants

To achieve a representative sample of the population and a good balance amongst participants, the criteria for recruiting participants from different universities were set. This phase targeted 400 participants for the questionnaire and listening test from six intact classes from six public universities out of 16 public universities housing Departments of English, which offer BA (Honours) programmes across different parts of Bangladesh. The purpose was to recruit 200 participants from two big, old, and more respected public universities, and 200 participants from four small, new, and comparatively less respected universities to ensure the same number of participants from both, to provide balance. However, due to the unavailability of target numbers of students from two big universities, data were collected from three big universities, thus making seven public universities in total (see Table 3.1 below).

Ideally, the tertiary-level first-year undergraduate students of English from these universities had already obtained twelve years of formal education in English, as a compulsory subject in schools and colleges prior to their tertiary learning. This was the target group of population for my study. The target population was, in many respects, homogenous. They were homogenous in terms of their age (19-20 years), pursuing a BA (Honours) degree in the Department of English (English language and literature), studying in their first year, receiving teaching in listening skills as part of an English language module, and had received formal education in English as a compulsory subject at the primary and secondary level (a total of 12 years) from generally public schools and colleges run by the Government. Attention was also given to recruiting from the public universities which offer teaching in

listening skills as part of an English language course for the fulfilment of a BA (Honours) degree in English (English language and literature). Although during data collection, some of the students had already started listening classes, some others were waiting for their formal listening classes to begin.

The participating students from the seven public universities for the survey study of phase I are displayed in the following table.

Table 3.1

Participants from 7 different public universities in Bangladesh

Participating Universities		Number of Participants
Big and Old	Small and New	
Public University		69
Public University		55
Public University		78
	Public University	52
	Public University	49
	Public University	42
	Public University	50
Total 3	Total 4	Total 395

Sampling Strategy

The sampling strategy employed for selecting participants for Phase I was stratified random sampling. A decision was taken to study tertiary level EFL learners in their first year of an undergraduate BA (Honours) programme. A random selection of universities was made from two strata of two types of public universities: big and old established public

universities, versus small and newly established public universities. The initial decision was to randomly select two out of four big universities since each big university offered approximately 100 places, and four out of 12 small universities since each of them offered approximately 50 places for admission in the first year to do their 4-year BA (Honours) programme. However, one big university was added for the reason that has been mentioned above. Finally, 395 first-year undergraduate EFL learners participated, from seven intact classes from the Department of English at seven public universities, from out of 16 public universities, which offer BA (Honours) degrees in English (English literature and language).

3.3.1.2 Instruments

In Phase I, I exploited two kinds of instruments to collect quantitative data: an EFL Listening Strategy Questionnaire (EFLLSQ) to measure the EFL learners' perceived listening strategy use, and a listening test adopted from a sample IELTS test to measure their listening comprehension. The participants' listening scores in the listening test served two functions: one to see the correlation between their perceived listening strategy use and listening comprehension in order to answer RQ1; and the other, to divide the two listening ability groups and to form a subsample of participants taking an equal number from the participants with high and low listening scores. Phase I, therefore, exploited the following two instruments:

3.3.1.2.1 The EFL Listening Strategy Questionnaire

I developed an 'EFL Listening Strategy Questionnaire' (EFLLSQ) (see Appendix 3A) based mainly on the two existing strategy taxonomies of O'Malley and Chamot (1990, p. 137-139), and Vandergrift (1997b, p. 392-395). However, for a few of the strategy items and the Likert-scale, I followed two existing strategy questionnaires – the Strategy Inventory of Language Learning (SILL) by Oxford (1990), and the Metacognitive Awareness of Listening

Questionnaire (MALQ) by Vandergrift et al. (2006). When selecting any strategy items from Oxford (1990), I also looked for items from her list of strategies useful for listening (p.317-320) along with SILL. According to the taxonomy proposed by O'Malley & Chamot (1990, p. 137-139), and inventory adopted by Vandergrift (1997b, p. 392-395)[2], strategy classification falls into three categories – metacognitive strategies, cognitive strategies, and socio-affective strategies. The EFL LSQ developed, which was then adapted taking into consideration the EFL context of Bangladesh, had 40 listening strategy items under the three categories of metacognitive, cognitive and socio-affective strategies.

In the EFLLSQ, I used a five-point Likert-scale following Oxford's (1990) Strategy Inventory for Language Learning (SILL), which has been used extensively in different EFL/ESL contexts and is well accepted. However, a modification in option number 3 was made in Oxford's (1990) five-point Likert-scale. I replaced 'somewhat true of me' in number 3 in SILL with 'sometimes true of me,' to make the options similar and uniform in terms of the number of times the students respond to and measure their frequency. Therefore, all the strategy items had five-point Likert-scale responses where, 1 = Never or almost never true of me, 2 = Usually not true of me, 3 = Sometimes true of me, 4 = Usually true of me, 5 = Always or almost always true of me. Likert-scale responses were used to see the frequency of listening strategy use amongst the participants.

Strategy questionnaires are considered to be the most efficient and comprehensive way (Oxford, 1996) and the most frequently used method for eliciting learner strategies (Cohen, 1998). However, the reasons for not employing the standardised and much exploited SILL and MALQ are discussed here. The Strategy Inventory for Language Learning (SILL) created by Oxford (1990) has been exploited extensively to measure perceived strategy use

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[2] Vandergrift's (1997b) inventory itself was adapted from O'Malley & Chamot (1990) Oxford, (1990), and Vandergrift (1996).

and its relationship to other variables, and is the most widely used instrument in language learner strategy research (White et al., 2007). However, SILL was developed to elicit language learning strategies in general, not for strategies specific to a particular language skill; moreover, some strategy items overlap. On the other hand, the Metacognitive Awareness of Listening Questionnaire (MALQ) created by Vandergrift et.al (2006) was developed based on listening skills, and has been trialled and validated in different learning contexts. Internal reliability estimates of the MALQ are respectable, ranging from .68 to .78. In addition, there is a demonstrated significant relationship between MALQ scores and actual listening performance (Vandergrift et al., 2006). Nonetheless, the MALQ was designed to elicit data on listeners' metacognitive awareness of their person knowledge and listening strategies, not their actual use of the strategies themselves. Moreover, the strategy items do not include all the possible listening strategies used by listeners in the listening comprehension process (White et. al., 2007), rather it focuses on listeners' awareness of mostly metacognitive strategies. However, the research design of the current research project required a "specialized" (Oxford, 2011, p. 166) strategy questionnaire in the particular language area of listening skills, which also encompassed all the possible metacognitive, cognitive, and socio-affective listening strategies.

With this expectation in mind, I decided to develop an EFLLSQ mainly based on O'Malley and Chamot's (1990) taxonomy, which reflects, to a great extent, strategies involving listening strategies as verified by a number of researchers in their work on listening, for example Vandergrift (1996, 1997, 2003). Thus, the EFLLSQ developed was primarily based on O'Malley and Chamot's (1990, p. 137-139) definition and classification of broad categories of strategies and many of the sub-categories. However, sub-categorisation of a few of the strategies, and defining examples for most of the individual strategies were taken from Vandergrift's (1997, p. 392-395) work. The initial EFLLSQ questionnaire had 46

strategy items, which were then reduced to 40 items based on feedback from two EFL teachers in the higher education context in Bangladesh. After that, the questionnaire was reworded and adapted according to the teachers' feedback and my experience as a lecturer in the higher education level of the Bangladeshi context. Thus constructed, the 40-strategy item EFL LSQ had 15 strategy items (1-15) constituting the metacognitive strategy category, 18 items (16-33) constituting the cognitive strategy category, and seven items (34-40) constituting the socio-affective strategy category. This was then pre-piloted with five undergraduate EFL learners in English. The EFL LSQ developed was finally piloted (see Section 3.4). After trialling the questionnaire, questionnaire data were checked for reliability via computing Cronbach alpha. Further on the validity and reliability check of the EFL LSQ is discussed in Section 3.3.1.5.

3.3.1.2.2 The Listening Test

In Bangladesh, there is no available national standardised test to assess Bangladeshi EFL learners' listening performance, therefore a practice IELTS test was chosen here to assess the listening comprehension of participants, as the IELTS is internationally recognised as a secure, valid and reliable indicator of the true-to-life ability to communicate in English for education (www.ielts.org). I chose the practice test from online IELTS resources in order to avoid students' potential familiarity with listening passages and test questions in sample IELTS tests in Cambridge IELTS books available on the market in Bangladesh. A standardised test is desirable as a discriminating factor between successful and less successful listeners, since most of the previous studies (e.g. O'Malley et.al. (1989), Young (1996), Vandergrift (1997, 1998), Vogely (1995), and Osada (2001)) on successful and less successful listeners did not measure successful listening using a standardised test (Macaro et al., 2007). Therefore, there are validity concerns with regards to the definition of 'successful' and 'less successful' listeners in their studies.

The listening test (Appendix 3B) was therefore constructed from an international standardised test, the IELTS, to measure the EFL learners' listening comprehension. For this, sections 3 and 4 of academic listening from IELTS practice tests were chosen and cut and concatenated using Praat software. Taken from IELTS practice tests from ieltshelpnow.com, sections 3 and 4 involve students' discussion on academic related affairs, and a teacher's lecture respectively. In the IELTS, the four parts within the listening module are progressively more difficult (Chalhoub-Deville & Turner, 2000); therefore, the passages were organised accordingly for the listening test in the current study: section 3 followed by section 4. Each section contained questions for 10 discrete marks for typical listening question types for multiple-choice questions: short answer, fill in the gap, and completing a sentence. The sample IELTS test served the purpose of providing a standardised test and academic listening texts needed for the current study. Academic listening was chosen for the current study because Bangladeshi EFL learners are apparently exposed to academic listening (Alam & Sinha, 2009), for example listening to a teacher's lecture, communicating with teachers, participating in group-discussions with co-learners etc. They have very limited scope to listen to English outside the classroom, except for listening to songs and watching movies on television etc. Moreover, academic listening merits more research investigation as the specific case of academic listening is even less-well researched (Lynch, 2011).

The listening test, however, seems to have been difficult for this population as seen from their performance in the pilot study and main study. Their performance in the main study showed a wider range of scores (0-16) out of 20 (M= 4.81, SD=3.07), with only 52 students out of 495 students scoring ≥10. This might also explain no significant correlation between their listening scores and strategy scores in the questionnaire due to floor effect as majority of the students scored to the bottom starting from zero. Therefore, the present study acknowledges this as a limitation.

3.3.1.3 Data Collection Methods

Quantitative data were gathered from 395 participants from the seven different public universities mentioned above via the above-mentioned two instruments - questionnaire and listening test. To collect data from participants, I first sought the consent of the respective Chair of the Department of English from the respective universities, formally through their signing of the Consent Form (Appendix 3C) sent ahead of the study. I took informed consent from the students themselves who were willing to participate in this research programme, by asking them to sign the Informed Consent Forms (Appendices 3D and 3E). Participants were assured that ethical issues had been considered and that the information provided by them would remain confidential; nobody except the researcher and her supervisor would have access to the data. The data would be anonymised after a certain period of data analysis, and they were also assured that their participation in the study and any information they provided and their listening scores, would not affect their academic grades at all.

First of all the listening test was administered to the participants to assess their listening performance. The decision to administer the listening test first was to give them some opportunity to experience some English listening, which could stimulate them and help remind them of their use of listening strategies in terms of any previous listening experience. In the listening test, they answered 20 discrete items for 20 marks in two sections of the listening test. There were instructions in the recording and on the question paper as well, on how perform the tasks. They had to write the answers on the question paper provided. Unlike in the IELTS, they were not expected to transfer their answers to an answer sheet at the end of the test, since their answers were checked and scored manually, not by scanned machine. Moreover, this two-step recording of answers on two separate pages may provide opportunity for making errors (Chalhoub-Deville & Turner, 2000). Again, unlike in the IELTS, these students were given scope to listen to the recording twice; the decision to give a second

chance was taken based on students' poor performance and their request for a second chance to listen in the pilot study. However, following the IELTs, they were given two minutes at the end of the test to check their answers.

After the listening test, the EFL LSQ was administered. Participants were encouraged to answer the questionnaire both in terms of the listening tasks they performed immediately before the questionnaire, and of overall listening experiences they had already had in the classroom and so on. Detailed guidelines were given to the participants both orally and in writing on how to complete the questionnaire (see Appendix 3A). Participants had the opportunity to enquire about anything they were not clear or that they wanted to know.

The listening test and questionnaire were administered by me with the help of the respective course teacher of the class period, after the class. These were administered in the participants' regular classroom, so as to ensure a comfortable environment for the participants to take the test and perform the questionnaire. The whole process took about one hour. For this, oral consent from the respective course teacher was first sought. The presence of myself as the researcher was helpful as it enabled any queries on the part of the participants to be answered and made it easy and comfortable for the students, and it also typically ensured a good response rate (Cohen et al. 2011). The presence of myself as the researcher whilst taking the listening test was very important so as to ensure reliability of the test and to ensure an opportunity for the students to enquire about anything to do with the research instruments and also the project.

3.3.1.4 Data Analysis Methods

Data, collected via the questionnaire and the listening test, were scored and coded for statistical analysis. The students' performance on the listening test was scored on a scale of 20 marks for 20 discrete points. They were given one mark for one correct answer. However,

the decision was taken to consider partial answers as a correct answer as prescribed by the IELTS (e.g., "26,000" instead of "26000 people"), and some minor spelling mistakes if they were intelligible. To check inter-rater reliability, a second coder, who was an MA student in English, was appointed. An answer sheet with a note on acceptable answers was shared with a second scorer to ensure uniformity in scoring students' performance on the test. The inter-rater reliability was 98.35%. The coding of the students' answers to the EFL LSQ was straightforward, since I numbered the questionnaire items from 1 to 40 against each of the 40 strategy items and the students circle one from 1-5 Likert scale for their answer for each strategy item. Therefore it was straightforward to enter the data into SPSS and make profile for each student identified with their ID numbers. After that, items1-15 were grouped under the metacognitive, 16-33 under the cognitive, and 34-40 under the socio-affective category for further analysis.

After the data were entered, cleaned and prepared, they were analysed using the Statistical Package for Social Science (SPSS) version 24. To address RQ1, first descriptive statistics for means, medians and standard deviations were analysed from the questionnaire and listening test scores, then ANOVA and Pearson Correlation Coefficient tests were conducted to identify any relationship between students' listening comprehension and perceived strategy use.

3.3.1.5 Validity and Reliability

The validity and reliability of the Phase I quantitative study were enhanced in the following ways.

Validity

According to Carmines and Zeller (1979), the validity of an assessment refers to, "the extent to which any measuring instrument measures what it is intended to measure" (p.17).

To maximise validity of my quantitative data, I also followed Cohen et al. (2011), who suggested that validity can be improved through careful sampling, appropriate instrumentation and appropriate statistical treatments of the data (p.179).

To demonstrate content validity, I had ensured that the instruments fairly and comprehensively covered the domain or items that they purported to cover (Carmines & Zeller, 1979, p.20). The listening strategy questionnaire was developed by carefully selecting strategy items from the established and the frequently employed and proven strategy taxonomies in the studies by O'Malley and Chamot (1990), and Vandergrift (1997). As proposed by Cohen et al. (2011), a factor analysis can also cluster together similar issues and separate them from others (p. 189). Factor analysis, Principal Component Analysis, on the questionnaire showed an Eigen value of .760, which indicated the sample size was enough for factor analysis (see Appendix 3F). The Bartlett's test of sphericity, $p < .001$, also indicated that there were enough correlations amongst the strategies. The scree plot showed there were three possible factors amongst the strategy items (Appendix 3F). However, factor analysis did not cluster similar strategies according to these three factors; therefore, I decided to reject the clustering of the factor analysis on the grounds that the strategy items were grouped according to pre-existing established taxonomies and questionnaires. Validity of the instruments was also enhanced by piloting the instruments with the target but different set of participants and by revising the instruments accordingly. The listening test was adapted from internationally standardised IELTS practice tests; therefore it was a valid and reliable test.

Reliability

According to Carmines and Zeller (1979), "reliability concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials" (p. 11). Field (2005) also pointed out that "reliability just means that a scale should consistently

reflect the construct it is measuring" (p. 666). The reliability of the assessments in this study was examined using two methods, namely the internal consistency method, by calculating Cronbach's alpha (Carmines & Zeller, 1979, p. 43; Field, 2011) and the test-retest method (Carmines & Zeller, 1979; Field, 2011) for the listening test. The Cronbach alpha for the EFL LSQ was .83 (see Appendix 3G), and the correlation between the test-retest listening scores on the listening test in Phase I and think-aloud tasks in Phase II showed a strong significant correlation, r =.80, p<.001 (see Section 5.2.2.2.1 in Chapter 5).

3.3.2 Methods for Phase II

In Phase II, qualitative data from a subsample of participants of task-based, on-line strategy use and learners' perceptions of a GL and themselves as listeners, were collected via think aloud protocols and semi-structured interviews respectively. The think aloud protocols were analysed using both content analysis and thematic analysis. The interview protocols were analysed using thematic analysis; however, a frequency count was also done.

3.3.2.1 Participants

The participants of Phase II of the study comprised 30 students, a subsample from the larger group of participants in Phase I. Thirty participants were selected from the larger group on the basis of their listening scores on the listening test they took in Phase I. The larger group of participants were divided into two groups - the less successful listeners (LSLs) and the more successful listeners (MSLs), based on their listening scores on listening test. The students scored across a range of 0 to 16, out of 20 discrete marks, and a score of 9 was considered to be the cut-off point where students scoring less than 9 (<9) were LSLs and scoring more than 9 (>9) were MSLs. From these two groups, 15 participants from the LSL group and 15 participants from the MSL group were randomly selected for Phase II. In Phase

II the LSLs' scores were in the range of 0 to 7, and the MSLs' scores were in the range of 10-16, making groups with comparable ranges.

3.3.2.2 Instruments

Task-based, on-line strategy use was elicited via a think aloud technique through the instrument of a listening text with associated tasks, which I termed "Think Aloud Text and Task." After that, the students were interviewed about their perceptions, using a semi-structured interview schedule.

3.3.2.2.1 Think Aloud Text and Task

Participants were asked to 'think aloud' whilst listening to an academic listening text in two sections with 25 predefined pauses, and whilst performing associated listening tasks. Participants were asked to 'think aloud' about what was happening inside their mind, whilst reasoning and solving particular problems. In order to elicit their think aloud protocols, there were three parts in the whole think aloud procedure - a training session, a warm-up session, and the main data collection session (see Section 3.3.2.3.1). In the main data collection session, think aloud protocols were elicited from participants on an individual basis. The academic listening text and tasks were very similar to the listening text and task of the listening test the students participated in, in Phase I. The similarity of the listening test and the think aloud task was maintained for validity reasons, to be able to claim that their strategy use as elicited in the think aloud protocols reflect their listening performance. The think aloud text and task (see Appendix 3H) were chosen in a similar way as the listening test in Phase I, i.e., from academic listening sections 3 and 4 from sample IELTS practice materials from ieltshelpnow.com. The think aloud text comprised a teacher-student discussion on academic affairs, and a teacher's lecture. The rationale as to why these were

taken from IELTS materials and for using an academic listening text is explained in section 3.3.1.2.2 above.

3.3.2.2.2 The Semi-structured Interview Schedule

A learner's perceptions of EFL listening were elicited via semi-structured interview (Appendix 3I) immediate after an individual student completed the think aloud session.

A semi-structured interview is the type of interview that can be located somewhere between a highly structured interview and a completely unstructured interview (Berg, 2007; Cohen et al., 2011). Semi-structured interviews focus on specific themes using some pre-determined questions (Wellington, 2000). Semi-structured interviews have generally open-ended questions and also allow the use of *probes* and *prompts.* The use of probes and prompts enhances the richness and depth of responses (Cohen et al., 2011). The development of the interview schedule considered the formatting and sequence of the interview questions (Cohen et al., 2011). Double-barrelled, ambiguous and leading questions and academic jargon were avoided to ensure easy understanding of the questions (Merriam, 1988). For this study, the interview schedule was designed using 10 thematic questions, along with probes and prompts where necessary, relating to participants' perceptions of a GL and their self-concept, their listening difficulties, and their approaches to solving these difficulties, and their perceptions of differences between approaches employed by themselves and GLs.

3.3.2.3 Data Collection Methods

Think aloud protocol elicitation was followed by an interview session on an individual basis in a single go, with breaks for a few minutes if necessary. How the think aloud procedures and the interview sessions were conducted is described below.

3.3.2.3.1 Think Aloud Procedures

There are two special forms of verbal reporting: the one concurrent, the other retrospective, and these are most likely to yield direct evidence of cognitive processes (Ericson & Simon, 1993, p. 30). A think aloud procedure is a concurrent data collection procedure, and for this study the think aloud technique was the right choice as this was more appropriate for an in-depth understanding of learning strategy use (O'Malley, et al., 1989). The think-aloud procedure for the present study was adopted from Ericson and Simon (1993). It consists of a training session, a warm-up session and a data collection session. For the present study, training was provided for 30 participants in groups, in five different sessions - five groups of unequal numbers from five different universities in various different parts of Bangladesh. The main data collection started after a day's training was provided to the groups due to time constraints. Each day I could collect data from only 1 to 2 participants.

The purpose of the training session was to train participants in how to 'think aloud.' Training included practising how to 'think aloud,' whilst doing some verbal reasoning through analogy, then doing mathematics problems verbally, and finally practising thinking aloud whilst listening to sample academic English listening texts with particular tasks similar to those used in the main think aloud protocols, usually in their native language, Bengali. An example of verbal reasoning using analogy, was 'Physician: Treatment:: Judge: ?' and of doing a mathematics problem, was '10:99:: 9:?'. To train participants to think aloud, I myself modelled with a sample excerpt by thinking aloud considering the content and the way of thinking aloud, and then by asking them to practise themselves and correcting them where necessary. The main think aloud experiment started the next day and each student was offered a warm-up session immediately before the main think aloud protocol. In the individual warm-up session there was an informal talk between myself and the participant about the participant's background and motivation for learning English and so on, followed

by more practice of thinking aloud to remind them of the training session on how to think aloud in a listening task with predefined pauses.

The students were allowed to think aloud in either of the languages of English and Bengali or switching between them, but they were encouraged to do so in their native language because thinking aloud in an L1 might be easier for them and thus allowed more processing capacity for the task (White et al., 2007). Only one student reported his entire think aloud protocol in English, others reported in Bengali or by code-switching. Pauses in each of the two listening passages in the think aloud text were pre-defined by me, during which I stopped the recorder for the participant to think aloud about how s/he was listening to the text and performing the related task.

During think loud session, if necessary I asked some prompt/probe questions like 'what are you thinking?', 'How did you figure that out?', 'What's going on in the back of your mind?', 'Can you be more specific?' mostly as a reminder to think aloud in the predefined pauses. The think-aloud procedures required at least two tape recorders; one for playing the listening text, and another for recording the whole thing which included both the listening excerpts until the pauses, and the subsequent participants' 'thinking aloud' and my prompts. In the present study, to avoid any technological problems three instruments were used for the think aloud procedure: a laptop, an audio and a video recorders.

The think aloud technique, however, has its limitations. The concern as revealed in existing literature (e.g., Santos et al., 2008; Graham et al., 2011; Macaro et al., 2007) is to what extent a verbal report can reflect 'internal reality'. The argument is it cannot tap all the mental processes going on inside listeners' head; however, till date it 'appears to be a productive methodology for studying on-line strategy use' (Vandergrift, 2003b, p.471). Macaro et al. (2007) also acknowledge the lack of alternative tools to verbal reports and think

aloud technique is most likely to yield direct evidence of cognitive processes (Ericson & Simon, 1993, p. 30). Secondly, Macaro et al. (2007) question the 'artificially channelling' of the thought process whilst training the listeners to verbalise. Moreover, accidental insertion of some strategies might happen whilst training them. Care was taken to minimise training to the students. The students were made aware of what is expected from them and why, with a short modelling of think aloud. They were asked to think aloud anything they did to listen the text and perform the task, what they understood and not. To address another concern of the extent the listeners can retain what they have listened and done during listening, pauses were pre-selected after each short excerpt with natural boundary. Thus, care was taken as to when to interrupt, how to prompt and how much. The decision of pausing the tape by the researcher and prompting when necessary was taken to avoid listeners' frequent non-pausing and not thinking aloud from the pilot study.

3.3.2.3.2 Interview Data Collection Procedures

Interview data collection of a participant's perceptions of EFL listening followed his/her think aloud session. The student was interviewed using 10 thematic questions from the semi-structured interview schedule, and probes and prompts were used when necessary and as required. Individual interviews took on average 30 minutes, varying from 18 minutes to 45 minutes. Interviews were both audio and video recorded.

3.3.2.4 Data analysis methods

Whilst the think aloud data were analysed both quantitatively and qualitatively through content analysis of their types of strategy and frequency of use, and thematic analysis of their orchestration and coordination of strategy use respectively, interview data were analysed using thematic analysis; however, an attempt was made to identify the frequency of mentions of each item associated with their perceptions. The students' interview data on

their perceptions of EFL listening were analysed as their metacognitive knowledge about L2 listening, following Flavell's (1979) typology of metacognitive knowledge.

3.3.2.4.1 Think aloud data analysis

The following sections shed light on the purposes of both the content and thematic analyses in detail, and the procedures for the content analysis and thematic analysis performed in terms of the coding procedures, coding reliability, and taxonomy / inventory development.

3.3.2.4.1.1 Why both content and thematic analyses?

Data collected via the think aloud protocols were analysed both quantitatively and qualitatively - first, for frequency counting and pattern finding, and second, for meaning making (Gu, 2014). It is common practice in strategy research to code which strategies are used and how many times, however few studies code how a strategy is used and how effective it is (Gu, 2014). Both LSLs and MSLs may use the same listening strategy (e.g., inferencing) and at the same level of frequency, but differences may lie in their ways of employing these strategies-how they coordinate or orchestrate these strategies, how effective the use of a strategy is, such as the accuracy of an inference, an appropriate connection to prior knowledge or the depth of summarisation (Vandergrift, 2003b). The robustness of think aloud data lies in the most revealing of the insights by qualitative analysis, and if we stopped at the strategy counting level, we would miss the most revealing insights of qualitative research (Gu, 2014). As propounded further by Gu (2014), qualitative analysis of think aloud protocols concerns the varying quality of strategy use by good and poor learners, since less successful pupils might use the same listening strategy (e.g., inferencing and prediction) as their more successful counterparts, but differences could lie in other aspects (e.g., accuracy of bottom-up decoding, retrieval of schemata of varying degrees of relevance). Moreover, there might be a third variable of which qualitative analysis may have some interpretation. Such an

experience reinforced the commitment to mixed methods research (Johnson & Onwuegbuzie, 2004). Therefore, a mixed methods approach to analysing think aloud protocols was deemed important for the present study.

3.3.2.4.1.2 Content Analysis

Content analysis of think aloud protocols was conducted to see the types of strategy use and frequency of mentions of individual strategy items as coded against existing strategy taxonomies available in the literature. However, I decided to be flexible to the data; therefore, both a deductive and an inductive approach to coding data was taken. The coding of protocols was checked for inter-coder reliability. The following discussion describes the coding procedures and coding reliability, and the development of the listening strategy taxonomy for the current study.

Coding procedures

The coding phase had two steps: transcribing all interviews manually, and coding them manually against predefined strategy taxonomies. All the audio and video recorded data collected via think aloud protocols were transcribed verbatim. An attempt was made to transcribe whole protocols verbatim, although I excluded the reporting of non-verbal and emotional elements, for example pauses, laughter, etc., since they were not required for either content analysis or thematic analysis of strategy data. After transcribing all think aloud data, the transcripts were reduced to manageable patterns by coding them. As I was looking for instances of strategy use, coding was done by tagging a category label to a chunk of data as many times as a strategy occurred in a participant's whole transcript. For this tagging, I first labelled all the codes (individual strategy items in the existing taxonomies) numerically from 1 to 37 for both convenient coding and entry purposes into SPSS.

Following Miles, Huberman, and Saldana (2014) I started coding against theoretically and empirically developed strategy taxonomies, but with the flexibility of adding, deleting,

and reshuffling the codes based on the data itself. Following O'Malley and Chamot's (1990) language learning strategy taxonomy and Vandergrift's (1997b) listening strategy taxonomy I started preliminary coding of the think aloud protocols. However, whenever a new type of strategy use emerged, it was first listed as new and the decision to tag it as a particular strategy type was taken following strategy definitions in other strategy taxonomies (e.g., Goh 2002, Oxford, 1990, Vandergrift, 2003b) and the context specific to the use of that strategy by EFL learners in Bangladesh. Therefore, in order to achieve a pragmatic balance, a coding scheme, derived from both top-down and bottom-up approaches, was the right choice. This was in fact a practical solution to the tension between what the data showed (bottom-up) and what the researcher wanted to see in the data (top-down) (Gu, 2014). Thus, data were coded both deductively and inductively.

Once the coding was done, a profile for each of the participants was created by tallying and tabulating the frequency of their use of the strategy items and totalling the items into strategy subcategories, for example elaboration, and then into the three major categories, as proposed by the O'Malley and Chamot's (1990) and Vandergrift (1997b) strategy taxonomies.

Coding reliability check

I familiarised myself with my data by looking at them several times before the actual coding started. I then decided to follow O'Malley and Chamot (1990) and Vandergrift's (1997a) strategy taxonomy as my data reflected their classification most, and started preliminary coding of one third of the data. Based on coding of one third of data, I adapted their taxonomies. After that both I, and a second coder,[3] coded another one third of the protocols (10 protocols; 5 from each group of LSLs and MSLs). I appointed a second coder

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[3] The second coder was a Bengali speaking Bangladeshi, who was educated in Bangladesh until her MA, and did her PhD in the UK in Social Sciences, and is currently serving as a teacher-manager in the UK.

to check the inter-rater reliability of the coding of those protocols. Before coding, I trained her in how to code against a predefined taxonomy, and what all these categories, subcategories and definitions meant, with the help of representative examples. Following Miles and Huberman's (1994) formula[4], the inter-coder reliability was checked and the inter-coder reliability was 79.76 %. Any discrepancies and question marks in this one-third of the protocols were resolved through discussion by interpreting classifications and definitions by O'Malley and Chamot (1990) and Vandergrift (1997b), and interpreting the context of the target strategy items used and the EFL context of the listeners. How the discrepancies and confusions were resolved through discussion is elaborated on in the next section.

Development of the Listening Strategy Taxonomy

In this section, I describe the strategy items in existing taxonomies that were not present in the strategy data in the current study, strategy items that were reinterpreted to suit my data, and strategy items that emerged from the data.

- Production monitoring and style monitoring under the subcategory of monitoring in O'Malley and Chamot's (1990) taxonomy were not much evidenced by the strategy items derived from the data of the current study. Moreover, Vandergrift's studies (1996, 1997b, 2003b) also did not show these two types of strategy in his classification. This was probably because those strategies are associated with other kinds of language performance (e.g., productive skills) other than listening comprehension. However, the data of this study showed very few instances of checking and revising spelling and grammar whilst deciding on the answers. Therefore, the present study grouped these two strategies together as production monitoring, in which listeners monitored aspects of their grammar or vocabulary whilst producing the answers to the questions.

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[4] Reliability = total number of instances of agreement ÷ total number of instances of agreement + disagreement

- It seems there was not a clear boundary between ability evaluation under the self-evaluation category, and self-evaluative elaboration. In this instance, the decision was taken to treat any instances of the strategy of judging or evaluating their ability to perform the task at hand, as ability evaluation. For instance, in most instances students were found to judge themselves by reflecting on their performance and consequently they became aware of their ability and proposed/planned actions for the future. No evidence was found of elaboration for comprehension based on self-evaluation.

- In the case of the individual strategy of transfer, O'Malley and Chamot's definition was confusing to me because students' use of previously acquired linguistic knowledge to facilitate a language task could easily be coded under academic elaboration. Therefore, Vandergrift's (1997b, 2003b) definition seemed to be more convincing. In the cases of resourcing and cooperation, the data showed no evidence of such instances, due to the nature of the listening tasks under test conditions. Resources like dictionaries or glossaries and textbooks etc., were not allowed to be consulted, and there was no opportunity to cooperate with peers or others due to the test conditions of the think aloud tasks. Again, due to the test conditions and unidirectional listening, there was also no opportunity to ask the teacher or others for clarification or verification, thus showing no instances of questioning for the clarification strategy. Although O'Malley and Chamot (1990) classified self-questioning under this subcategory, both I and the second coder, decided to group this under questioning elaboration.

- In a number of the instances, some strategies overlapped and consequently had the possibility of being treated differently. In such instances, care was taken to understand the purpose of that particular strategy item, and to define and classify it accordingly.

However, if one strategy, although very few in number, was used for two purposes at the same time, for example for the substitution of words and for comprehension or double-check monitoring, that strategy was counted twice as two different strategy types.

Based on the decisions made in coding one-third of the protocols, I coded the remaining two thirds, i.e., 20 protocols. After I coded them, I tried to solve any further confusion and unresolved issues arising from these 20 protocols after discussing them with the second coder. I also asked the second coder to cross check a few of the protocols and she coded four protocols randomly taken from the remaining 20 protocols. Finally, any disagreements were resolved by referring to a third person who was familiar with strategy research. The decision was taken that between-parts elaboration was more appropriate than between- parts inferencing, and a strategy that emerged from the data would be defined as 'reverse question mapping'.

In the current study, I tried to closely follow both O'Malley and Chamot (1990) and Vandergrift (1997b); O'Malley and Chamot (1990) provided me with the classifications and definitions of the strategies, whilst Vandergrift provided me with representative examples of almost all the individual strategies, except for a few for which examples were taken from the data itself, for example some of the monitoring strategies, and reverse question mapping. The reverse question mapping strategy emerged inductively from the data itself and is elaborated on in the following section. In the instances of differences between the two taxonomies, I followed how my data best fit into whichever taxonomy. As mentioned earlier, although the coding was guided by these two taxonomies, it was not limited to the categories or strategy items in them. I decided in advance to be flexible in coding so as to give strategies emerging from the data new definitions if they did not fit into any of the predefined classifications.

Being informed and having decided, I did preliminary coding of my data. Being inspired by the data, I decided to follow O'Malley and Chamot's (1990) classification of planning, directed attention, selective attention and self-management as separate subcategories. The reason was that the data showed two types of strategy associated with these subcategories - one type was deciding in advance to do something, and another was doing that particular action instantly whilst listening; that is planning to attend selectively in the pre-listening phase and attending selectively whilst listening. Secondly, from the preliminary coding, it became clear that instances of inferencing best suited Vandergrift's classification of the inferencing subcategory, which was divided into a number of strategy types (linguistic inferencing, voice and paralinguistic inferencing, kinesic inferencing, extralinguistic inferencing, and between parts inferencing). However, the current study based on audio listening did not show any instances of kinesic inferencing (body language and facial expressions) (Vandergrift, 1997a). Moreover, voice and other prosodic features like tone, stress, pitch, rhythm, ers-ums, body language, and facial expressions could be grouped under paralinguistics, as suggested by many researchers.

Thirdly, instances of between parts processing best fitted under O'Malley and Chamot's (1990) elaboration subcategory, instead of Vandergrift's inferencing. Fourthly, since the study did not involve interactive listening, the data exhibited little evidence of socio-affective strategies (also evidenced by Vandergrift, 2003); however, the students employed a number of affective strategies and these best suited Vandergrift's (1997) definitions of affective strategies, although lowering anxiety and self-encouragement were grouped together since both were facilitating and encouraging. Finally, a new subcategory of cognitive strategies emerged from the data itself, and I termed it 'reverse question mapping,' as students managed to hear some words, which according to them seemed to be the answers to particular questions and tried to find those respective questions to add these answers.

However, in most cases the LSLs used this strategy, which mostly failed to be successful. Thus the Listening Strategy Taxonomy (Appendix 3J) emerged from the existing taxonomies, and the data itself in the current study.

3.3.2.4.1.3 Thematic Analysis

Whilst conducting content analysis of task-based, on-line strategy use, an attempt was also made to seek out any qualitative differences in strategy orchestration; that is, how strategies were actually deployed and coordinated by the two listening ability groups. To this end, thematic analysis was the right choice to identify themes emerging from the data in the ways of employing strategies in the data, which was not possible in the content analysis by seeking types and frequency of strategy use. Whilst coding for strategy types and tallying the frequency, I coded further information on the ways strategies were deployed, which provided me with significant findings on the qualitative importance of strategy use.

Coding procedures and the development of an inventory of strategy orchestration

In what fashion and how effectively and successfully more successful listeners deploy strategies can only be found in the richness and depth of qualitative analysis of strategies (Gu, 2014). To this end, thematic analysis of the think aloud protocols was performed. To understand this in-depth processing of strategies, I looked for themes in the ways that distinguished the MSLs' processing from that of the LSLs.

Thematic analysis, however, was conducted primarily inductively, as themes emerged from the data itself; nevertheless, I could not ignore the influence of prior knowledge from reading existing literature that revealed different qualitative themes in strategy orchestration. Thus, the thematic analysis was both a-priori and post-priori.

For the thematic analysis, I followed Braun and Clarke's (2006) steps of thematic analysis: Step 1 - familiarising myself with the data; Step 2 - generating initial codes; Step 3 -

searching for themes; Step 4 - reviewing themes; Step 5 - defining themes; and Step 6 - producing the report. These six steps of thematic analysis are described in detail in Appendix 3L whilst documenting the thematic analysis of the interview data on metacognitive knowledge.

Whilst coding strategy items, coding for themes of *how* a given strategy was deployed, was performed by employing different techniques simultaneously, for example by writing down memos in the margins of the written transcripts, by colour-coding the target excerpts of the protocols, and by adding signs (e.g., +) to mean a combination of strategies. For instance, if a student employed more than one strategy at a time, or sequentially after failure of a previous one in order to understand a single segment of text or solve a single problem or perform a task at hand, I wrote down 'combination' in the margin, and put a (+) mark between these two strategies, and colour-coded the excerpts involved. An attempt was also made to record inappropriate, unsuccessful and ineffective use of strategies by writing down a key word like 'wild inferencing' next to the strategy. I also tried to document students' motivation and interest in think aloud task and willingness to report in detail, as well as their reflexivity towards think aloud interference. Thus, after initial coding, step 2 was performed.

After initial coding of instances of the ways strategies were deployed, I tried to identify any thematic patterns amongst all these codes, memos and annotations; from– making notes on the written transcripts and profile pages of individual students. I then assembled them as subthemes and themes and documented them in a MS word file following Braun and Clarke's (2006) step 3 i.e., searching for themes. To map between (like reference in NVivo) each instance of themes/subthemes in the MS word file with excerpts in the transcripts, in the MS word file I put strategy numbers (1-37) along with pause numbers (1-25) for the listening excerpts against each theme/subtheme. On inspection, I grouped the

emerging patterns into two major themes: combination of strategies, and effective use of strategies. "Effective use of strategies" was then changed into "appropriate and effective use of strategies". This is to note that under this theme, I coded any instances of use of strategies inappropriately and ineffectively. I also characterised the combination of strategies into subthemes as the strategies were combined in different ways, for example metacognitive and cognitive or metacognitive and metacognitive or cognitive and cognitive strategies, some of which were combining top-down and bottom-up strategies. Some combinations happened sequentially such as when one strategy did not work, the student looked for another strategy to solve that single problem. After reviewing, assembling and dissembling the codes, I decided to code any combination as combination of strategy use, excluding combinations of top-down and bottom-up strategies. In addition, looking for the next strategy when the first one was ineffective was termed as 'flexibility in strategy use.' Therefore, I grouped any combinations of strategies (other than top-down and bottom combinations) and flexibility in strategy use in one theme and termed it 'combination of strategies and flexibility in strategy use'. The reason for putting these two types of combination together was that it was not always clear-cut whether the students used them at the same time or one after another to process the incoming text and/or corresponding task. However, although a combination, this combination top-down and bottom-up strategies revealed an important distinguishing factor between the LSLs and the MSLs. I therefore disassembled them and grouped them separately as a theme and termed it 'interactive top-down and bottom-up use of strategies.'

Finally, I coded: a) all other combinations together as a single theme by defining them as 'combination of strategies and flexibility in strategy use'; b) combinations of top-down and bottom-up strategies only as interactive top-down and bottom-up use of strategies;' and c) any inappropriate, unsuccessful, and ineffective strategies as 'inappropriate and ineffective strategy use.' In so doing, three distinct major themes emerged from the thematic analysis of

the think aloud protocols, which distinguished the MSLs and the LSLs: combination of strategies and flexibility in strategy use (see Vandergrift, 2003); interactive top-down and bottom up use of strategies (see O'Malley et al., 1989); and appropriate and effective use of strategies (see Graham et al., 2008). However, as seen above, all these major themes were somehow interconnected, and could even work together for successful listening. Thus, following the remaining steps 5 & 6 of the thematic analysis, finally a coding framework for the thematic analysis of the ways strategies were deployed emerged, called the Inventory of Listening Strategy Orchestration (see Appendix 3K).

3.3.2.4.2 Interview Data Analysis

Interview data on listeners' perceptions of what makes a GL, and themselves as listeners were analysed using thematic analysis. I was not theorising like in grounded theory, but looking for emergent themes on MK about L2 listening and listeners' differences in metacognitive knowledge, a research area that is less explored, hence new. This section concentrates on the procedures for the thematic analysis, coding reliability and development of the inventory of metacognitive knowledge.

Interview data on the students' perceptions of what makes a GL and themselves as listeners, were analysed as their metacognitive knowledge about L2 listening, following Flavell's (1979) typology of MK: person knowledge, task knowledge, and strategy knowledge. Therefore, in order to analyse as MK the data on perceptions, a thematic analysis suited best, in which the three components of MK provided major themes, and each of which consisted of a number of subcategories for which I followed mainly Goh (1997, 1998a, 1999) and the data itself. This section elaborates on the coding procedures for the thematic analysis, the reliability check of the coding, and the development of the 'Inventory of Listening Metacognitive Knowledge' (Appendix 3M) in EFL listening.

3.3.2.4.2.1 Thematic Analysis

For the interview data, I chose thematic analysis which better suited my data and served the purpose of research question 4. Thematic analysis is a widely used qualitative data analysis tool, which searches for themes or patterns; it is, "a method for identifying, analysing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 79). A theme captures something important about the data in relation to the research question, and represents some level of *patterned* response or meaning within the data set. Therefore, a researcher's judgement is necessary to determine what a theme is. For the thematic analysis of the two listening ability groups' perceptions of L2 listening, I followed Braun and Clarke (2006). They recommend retaining some flexibility, since rigid rules do not work in this case. As advocated by Braun and Clarke (2006), thematic analysis is a useful and flexible method for qualitative research, which offers an accessible and theoretically-flexible approach to analysing qualitative data (Braun & Clarke, 2006). A rigorous thematic approach can produce an insightful analysis that answers particular research questions (Braun & Clarke, 2006). A detailed description of how I analysed the interview data on MK following six phases of thematic analysis by Braun and Clarke (2006) is described in Appendix 3L.

Coding reliability and development of the inventory of metacognitive knowledge

To identify the categories from the students' verbal data I followed Flavell's (1979) three-component model of MK (see Chapter 2), and for further classification within the categories an attempt was made to follow Goh (1997, 1998a, 1999) and the data itself, as in a number of cases the sub-categorisation followed themes and sub-themes emerging from inductive coding of data. Unlike existing studies on person knowledge, the current study investigated both knowledge of a GL and person knowledge. Therefore, I grouped the data as types of person knowledge, which consisted of listeners' perceptions of a GL, termed as GL knowledge, and beliefs of and knowledge about themselves as listeners, termed as listening

self knowledge. The listening self in my study refers to person knowledge in previous studies, for example Goh (1997, 1998a).

As revealed from the data, GL knowledge encompassed a GL's linguistic, motivational, strategic, and other miscellaneous factors facilitating listening comprehension. Data revealed a new subcategory in person knowledge that is 'listeners' needs'. However, 'self-concept' in this study refers, to a great extent, to Goh's (1998a) 'listening self'. Therefore, This present study has two types of persons under person knowledge: beliefs about listeners' themselves termed as 'listening self' and perceptions of what makes a 'good' listener termed as 'Good Listener Knowledge (hence GL knowledge). Task knowledge included factors affecting listening comprehension, input useful for developing listening, and the nature of second/foreign language listening, as subcategorised by Goh (1997, 1998a, 1999). Further, following Goh, strategy knowledge also was comprised of strategies assisting listening comprehension, strategies assisting listening development, strategies that do not always work, and strategies of different types, such as metacognitive, cognitive and socio-affective strategies. Although the students reported on person knowledge and strategy knowledge mostly explicitly (although not using the terms explicitly) in response to the interview questions, their reports on task knowledge emerged mostly implicitly, from their responses to questions relating to themselves, their listening practices, problems and difficulties they face whilst listening, and the ways they try to overcome them.

As mentioned earlier, in developing the coding framework, I started by initially coding four of the transcripts and I developed a coding framework based on Flavell (1979). After that I coded six more transcripts and then four more, and added and deleted the codes from the initially developed coding framework, after which I classified the codes following Goh (1997, 1999, 2000) and according to factors emerging from data itself. Out of this I developed an initial codebook from 14 transcripts. Both I and a second coder coded another

10 transcripts and I cross-checked our performance and calculated the inter-coder reliability following the same formula of Miles and Huberman (1994) that I used for the content and thematic analyses of the think aloud protocols. The inter-coder reliability was 79.59%. Any discrepancy was resolved on mutual agreement. After that, all the data were coded against this framework that had been developed. This framework was finally revised as necessary, as there were a few further issues to be solved, for example the emergence of the 'listening by repeating' strategy, as a new strategy used by students. Moreover, there was confusion regarding items under miscellaneous factors in GL knowledge, and both I and the second-coder, came to an agreement. In this way, a final coding framework was developed both inductively and deductively (see Appendix 3M).

3.3.2.5 Issues of Trustworthiness

For the qualitative study in Phase II, I enhanced issues of trustworthiness throughout the study. To enhance trustworthiness I basically considered four criteria suggested by Lincoln and Guba (1985): credibility, dependability, conformability, and transferability. However, I also looked at some validation strategies proposed by Creswell (2013), for example prolonged engagement, clarifying researcher bias, and relying on presenting rich descriptions.

Credibility means checking the relationship between the researcher's interpretation/depictions of the observed reality and the degree of credibility of these to the research participants themselves (Lincoln & Guba, 1985). In order to enhance the credibility of the present study, two techniques were applied: triangulation and member checking. Triangulation of the strategy data occurred in different ways: off-line measures of strategy use were compared with online measures of strategy use, and online measures of strategy use were compared with strategy knowledge in the discussion (see Chapter 7). Although the first

triangulation revealed an anomaly between the findings, the second one showed that the data were congruent. Moreover, triangulation also happened when the quantitative analysis of online strategy use was reinforced by qualitative analysis of the data. Member checking means taking the research findings back to the research participants to see if the meaning and interpretation assigned to them, were accurate and matched participants' perspectives (Liamputtong, 2009). Member checking was carried out in that reports of the main findings of the study were sent to and shared with the research participants via email and Facebook messenger; however, the response rate was very low.

Dependability is parallel to reliability in quantitative studies, and it also relates to credibility (Miles & Huberman, 1994; Miles, Huberman & Saldana, 2014). It concerns whether, "the process of the study is consistent, reasonably stable over time and across researchers and methods" (Miles & Huberman, 1994, p. 278). By using an *audit trail* (Carcary, 2009)*,* detailed description of the methodology including the procedures for qualitative data collection and data analysis were documented (Sections 3.3.2.3, 3.3.2.4). Inter-rater reliability of the coding process was also important; this involved checking whether the same codes were similarly assigned to the given data by two separate coders (Silverman, 2006). A two-hour training session for think aloud protocols and later another one and half-hour training session were held with a second coder, a Head of Law, who was from the participants' home country with Bengali as her L1, and who had a social science background and did her MA and PhD at a UK university. To calculate the inter-coder reliability, instances of agreement and disagreement were counted and following Miles and Huberman's (1994) inter-coder reliability formula mentioned above; the inter-rater agreement reached 79.76% for the content analysis of the think aloud data, 74.5% for the thematic analysis of the think aloud data, and 87.35% for the thematic analysis of the interview data. The discrepancies were resolved by discussion.

Confirmability refers to the degree to which the findings and interpretations are grounded in the data (Lincoln & Guba, 1985; Miles, Huberman & Saldana, 2014). To strengthen confirmability, bias is explained in Section 3.5. A detailed methodological description has been given, including the process for and the logic of the data analysis (see Section 3.3.2.2). Any claims made were evidenced and supported by students' think-aloud protocols and interview excerpts from the transcripts. Confirmability was also achieved through triangulation and member checks, as mentioned in relation to credibility.

Transferability refers to whether the findings are transferable to other contexts. In this study, the findings are generalizable to the target population of public universities in EFL context Bangladesh. It might not be generalizable to other tertiary level EFL students from private and national universities and other EFL contexts of Asia or elsewhere. A detailed description of the phenomena under study, and the participants' rich descriptions (Friedman, 2012) were provided in this chapter and Chapter 1. Description of learners' proficiency levels, ages, and past experiences of listening were highlighted in this study (see Chapter 3). It was hoped that presenting this thick description would allow the reader to determine whether the findings might be transferable to another context with similar characteristics (Creswell, 2013).

In order to enhance trustworthiness, I also looked at the validation strategies proposed by Creswell (2013). Creswell (2013) also identifies some validation strategies, for example prolonged engagement, clarifying researcher bias, and relying on presenting rich descriptions. Each of the analyses of the think aloud data and interview data separately took me around eight months, allowing me to analyse both the think aloud protocols and interview data multiple times whilst taking breaks, and coming back to the data analysis again whenever I was stuck on categorising and meaning making. This involved both being reflexive and

reflective during the data analysis process and the writing-up process. In these ways, the trustworthiness of the qualitative study in Phase II of my study was enhanced.

3.4 Pilot Study

Prior to the main study, in July 2014 a pilot study (see Appendix 3N, for a detailed description of the pilot study) was conducted with 52 first-year undergraduate students in the Department of English at a public university, which was not part of the main study. The pilot study involved trialling the instruments and procedures for the data collection for Phase I and Phase II, analysing some of the data, for example the listening test scores and the questionnaire data, and refining the instruments and data collection procedures for the main study.

3.4.1 Piloting and revising the instruments for Phase I

Two instruments in Phase I - the listening strategy questionnaire and the listening test- were trialled with 52 (out of 54 questionnaires - 2 were missing data) EFL students majoring in English. To provide a natural teaching environment for the learners, the instruments – the listening strategy questionnaire and the listening test for Phase I - were piloted during a class session with the help of the course teacher of that class.

The principal function of piloting was to increase the reliability, validity and practicality of the questionnaire (Cohen et al., 2011; Oppenheim, 1992) and of the listening test. As it was a highly structured questionnaire, there was no way of knowing if the respondent might have wished to add any other comments about the issue under investigation or about the categories of the rating scale, so a straightforward way to circumvent this issue is to run a pilot (Cohen, Manion, & Morrison, 2011). The procedures for piloting and revising the instruments are described below.

1. Before administering the listening strategy questionnaire, students took part in a listening test adapted from IELTS practice tests. Following administration of the IELTS listening test, the initial plan was to play the listening text once only. However, on request from the students after the test, the listening text was played again, since they felt they did very poorly in the test after listening to the text only once. The reason for administering the listening test first was to give the students an opportunity to remember any prior listening experiences. Moreover, in the questionnaire, it was mentioned that they could think over any listening experiences they had from listening to their teachers' lectures.

2. For the validity and reliability check of the listening strategy questionnaire, statistical tests were carried out. The missing values were cleaned up, and outliers were examined; no outliers were detected. A Cronbach's alpha was computed to examine internal consistency of the items in the questionnaire. The alpha for the 40 items was .837, which indicated that the items performed internal consistency reliability. The validity of the questionnaire was ensured by exploring the pattern of use of listening strategies established through the correlation between listening strategy use and the listening performance of the participants in the pilot study. However, the results showed no correlation between listening scores and overall or any of the strategy categories (except a few individual strategies; for example, there was a positive correlation with planning and substitution, but a negative correlation with inferencing and note taking). In this case, the small sample size was considered as a potential explanatory factor for the non-significance correlation.

3. Based on the observation of learners' participation in the survey study, the listening strategy questionnaire was refined. Although none of the students responded to 'If you want to add more from your personal experience, please do add it overleaf,' an

open question in the questionnaire, I also orally asked for feedback on any issues with the questionnaire whilst administering the questionnaire and after its completion. Based on discussion with them, a few changes were made in the wording (e.g., 'everything' in LSQ7 was substituted with 'all the other things'). The phrase 'Strategy Questionnaire' in the title was changed to 'Student Questionnaire,' and changes were also made in the layout of the questionnaire. Whilst analysing and interpreting the strategy data, I found that some strategy items better suited Vandergrift's (1997) classification, for example inferencing and elaboration strategies.

4. In both the EFLLSQ and the listening test papers, changes were made in the demographic items. Participants' contact numbers were asked for along with their student ID/ roll number and the name of their university because a subsample of the participants would need to be contacted to participate in Phase II.

5. A few changes were also made in the listening test; in both the question paper and the recording. The recording for the listening test would be played twice, because whilst piloting the students felt they were lost and could not do better upon listening only once. Some modification in the formatting and instructions were made for better understanding of the test. Right answers for the listening test were as specified in the answer sheet in the IELTS practice test; however it was decided to accept minor mistakes in spelling. All revisions were made based on participants' confusion with and misunderstanding of wording and layout.

3.4.2 Piloting and revising the instruments for Phase II

In order to pilot the instruments and procedures for Phase II, two participants were interviewed for the think-aloud task and the interview; one was selected from amongst the

high scoring participants and one from amongst the low scoring participants, based on their scores in the listening test of Phase I. The procedures for piloting and revising the instruments are described below.

1. Instruments for the Phase II think aloud procedures and the interview were trialled on different days, after calculating the participants' scores on the listening test and their strategy use, and dividing them into more successful and less successful listeners. Piloting the tools and instruments took two weeks.

2. By the time the main study began, the think aloud and interview data had not been analysed systematically due to time constraints. The principal purpose of piloting this phase was to gain hands-on experience of conducting the think aloud experiment and interview; therefore basically piloting the process. After piloting the think-aloud task and the interview, I gained much experience in how to conduct them, with pausing and recording properly in the think aloud task, and being careful how questions were worded and using turn-taking to minimise researcher bias. However, an attempt was made to listen and re-listen and to code major findings from their protocols to see if there were any differences between the high and low scoring participants, and this preliminary analysis of the protocols confirmed the difference.

3. In the think aloud experiment, 24 pauses became 25 pauses for better tapping into their strategies. Interviewees needed to be instructed in a clear way about what they were going to do, and the formatting and layout of the listening task needed to be clearer to understand it properly. In the interview schedule, question number 3 was totally reworded to elicit more qualitative data than quantitative percentages on their self-assessment.

3.5 Researcher Stance and Potential Sources of Bias

A reflection on researcher stance and possible insertion of bias is critical to minimising bias (Norris, 2009). As a language teacher, my academic interest in listening and strategy use motivated me to pursue this study. I was fully involved in the whole process of conducting the study. However, whilst the students were thinking aloud, I adopted an etic role (an outsider view). I asked them to ignore me by thinking that nobody was there. I interrupted with prompts like, 'what's going on inside your head?' only when I realised that they were thinking during the pause but had forgotten to think aloud. However, my development of the EFLLSQ and interpretation of on-line strategy use and students' MK were biased by my interest in metacognition and my previous knowledge of listening strategies and MK about L2 listening from my reading existing literature. To minimise my bias prior to conducting the study, I examined the literature critically and familiarised myself with the challenges and significance of identifying and teaching strategies, and the negative findings in the existing literature. Whilst conducting the study, I tried to be open to alternatives, to accept other views, and to minimise my effect on participants (Norris, 2009). I avoided imposing my strategies and perceptions of listening whilst training the students in the think aloud procedures, and in interviewing and the probing and prompting of their perceptions of L2 listening.

3.6 Ethical Considerations

A number of issues were considered prior, during and after data collection to ensure ethicality of this study. Ethical issues concerning the methodology of this study are detailed below.

a) Obtaining official permission is deemed as the first step to consider when conducting any research study (Cohen et al., 2011). First, I sought and obtained approval from the Ethics Committee in the Department of Education at the University of York by completing an Ethics Audit Form for conducting this research. In order to gain access to the participants' universities and to obtain the authorities' permission to collect data from their students, consent from the chairs of the respective departments was sought by informing them about the project and of what it involved, and by obtaining signatures from them by sending them informed consent forms via email and in person as appropriate.

b) Participation was voluntary. First, in their respective classrooms, students were informed about and issues clarified orally in front of their class teacher, of the research project and the process for data collection, the participants' rights, and any benefits of participating in the study etc. Directly after, informed consent of the participants (18 years old) was sought by having informed consent forms signed by them. The informed consent forms for the EFL LSQ and the listening test for Phase I were provided to the entire class in the classroom in the Department of English at seven universities at different times, and students were asked to sign the forms only if they agreed to participate in the questionnaire and listening test; those who did not agree did not sign the forms and left the class for the duration of the data collection. A subsample of participants signed another informed consent form only when they were approached after Phase I of the data collection and the computing of the results of the listening test. More than the target number (15) of students from each of the two listening ability groups were contacted through their class representatives to participate in Phase II of the data collection and out of whom 30 (15 LSLs and 15 MSLs) were selected with consultation with class representatives on their

talkativeness and willingness to participate, who signed another consent form for think aloud and interview. All these informed consent forms provided information on the PhD project in a brief description and the participants' roles in the current study in Phase I, and Phase II separately. Whilst conducting the think aloud sessions and the interviews, a neutral stance was adopted, by valuing all the behaviours and perceptions of the students (Holloway & Wheeler, 2002) and by treating all LSLs and MSLs equally.

c) Participants were free to withdraw any time they wished from the research investigation. Even after providing data, participants were given the opportunity to withdraw their data up to two weeks after completion of data collection if they did not want them to be used in the current study; after this time their identity would be erased, particularly data from Phase I.

d) Great care was taken whilst giving training and using prompts towards participants when thinking aloud, so that accidental planting of ideas about strategies from the researcher who was the trainer and interviewer did not happen to any participant. Probes and prompts were also used carefully during interview.

e) In the data analysis and presentation, care was taken regarding the anonymity and confidentiality of the participants. There was no mention of the names of participants' universities or departments in any of the data collection forms, scripts or transcripts etc. Participants' identities were important only in the form of the class roll number in Phase I to match a subsample's data in Phase II, for identifying the two listening ability groups and for triangulation purposes. However, in face-to-face interviews, it was not possible to ignore their names (Cohen et. al., 2011) beside their roll numbers. However, participants' identities in the form of their class roll number were kept confidential and after a certain period any clues regarding their identities merged. It

was necessary to ensure the anonymity of participants to protect their identities (Miles & Huberman, 1994). Their identities in any forms were kept confidential throughout the thesis, for example when quoting them. Throughout the thesis they were mentioned as required and only in Phase II, by the pseudonyms assigned to them whilst preparing the data for analysis.

3.7 Problems Encountered

Reality does not always follow expectation. It is often difficult to find a perfect match between a research design and its implementation in the real world. During the life of this PhD project, I faced a number of problems; two major problems are discussed below.

First, the data collection was not as smooth as I expected. Due to a student strike, I had to cancel my journey twice for Phase I of the data collection from a university I selected. On the other hand, I had to go to another university three times only to collect Phase I data because of the tight schedule of the classes; moreover there was scarcity of empty classrooms where we could sit together for the questionnaire and listening test. In addition, in two phases of the study, I had to travel several times to individual universities in different parts of Bangladesh. It was expensive both in terms of time and money.

Second, due to time constraints and the word limit of this academic research, a mixed-methods design with two phases with different types of data was just overwhelming, both in terms of analysing and presenting them within this time frame and word limit.

3.8 Conclusion

This chapter discussed the methodology and research design employed in this study. It presented all methodological decisions such as the research paradigm and the mixed-methods approach, participant selection, methods of instrument development, of data

elicitation and data analysis, with the rationale behind all the decisions taken during the two phases of the mixed-methods study. Thus, the chapter also illustrated the stages that led to the emergence of the study's findings. The next chapters, Chapters 4, 5, and 6, present the results and findings of Phase I and II of the study. Chapter 4 presents the results and findings of the quantitative study in Phase I.

Chapter 4 Results and Findings 1: Phase I

Perceived Strategy Use and Listening Comprehension

4.1 Introduction

This chapter reports on the results and findings of the quantitative data elicited via strategy questionnaire and listening test from a larger group of participants in Phase I. Both descriptive and inferential statistics were conducted using statistics in SPSS 24 to answer RQ1: "Is there any relationship between tertiary-level EFL learners' perceived use of listening strategies and their listening comprehension in the context of Bangladesh?" Although there was a numerical difference between the LSLs[5] and the MSLs in their use of metacognitive and socio-affective strategies with slightly higher use of these strategies amongst the MSLs, the results of ANOVA results and Pearson correlations showed no significant differences between the groups and no significant correlations between strategy use and listening comprehension, except for the low correlations in the cases of a very few individual strategies. The preparation of the dataset for computing the statistics in SPSS and justification of parametric tests among data in non-normal distribution are presented in section 4.2, and the results and findings of quantitative analysis of data in response to RQ1 are presented in section 4.3.

4.2 Preparing the Dataset and Justification for Using Parametric Tests

Prior to data analysis, preparing data for entry into SPSS in order to conduct statistics tests is an important first step. After that, it is essential to check the dataset (Pallant, 2007, p.43) whether it is suitable for parametric or non-parametric tests. Preparing the dataset

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[5] Participants scoring more than 9 in the listening test were tagged as MSLs, and participants scoring less than 9 were tagged as LSLs. See Chapter 3, section 3.3.2.1 for further information.

involves data screening, dealing with missing values and outliers, and how the data are screened. Missing values and outliers are dealt with and presented in section 4.2.1. A discussion of whether the data met the assumptions of the parametric tests to be run on them and justification for choosing parametric tests with data in non-normal distribution is presented in section 4.2.2.

4.2.1 Data screening and dealing with missing values and outliers

This section describes how the data were screened, and missing values and outliers were dealt with in order to prepare the dataset for the statistics in SPSS. Before entering data into SPSS, seven participant cases were rejected, because they did not answer many of either the questionnaire items or the listening test. Therefore, data from 388 participants were entered into SPSS; they were screened and checked for errors, and subsequently errors were corrected.

Following Pallant (2007), the dataset was cleaned and the screening process went through the following two steps:

- Step 1: Checking for errors involves checking each of the variables for scores that are out of range (i.e., not within the range of possible scores).

- Step 2: Finding and correcting the error in the data file involves finding where in the data file the error occurred (i.e., which case is involved) and correcting or deleting the value as appropriate.

Missing cases and missing variables were identified. As SPSS identifies any missing values and leaves them as a full stop (.), I, therefore, did not feel it essential to give any specific value to missing values (Pallant, 2007, p.33). SPSS showed 17 cases with a number of missing variables. Therefore, the decision was taken to compute statistics using list-wise

deletion in dealing with these missing data. List-wise deletion was the right choice in this study on the grounds that it would reflect the results most accurately (as there would be no transformation and modification of data). Moreover, the number of missing cases was quite low; therefore, this would not affect my study that much. I also calculated outliers within the dataset. In the strategy use dataset there were only few outliers and they did not affect the mean scores; i.e., the mean scores including and excluding the outliers were very close. As such, the decision was taken not to exclude the outliers; rather they were treated as cases in the study. However, in the case of the listening scores, the mean scores differed when the outliers were included or excluded. However these outliers were genuine cases and they were important for the investigation of the present study. Therefore, the decision was taken not to exclude them from the study (see Field, 2011).

4.2.2 Parametric tests with data in non-normal distribution

The data on perceived strategy use and listening comprehension in Phase I of my study showed non-normal distribution. However, the decision was taken to do parametric tests on the data in non-normal distribution to answer RQ1. How much the data deviated from the four assumptions of parametric tests – normal distribution, homogeneity of variance, interval data, and independence (Field, 2011), and the rationale for using parametric tests with non-normal data are presented below.

4.2.2.1 The assumptions of parametric tests

Generally, parametric tests are regarded as more powerful and robust than non-parametric ones in detecting the differences that exist between the groups. However, if one does parametric tests when the data are not parametric, the results are likely to be inaccurate (Field, 2011). Therefore, it is important first step to test whether the data meet the

assumptions of parametric tests. Researchers have argued for the use of a non-parametric test, which is assumption-free or distribution-free test, if the assumptions of parametric tests are violated (Field, 2011; Pallant, 2007).

As stated by Field (2011, p. 132-133), there are four assumptions of parametric tests and these are:

- Normally distributed data: the rationale behind hypothesis testing relies on having something that is normally distributed.

- Homogeneity of variance: this means that the variances should be the same throughout the data.

- Interval data: this means that data should be measured at least at the interval level.

- Independence: this assumption, in this case, means that data from different participants are independent, which means that the behaviour of one participant does not influence the behaviour of another.

Given that using a parametric test when the assumptions are not satisfied will produce inaccurate results (Field, 2011), it was necessary to examine the assumptions before determining which statistical test (i.e., parametric or non-parametric test) should be used. The last two assumptions can be examined using common sense. In this study, the data from different participants were independent and they were interval data; therefore the data met last two assumptions. Then, to check homogeneity of variance, Levene's Tests were conducted, and to check normal distribution, Normality Tests were performed.

4.2.2.2 Levene's tests

To understand the homogeneity of variance of strategy use and listening comprehension, Levene's tests were conducted. As shown in Table 4.1 below, the Levene's tests showed that there was equality of variance amongst the participants in their use of each

of the strategy categories, use of metacognitive and cognitive strategies together, and their listening comprehension (p>0.05). However, the tests showed non-homogeneity of variance for overall strategy use (p=0.042).

Table 4.1

Homogeneity of variance for overall strategy use, combined metacognitive and cognitive strategies, and each of the three categories

Test of Homogeneity of Variance				
	Levene Statistic	df1	df2	Sig.
Mean of Overall Strategy Use	4.16	1	386	.042
Mean of Metacognitive and Cognitive Strategies	3.66	1	386	.057
Mean Metacognitive Strategies	2.54	1	386	.112
Mean Cognitive Strategies	2.39	1	386	.123
Mean Socio-affective Strategies	.58	1	386	.445
Listening Test Scores	.99	1	386	.319

4.2.2.3 Normality tests

Normality tests of both strategy use and listening scores were performed to see if the data were in normal distribution to conform to the assumptions of the parametric tests to be run. Normal distribution was checked using three different kinds of evidence: Kolmogorov-Smirnov test results, Histograms, and Normal Q-Q plots. The results showed that the use of the metacognitive and socio-affective strategy categories amongst all participants and amongst the LSL group violated the assumption of normality. The listening scores of all participants and of both groups separately also showed non-normal distribution.

As shown in Table 4.2 below, the normality tests showed that the Kolmogorov-Smirnov sig. was not significant for the overall use of metacognitive, cognitive and socio-affective strategies (.19), overall use of metacognitive and cognitive strategies (.20*), and use of cognitive strategies (.20*); the Kolmogorov-Smirnov result in each case was greater than .05. This indicates normality of distribution of the scores of these strategies. Both Histogram and Normal Q-Q plots of the tests also indicated a normal distribution of the scores (see Figures 4.1 to 4.6).

Table 4.2

Kolmogorov-Smirnov tests of overall strategy use and use of cognitive strategies amongst all participants

	Tests of Normality					
	All Participants					
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Mean_of all three categories together	.039	388	.194	.997	388	.721
Mean_Metacognitive and Cognitive Strategies	.029	388	.200[*]	.997	388	.731
Mean_ Cognitive Strategies	.032	388	.200[*]	.998	388	.934

*.This is the lower bound of the true significance.
a. Lilliefors Significance Correction
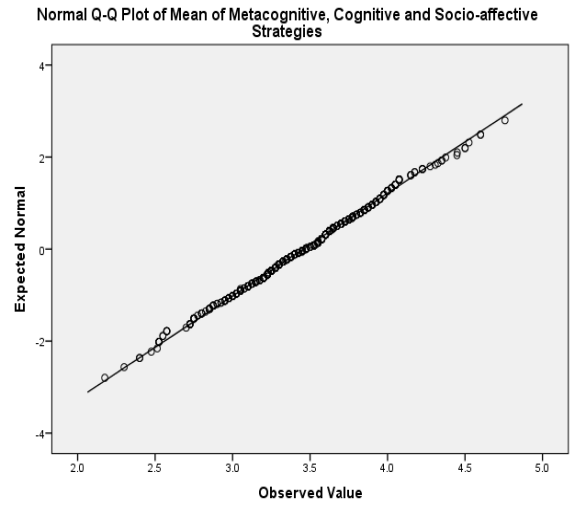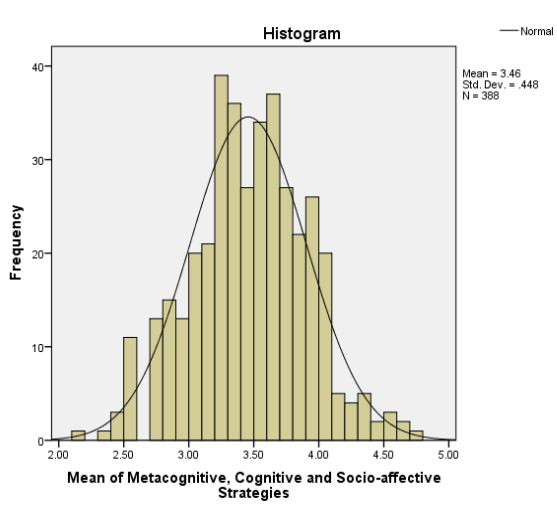
Figure 4.1. Histogram of overall use of metacognitive, cognitive and socio-affective strategies

Figure 4.2. Normal Q-Q Plot of overall strategy use
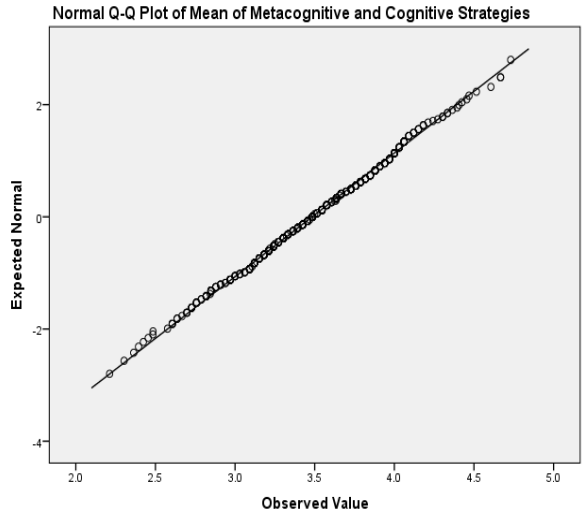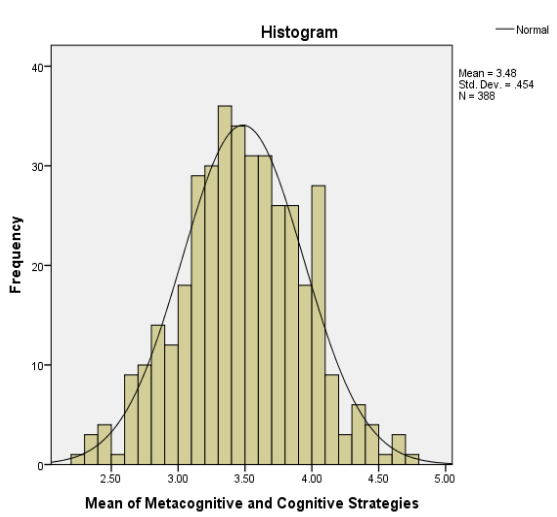
Figure 4.3. Histogram of use of metacognitive and cognitive strategies.

Figure 4.4. Normal Q-Q Plot of use of metacognitive and cognitive strategies.

Histogram

Normal Q-Q Plot of Mean Metacognitive Strategies
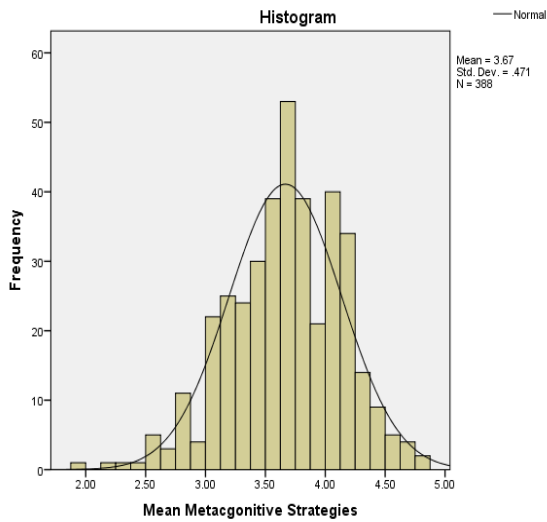
Figure 4.5. Histogram of use of cognitive strategies
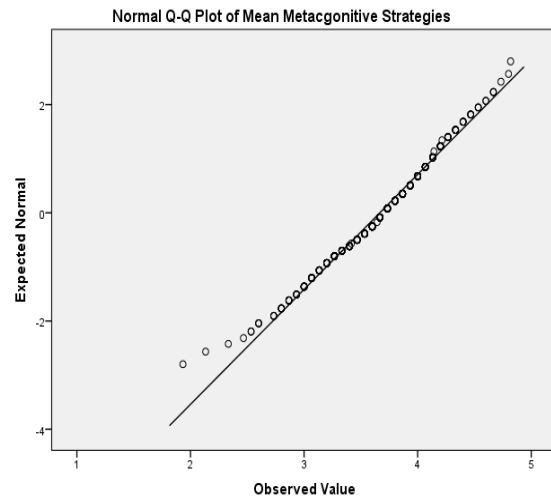
Figure 4.6. Normal Q-Q Plot of use of cognitive strategies

The metacognitive strategies (.000) and socio-affective strategies (.000), and listening tests scores, however, violated the assumptions of normality as seen in their Kolmogorov-Smirnov results (see Table 4.3 below). The listening test scores of all the participants also violated the assumption of normality (Kolmogorov-Smirnov sig. = .000). Both Histograms and Q-Q plots (Figures 4.7 to 4.12 below) also indicated a non-normal distribution.

Table 4.3

Kolmogorov-Smirnov tests of metacognitive and socio-affective strategy categories, and listening scores amongst all participants

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Tests of Normality						
All Participants						
	Statistic	Df	Sig.	Statistic	Df	Sig.
Mean_ Metacognitive Strategies	.075	388	.000	.988	388	.004
Mean_ Socio-affective Strategies	.070	388	.000	.987	388	.001
Listening Test Scores	.174	388	.000	.913	388	.000

*.This is the lower bound of the true significance.
a. Lilliefors Significance Correction
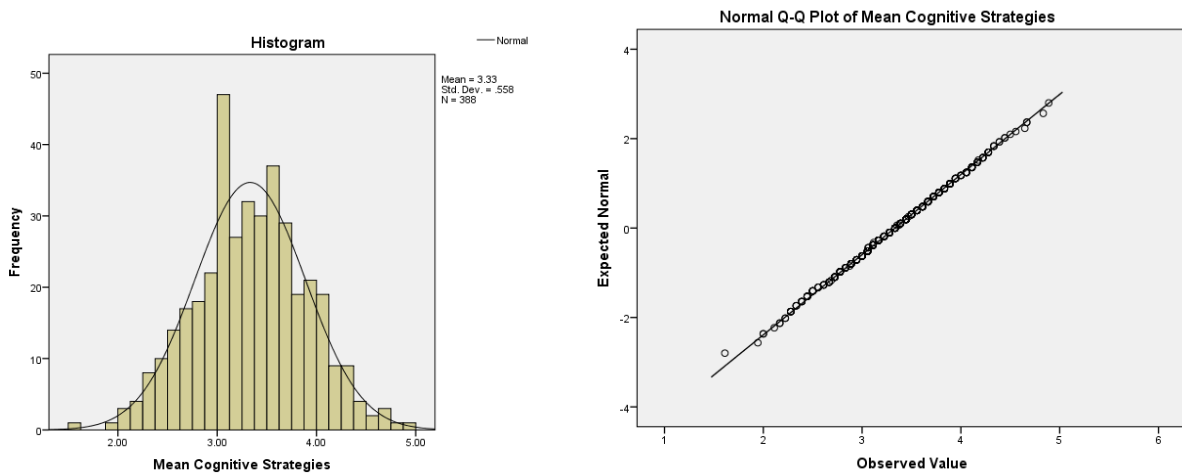
Figure 4.7. Histogram of cognitive strategies
Figure 4.8. Normal Q-Q Plot of cognitive strategies
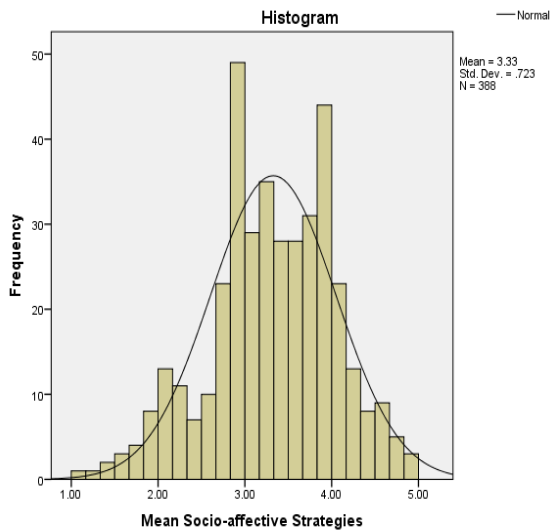
Figure 4.9. Histogram of socio-affective strategies
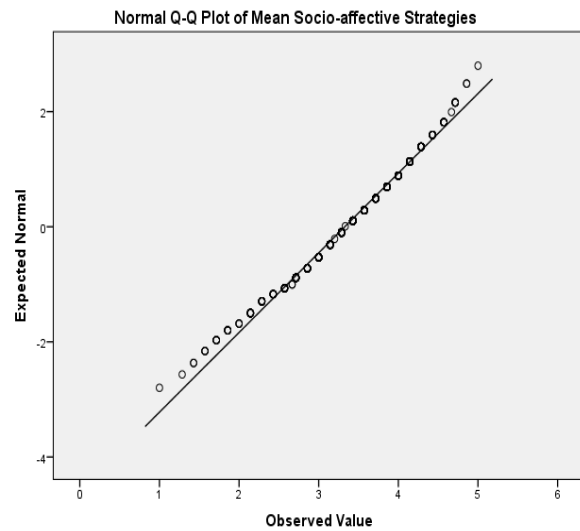
Figure 4.10. Normal Q-Q Plot of socio-affective strategies
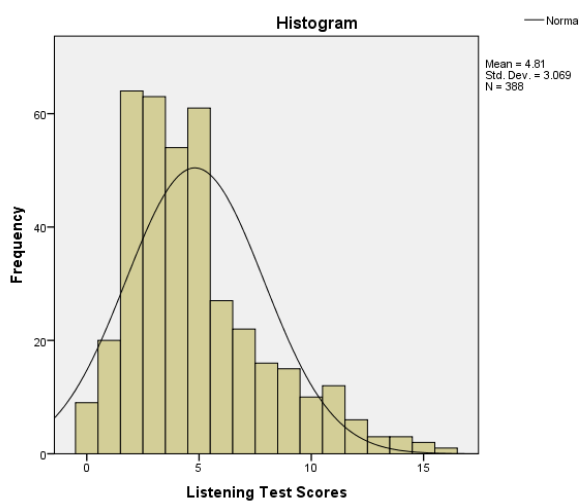
Figure 4.11. Histogram of listening the test scores amongst all participants
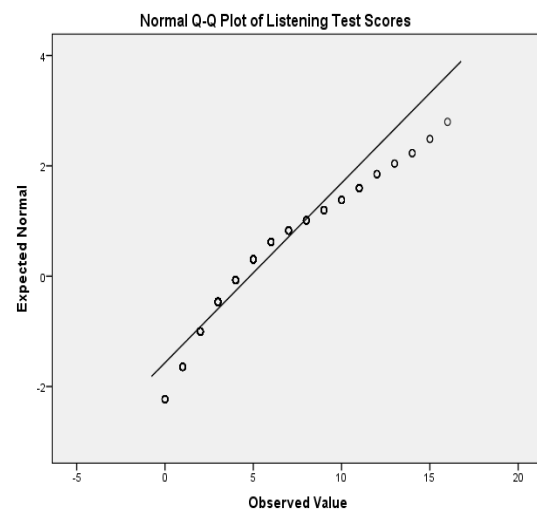
Figure 4.12. Q-Q Plot of the listening test scores amongst all participants

Looking into the results of normality tests of strategy use and listening scores of the two listening ability groups i.e., the less successful and more successful groups separately, the LSL group revealed similar results as of all participants, as shown in Table 4.4 below. Both Histogram and Q-Q plot supported the Kolmogorov-Smirnov test. This means that the overall strategy use of three categories, and strategy use of combined two categories, and use

of cognitive strategy categories were in normal distribution. However, uses of the metacognitive strategies and of socio-affective strategies were in non-normal distribution. Normality tests of the listening test scores amongst the LSLs also violated the assumption of normality (see Figures 4.13 and 4.14 below for the Histogram and Q-Q plots). Conversely, the MSL group revealed different results. Surprisingly, all the strategy use scores of the MSLs were in normal distribution, as seen Table 4.4. Both Histogram and Normal Q-Q plots indicated normal distribution amongst them. However, the listening test scores of the MSLs violated the assumption of normality. Both Histogram and Normal Q-Q plots indicated a non-normal distribution of listening scores, and the distribution was heavily skewed (see Figures 4.15 and 4.16 below).

Table 4.4

Kolmogorov-Smirnov test of strategies and listening scores of the two listening ability groups

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Less Successful Listener Scores	Listening Test Scores	.138	336	.000	.958	336	.000
	Mean_ All three categories	.036	336	.200[*]	.997	336	.764
	Mean_ Metacognitive and Cognitive Strategies	.035	336	.200[*]	.997	336	.693
	Mean_ Metacognitive Strategies	.077	336	.000	.989	336	.009
	Mean_ Cognitive Strategies	.030	336	.200[*]	.997	336	.890
	Mean_ Socio-affective Strategies	.074	336	.000	.984	336	.001
More Successful Listener Scores	Listening Test Scores	.186	52	.000	.874	52	.000
	Mean_ All three categories	.091	52	.200[*]	.982	52	.604
	Mean_ Metacognitive and Cognitive Strategies	.055	52	.200[*]	.993	52	.991
	Mean_ Metacognitive Strategies	.108	52	.184	.976	52	.366
	Mean_ Cognitive Strategies	.065	52	.200[*]	.991	52	.953
	Mean_ Socio-affective Strategies	.082	52	.200[*]	.988	52	.871

Tests of Normality
Less Successful Listener and More Successful Listener Groups

*. This is the lower bound of the true significance.

a. Lilliefors Significance Correction

Figure 4.13. Histogram of the listening test scores of the LSL group

Figure 4.14. Normal Q-Q Plot of the listening test scores amongst the LSL group
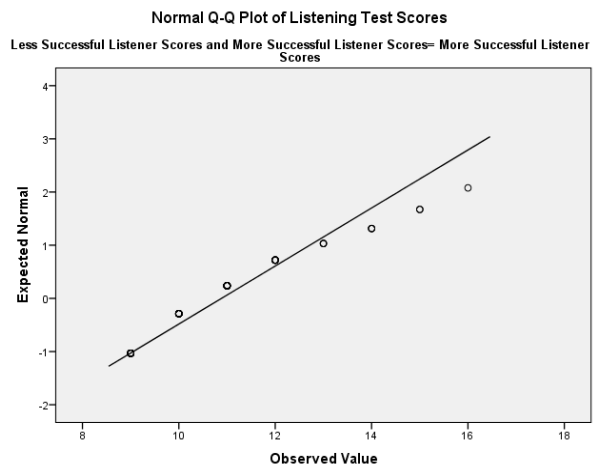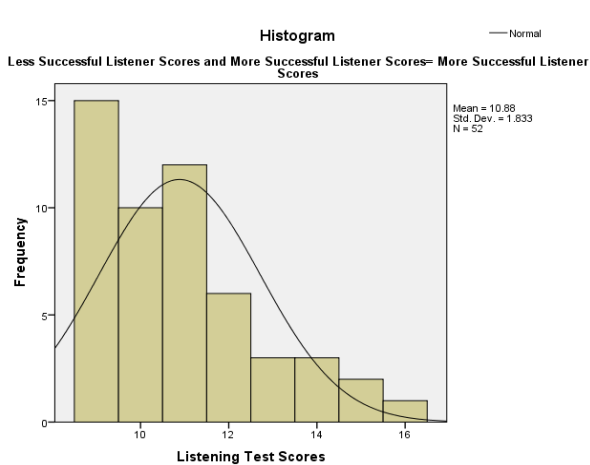
Figure 4.15. Histogram of the listening test scores amongst the MSL group

Figure 4.16. Normal Q-Q Plot of the listening test scores amongst the MSL group

The listening scores were always in non-normal distribution, thus violating the assumption of normality. The Kolmogorov-Smirnov test results of the listening test scores for all participants, as well as for the two listening ability groups was always sig .000, which is less than .05, indicating non-normality of distribution of the scores. Both Histogram and

Normal Q-Q plots below indicate a non-normal distribution and the distribution was skewed; it was slightly skewed amongst the LSL group but heavily skewed amongst the MSLs. Overall, the data were in non-normal distribution, since two of the strategy categories and the listening scores were in normal distribution. A summary of the results of the normality tests are presented in Table 4.5 below. However, their violations of assumptions were not that much; except in the case of the listening scores amongst the MSL group, which were heavily skewed. Data with violations of assumptions of normality generally require non-parametric tests (Field, 2011). However, in this study parametric tests were chosen and the decision is justified in the section below.

Table 4.5

Summary of findings of the normality tests of the use of overall strategies and strategy categories, and listening scores

Participants	Overall Strategy Use	Use of Metacognitive and Cognitive Strategies	Metacognitive Strategy Use	Cognitive Strategy use	Socio-affective Strategy Use	Listening Scores
All Participants	Normal	Normal	Non-normal	Normal	Non-normal	Non-normal
LSL Group	Normal	Normal	Non-normal	Normal	Non-normal	Non-normal
MSL Group	Normal	Normal	Normal	Normal	Normal	Non-normal

4.2.2.4 Justification for using parametric tests with data in non-normal distribution

Previous studies on strategy use have used both parametric and non-parametric tests, including analysis of variance (ANOVA), *t*-test, Pearson product-moment correlation, and the Mann Whitney U test. However, it is not often justified why a study used parametric or non-parametric tests. In the current study, however, an attempt was made to examine whether the

data met the four assumptions of parametric tests. All the four assumptions were examined. The last two assumptions (i.e., interval data and independence) were examined using common sense and the data of the present study met these two assumptions. The first two were examined using the Kolmogorov-Smirnov test (K-S test) along with looking at Histograms and Normal Q-Q plots, and the Levene's tests respectively. Levene's tests showed that there was equality of variance amongst the participants in terms of their separate use of strategy categories, combined use of metacognitive and cognitive strategies, their listening comprehension, and except for their overall strategy use (p=0.042). Normality tests revealed normal distribution of data of overall strategies, combined use of metacognitive and cognitive strategies, and use of cognitive strategies. However, use of metacognitive strategies and socio-affective strategies, and listening scores violated the assumption of normality. Therefore, the data of the current study met almost all the assumptions of parametric tests, except for the assumption of normality in two of the strategy categories and listening comprehension, and the assumption of homogeneity in overall strategy use. However, the extent of violation amongst the strategies was not as much as it was in the listening comprehension in which the normality distribution was heavily skewed.

It is, however, well accepted that in the social sciences data are generally non-normal (Pallant, 2007), and it happens that even with non-normal data, parametric tests can be run and be robust. Arguments made by Glass et al. (1972), and Schmider et al. (2010) are that even with a small sample size and non-normal data, the ANOVA is robust. Glass et al. (1972) reviewed a number of previous studies and summed up a great deal of evidence for the robustness of the ANOVA with regards to the empirical α and β values. With relatively a small sample size of 75 (divided into three groups), Schmider et al. (2010) empirically investigated the robustness of analysis of variance (ANOVA) against deviations from the assumption of a normally distributed dependent variable. Comparisons of the outcomes of the

ANOVA calculations for the different types of distribution gave reason to regard the ANOVA as robust. Schmider et al. (2010) argued that running ANOVA under violation of normal distribution does not seem to promote statistical error type I α and type II β. Based on the arguments made by Glass (1972), and Schmider et al. (2010), it is assumed that parametric tests like ANOVA can be robust even with data in non-normal distribution. Moreover, if the sample size is reasonably large, parametric tests can yield robust results amongst data with some violations of normality in social science research (Pallant, 2007). Thus, having researched this issue, I decided to use parametric tests for my non-normal data. Therefore, the data analysis of the current study exploited parametric tests even though they violated mainly one of the assumptions, i.e. the assumption of normality of parametric tests.

4.3 Results and Findings to Answer Research Question 1

This section reports on the relationship between the students' listening comprehension and perceived strategy use. Descriptive statistics showed a slight numerical difference between the groups in their strategy use. However, the results of the ANOVA did not show any significant group differences, and the results of the Pearson correlations also did not reveal any significant correlation between listening comprehension and strategy use, except a very weak correlation amongst a very few individual strategies. Before reporting the relationship, an overview of their average strategy use and listening performance is presented in section 4.3.1, which also discusses group differences in their strategy use.

4.3.1 Mean of students' listening scores and strategy use of all participants and groups

Amongst the students, average listening score was poor and average strategy use was only moderate. Descriptive statistics showed that the students' average listening performance

seemed to be poor (M= 4.81, SD= 3.07, out of 20 marks). Descriptive statistics of strategy use showed a moderate use of strategies by the students and the groups. There was little difference between the groups in their use of metacognitive and socio-affective affective strategies.

Mean of listening scores

The mean of the students' listening scores in the listening test they took in Phase I was 4.81 (SD=3.07) (see Table 4.6 below). This indicates that on average Bangladeshi tertiary-level EFL learners have poor listening abilities. As seen in Table 4.7 below, the mean of the listening scores amongst the LSLs was 3.88 (SD=1.94); on the other hand, the mean of the listening scores amongst the MSLs (only 52 MSLs) was 10.88 (SD=1.83). This reveals a huge difference between the LSLs and the MSLs in their listening comprehension. There is a larger effect size between the two listening ability groups (g=3.64), which indicates a big difference between the groups.

Mean of overall strategy use and strategy categories

As seen in Table 4.6 below, the overall use of listening strategies amongst the tertiary EFL learners in Bangladesh was 3.46 (SD=.45), which shows a moderate use of strategies by the learners. The use of metacognitive and cognitive strategies together was also moderate (3.48, SD =.45). Out of three categories of listening strategy, the use of metacognitive strategies was high, the mean being 3.67 (SD =.47). On the other hand, socio-affective strategies were least used, the mean being 3.33 (SD =.72), which was closely followed by cognitive strategies, the mean being 3.33 (SD =.56).

Table 4.6

Mean of all participants' use of overall listening strategies and strategy categories.

	N	Mean	Std. Deviation
Listening Test Scores	388	4.81	3.07
Mean of Metacognitive, Cognitive and Socio-affective Strategies	388	3.46	.45
Mean of Metacognitive and Cognitive Strategies	388	3.48	.45
Mean Metacognitive Strategies	388	3.67	.47
Mean Cognitive Strategies	388	3.33	.56
Mean Socio-affective Strategies	388	3.33	.72
Valid N (listwise)	388		

The findings, therefore, show a moderate use of overall listening strategies and of each of the categories of listening strategy, with a slightly high use of metacognitive strategies within the three categories (see Table 4.6).

Perceived strategy use amongst the groups

Since participants were divided into LSLs and MSLs based on their high and low listening scores in a listening test they took for the current study, an attempt was made to look at the LSLs and the MSLs reports of their employment of overall listening strategies and listening strategy categories separately, as shown in Table 4.7 below. These two groups did not differ considerably in their use of listening strategies. The overall use of strategies by the LSLs and MSLs was almost similar, indicating moderate use (3.45, 3.47 respectively), as also seen in Figure 4.17 below. Use of metacognitive and cognitive strategies was also similar in both the groups (LSL 3.48, MSL 3.49), as also seen in Figure 4.18 below. Both of the groups used more metacognitive strategies than other types of strategies, with the MSLs (3.70) using

slightly more metacognitive strategies than the LSLs (3.66). Although their use of cognitive strategies was very similar, the MSLs used slightly more socio-affective strategies (3.36) than their counterparts (3.32) (see Figure 4.19).

Table 4.7

Mean of LSLs' and MSLs' use of overall listening strategies and strategy categories

Less Successful and More Successful Listeners and listening strategies		N	Mean	Std. Deviation
Less Successful Listeners	Listening Test Scores	336	3.88	1.94
	Mean of Metacognitive, Cognitive and Socio-affective Strategies	336	3.45	.46
	Mean of Metacognitive and Cognitive Strategies	336	3.48	.46
	Mean Metacognitive Strategies	336	3.66	.48
	Mean Cognitive Strategies	336	3.33	.57
	Mean Socio-affective Strategies	336	3.32	.73
	Valid N (listwise)	336		
More Successful Listeners	Listening Test Scores	52	10.88	1.83
	Mean of Metacognitive, Cognitive and Socio-affective Strategies	52	3.47	.38
	Mean of Metacognitive and Cognitive Strategies	52	3.49	.38
	Mean Metacognitive Strategies	52	3.70	.41
	Mean Cognitive Strategies	52	3.32	.48
	Mean Socio-affective Strategies	52	3.36	.66
	Valid N (listwise)	52		
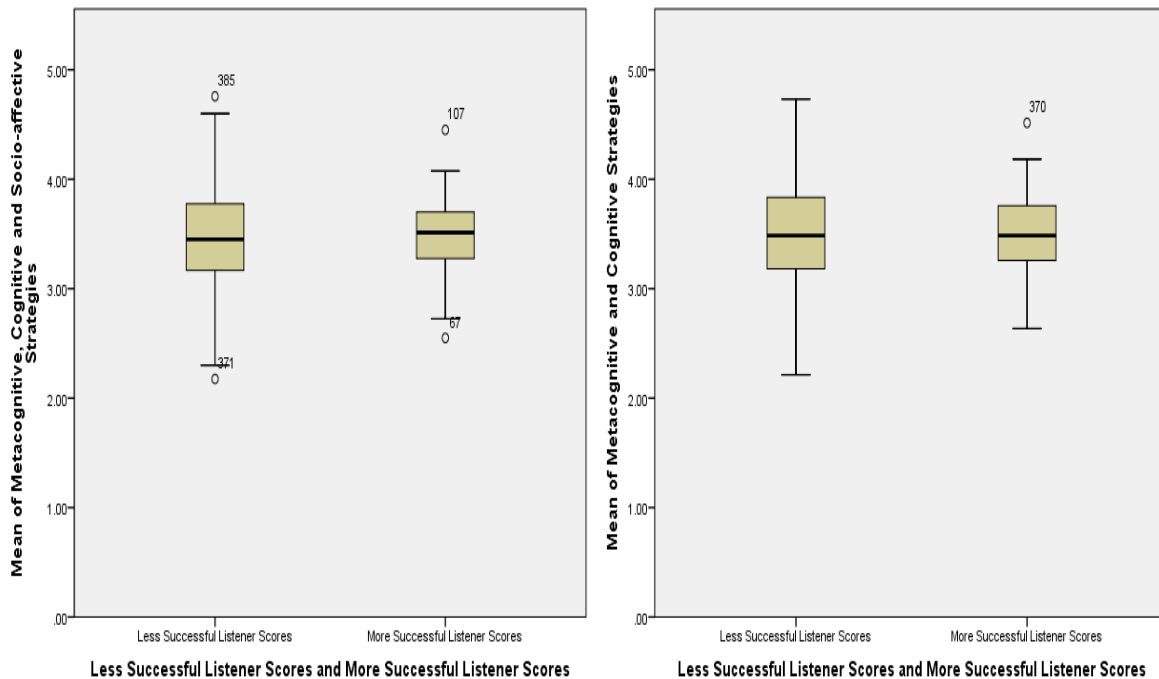
Figure 4.17. Use of overall listening strategies of metacognitive, cognitive and socio-affective strategies by low and high score.

Figure 4.18. Use of overall listening strategies of metacognitive and cognitive strategies by low and high score.

The first boxplot (Figure 4.17) shows the LSLs' and the MSLs' use of overall listening strategies. The range of use of overall strategies amongst the LSLs was greater than that of the high scoring participants; even the central tendency of the LSLs was seen within a wider range than that of the high scoring participants. In the case of the MSLs, the score for the least used of the strategies was greater than that of the low scoring participants. Both the LSLs and the MSLs showed two outliers each, however the outliers here did not affect the overall mean score to any considerable extent; therefore they were included in the calculation. The second boxplot (Figure 4.18) illustrates the use of metacognitive and cognitive strategies by the groups and shows a wider range of use amongst the LSLs. The

decision regarding the two outliers here was the same as with that of the overall use of strategies.

Figure 4.19 below illustrates both the LSLs' and the MSLs' use of listening strategy categories side by side. The figure shows slightly more use of metacognitive and socio-affective strategies by the MSLs than those by the LSLs. Here too, the outliers did not affect the mean use of strategy categories; therefore they were not excluded from the calculation.
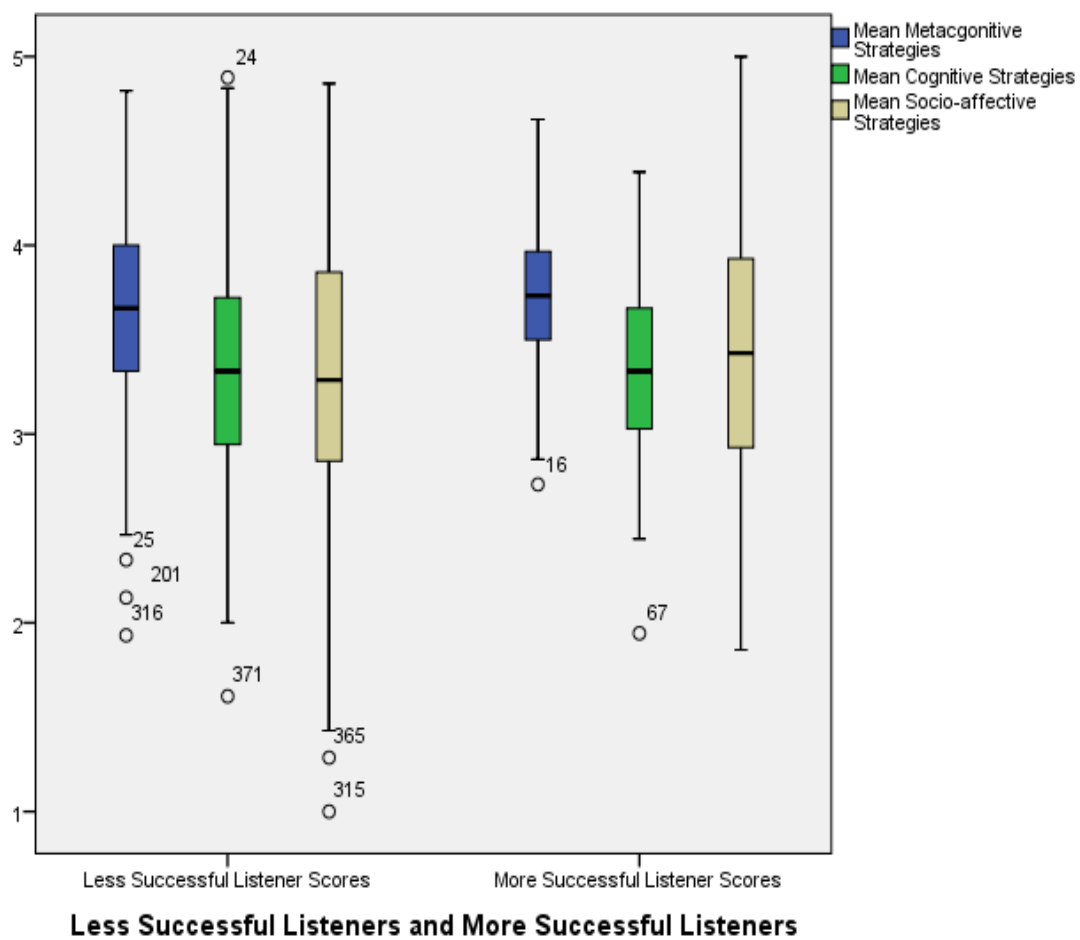
Figure 4.19 Mean use of listening strategy categories by LSLs and MSLs

Individual strategies of most frequent and least frequent use

The five most often and the five least often used strategies are indicated below (see Table 4.8 below) (see Appendix 4A, for the table of mean use of all individual strategies). Amongst the five most frequently used strategies by all participants or by each group, directed attention was reported as the most frequently used strategy by all the participants and groups. Whilst problem identification, planning, and selective attention were reported as most frequently used but to different degrees by all participants and both groups, self-management was reported as fifth most frequently used by all participants and the LSL group, and evaluation was reported as the fifth one by only the MSL group.

Table 4.8

Mean of five most frequently used and five least frequently used individual strategies by all participants and group.

Individual strategies	All Participants		LSLs		MSLs	
	Mean	SD	Mean	SD	Mean	SD
Of most frequent use						
Directed Attention	3.98	.77	3.95	.77	4.16	.77
Problem Identification	3.89	1.09	3.89	1.10	3.90	1.01
Planning	3.86	.77	3.85	.80	3.91	.51
Selective Attention	3.76	.84	3.77	.85	3.74	.77
Self-management	3.66	1.21	3.69	1.19	-	
Evaluation	-		-		3.67	.91
Of least frequent use						
Grouping	2.84	1.24	3.22	1.26	2.75	1.12
Repetition	3.16	1.42	2.88	1.42	2.56	1.38
Note Taking	3.16	1.25	3.19	1.26	2.94	1.14
Substitution	3.16	1.16	3.16	1.17	3.12	1.11
Cooperation	3.22	1.35	3.18	1.36	-	
Translation	-		-		2.67	1.45

Out of the five least reported strategies reported by all the participants or by each group, the four strategies of grouping, repetition, note taking, and substitution were reported

by all participants and both groups. The fifth one was cooperation and was reported by all participants and the LSL group, whereas translation was the fifth one for the MSLs. A comparison between the MSLs' and the LSLs' use of the strategy of translation showed that the LSLs' use of translation (M= 3.33, SD= 1.37) was much higher than their counterparts.

4.3.2 ANOVA results revealing group differences in strategy use

A one-way repeated measures ANOVA was conducted to explore whether there was any difference between participants' use of metacognitive, cognitive and socio-affective listening strategies (see Appendix 4B, for Multivariate Tests and Pairwise Comparison). The dependent variable was mean strategy use, and the independent was strategy category with three levels (metacognitive, cognitive, and socio-affective). Levene's tests suggest no violation of assumption of homogeneity of variances, as $p>.05$ for each of the strategy categories (see also section 4.2.2.2). There was a significant effect for strategy category: Wilk's Lambda = .68, $F (2, 386) = 90.28$, $p< .0005$, multivariate partial eta squared = .32. The results showed a significant difference somewhere amongst the categories. A partial eta squared suggested a large effect size, according to Cohen (1988). Pairwise comparisons compared each pair of strategy categories and indicated whether the difference between them was significant. The results suggested that the difference between the metacognitive category (M=3.67, SD=.47) and each of the cognitive (M=3.33, SD=.56) and socio-affective (M=3.33, SD=.72) categories was significant at the .05 level.

A mixed between-within subjects ANOVA was conducted to see whether this pattern held for both more and less successful listeners (see Appendix 4C for Multivariate Tests and Tests of Between-Subjects Effects). The dependent variable was mean strategy use, between subjects independent variable was group (with two levels, more successful and less successful listeners groups), and within subjects independent variable was strategy category (with three

levels of metacognitive, cognitive, and socio-affective strategies). Results showed that there was no significant interaction between participants' strategy use and group: Wilk's lambda =1.00, F (2, 365) = .26, p= .771, partial eta squared = .001. There was a substantial main effect for strategy: Wilks lambda = .81, F (2, 385) = 44.48, p <.0005, partial eta squared = .191. For the LSLs, there was a downward trend from metacognitive (M=3.67, SD=.47) to cognitive (M=3.33, SD=.56) to socio-affective (M=3.32, SD=.72) strategies, whereas for the MSLs, the trend was metacognitive to socio-affective to cognitive strategies. The main effect comparing the two types of listeners was not significant, F (1, 386) = .12, p = .725, partial eta squared = .000, suggesting no difference in the use of strategy categories between the groups.
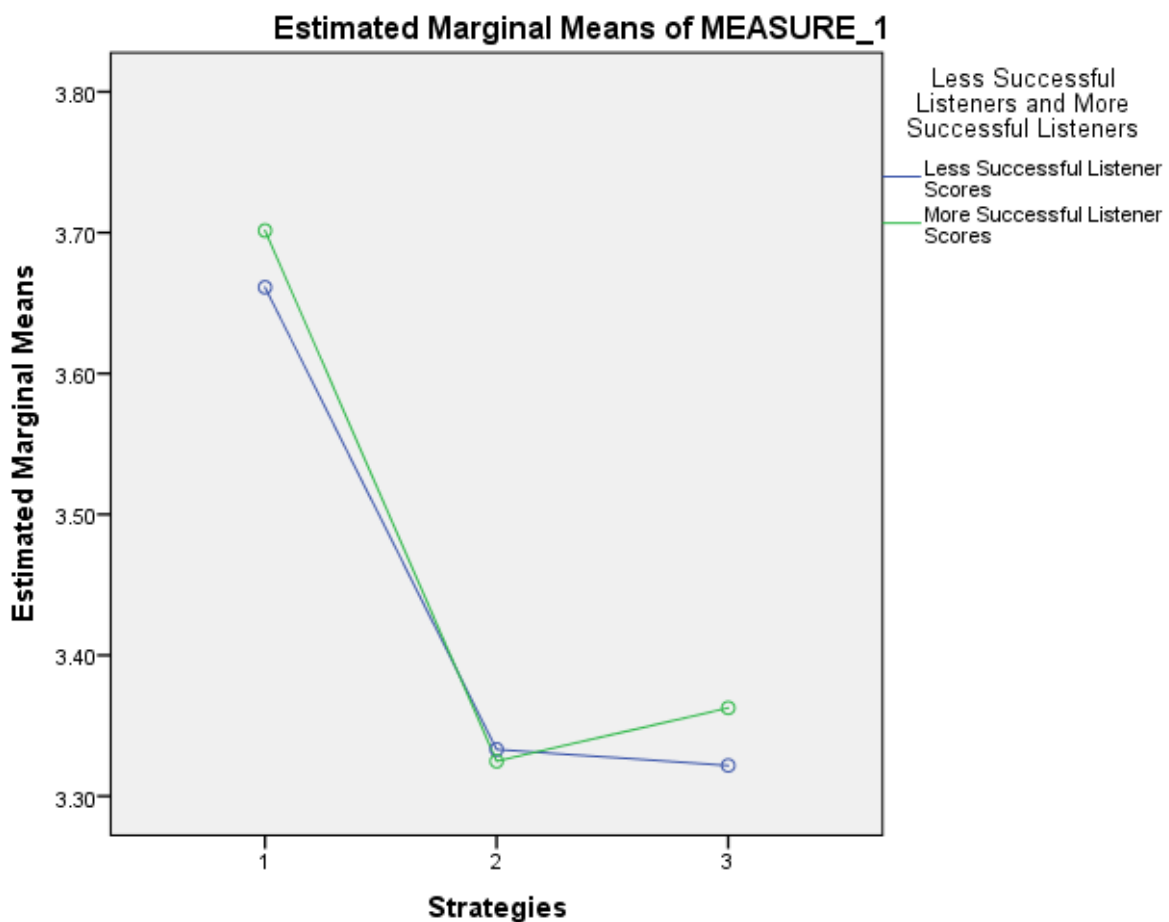
Figure 4.20 Profile plots of strategy categories for both the LSLs and the MSLs.

In the X axis, 1 refers to the metacognitive strategy category, 2 to the cognitive strategy category, and 3 to the socio-affective strategy category.

Although there was no statistical significance between them, Figure 4.20 shows a numerical difference between them; a slightly higher use of metacognitive and socio-affective strategies amongst the MSLs, as also seen in their mean use of strategies in Section 4.3.1.

4.4.3 Correlations between listening comprehension and perceived strategy use

Pearson correlations computed between the students' listening comprehension and their strategy use showed no significant relationship between them. However, a few of the individual strategies were slightly correlated with listening comprehension.

Correlation between listening comprehension and overall strategy use, and strategy categories

As seen in Table 4.9 below, the Pearson Correlation computed between the participants' listening comprehension and their reported use of listening strategies did not show any correlation between them. The results revealed no correlation between their listening comprehension and overall use of strategies, and use of combined metacognitive and cognitive strategies. The results also did not show any correlation between their listening comprehension and use of each of the strategy categories, i.e., metacognitive, cognitive and socio-affective (see Table 4.9).

Table 4.9

Pearson correlations computed between listening comprehension and perceived use of overall strategies, strategy categories.

Correlation

Overall strategies and strategy categories	Pearson correlation	Listening comprehension
Mean of Metacognitive, Cognitive and Socio-affective Strategies	Pearson correlation	.01
	Sig. (2-tailed)	.825
	N	388
Mean of Metacognitive and Cognitive Strategies	Pearson correlation	.00
	Sig. (2-tailed)	.916
	N	388
Mean Metacognitive Strategies	Pearson correlation	.02
	Sig. (2-tailed)	.623
	N	388
Mean Cognitive Strategies	Pearson correlation	-.01
	Sig. (2-tailed)	.860
	N	388
Mean Socio-affective Strategies	Pearson correlation	.02
	Sig. (2-tailed)	.645
	N	388

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Figure 4.21 below also shows that there was no correlational line between participants'

listening scores and their use of overall strategies and strategy categories.
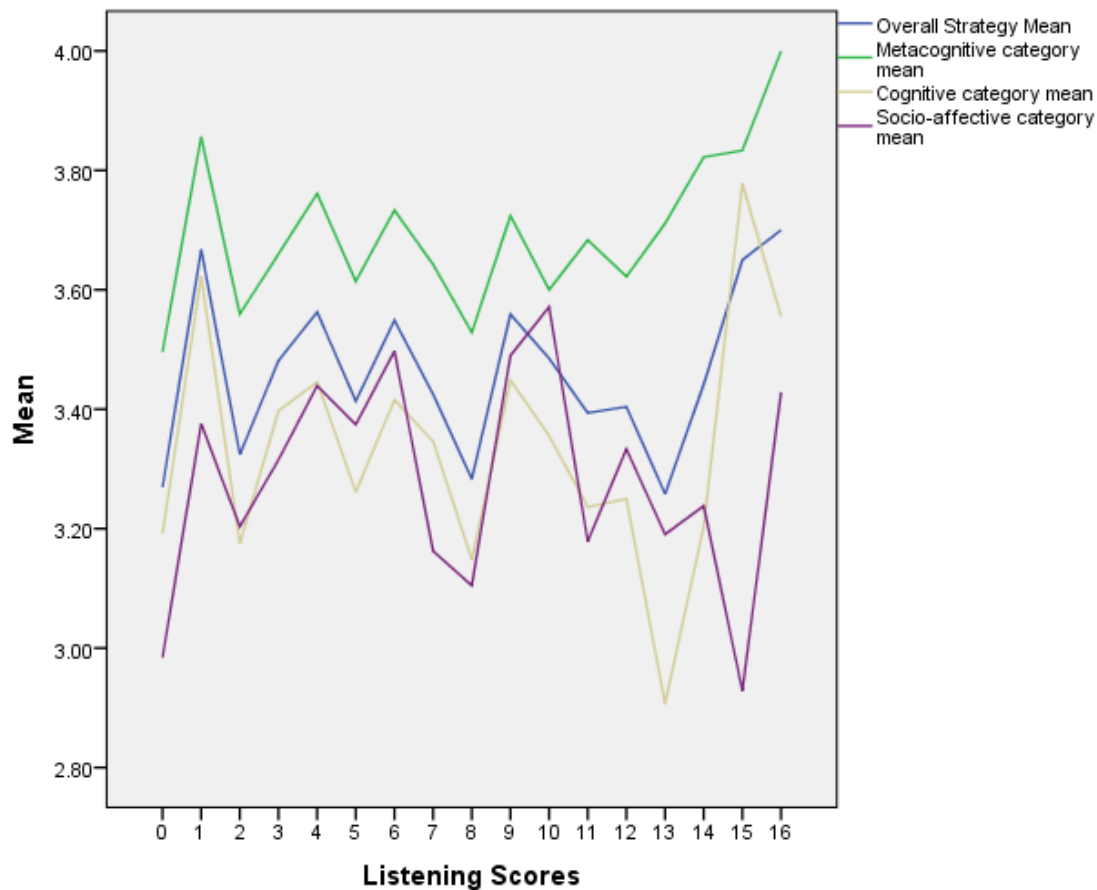
Figure 4.21 Relationship between participants' listening scores and their use of overall listening strategies and strategy categories

Correlation between listening comprehension and use of individual strategies

The results of the Pearson correlation showed no significant correlation between the learners' listening comprehension and most of the individual strategies; only a few of the strategies were slightly correlated, positively or negatively (See Appendix 4D). Out of these individual strategies, whereas directed attention (sig .12*, p =.014) and elaboration (sig .17**, p =.001) were positively correlated amongst all participants, translation, repetition, grouping, and note taking were negatively correlated (see Table 4.10). For comparison purposes, a non-parametric test, Spearman rho correlations computations (see Appendix 4E) also revealed very similar results. However, an alpha level for multiple comparisons was

adjusted later on and for this I did Bonferroni corrections. The Bonferroni correction is a multiple-comparison correction used when several statistical tests are being performed simultaneously and thus increase type 1 error (Keppel & Wickens, 2004). Therefore, I did Bonferroni corrections to control this family wise type I error, by dividing the alpha level by number of tests. After Bonferroni corrections (p=.002), only elaboration reaches positive significance whereas translation reaches negative significance, as seen in Table 4.10 below.

Table 4.10

Pearson correlation computed between listening comprehension and individual strategies

Individual Strategies	Pearson correlation	Listening Comprehension
Directed Attention	Pearson correlation	.12**
	Sig. (2-tailed)	.014
	N	388
Translation	Pearson correlation	-.20**
	Sig. (2-tailed)	.000
	N	386
Repetition	Pearson correlation	-.13**
	Sig. (2-tailed)	.008
	N	386
Grouping	Pearson correlation	-.14**
	Sig. (2-tailed)	.006
	N	386
Note Taking	Pearson correlation	-.13*
	Sig. (2-tailed)	.012
	N	387
Elaboration	Pearson correlation	.17**
	Sig. (2-tailed)	.001
	N	-388

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

4.4 Conclusion

This chapter presented the results of the Phase I, quantitative study. Analysis of data suggested that Bangladeshi tertiary EFL learners' use of listening strategies and any of the strategy categories was moderate, and that there was no significant correlation between their strategy use and listening comprehension, except a very low significance reached by a few individual strategies. Therefore, no considerable differences between the two listening ability groups seemed to emerge in their strategic repertoire. Chapter 5 presents the results and findings of group differences (15 LSLs and 15 MSLs, a subsample of the larger group of participants) in their task-based, on-line strategy use in the Phase II of the study.

Chapter 5 Results and Findings 2: Phase II

Task-based, On-line Strategy Use

5.1 Introduction

This chapter presents the results and findings of task-based, on-line listening strategy use of a subsample of participants comprised of equal numbers of LSLs and MSLs. Data were elicited via think aloud protocols from 15 LSLs and 15 MSLs (see Appendix 5A, for transcripts of sample think-aloud protocols), and were analysed both quantitatively and qualitatively by conducting content analysis and thematic analysis of their protocols. Sections 5.2 and 5.3 present the content analysis and thematic analysis respectively. Thus, this chapter employs mixed methods for the analyses of the protocols to explore the differences between the two listening ability groups. The findings of the content analysis show significant differences between the LSLs and the MSLs in their use of metacognitive strategies and a number of individual strategies, after Bonferroni corrections. The thematic analysis uncovers the qualitative differences between the groups in how particular strategies are orchestrated and coordinated by them, which the content analysis fails to reveal. Moreover, the thematic analysis reinforces the quantitative differences in the content analysis, by revealing the MSLs' frequent use of, for example, metacognitive strategies in combination with cognitive strategies. Although in correlational studies, it is not possible to show the direction of relationship between the variables, thematic analysis seems to suggest a further relationship between strategy use and listening proficiency by assuming listeners' linguistic knowledge as a potential factor for their frequent or flexible and effective use of strategies.

5.2 Content Analysis of the Think Aloud Protocols

In the content analysis, the qualitative data on task-based, on-line use of strategies were analysed quantitatively to see group differences. To this end, the first data were prepared for statistical analysis and the decision was taken to use non-parametric tests (see Section 5.2.1 below). After that, descriptive and inferential statistics calculating means, correlations and Mann Whitney U tests (see Section 5.2.2 below) were computed to see the differences between the two listening ability groups in their task-based, online use of strategies, whilst performing particular listening tasks.

5.2.1 Preparing the dataset and deciding on the non-parametric tests

As mentioned in Chapter 4, prior to data analysis, preparing the data for entry into SPSS and the data screening, in order to conduct statistics tests, was necessary. After that, the justification for doing parametric tests with non-normal data is presented in the following sections.

5.2.1.1 Preparing the dataset for SPSS analysis

Preparing data for entry into SPSS and data screening in order to conduct statistical tests are important first steps for the data to be analysed. A numerical system was applied to identify each data entry, which means that each strategy item was given a number; therefore, the first item was 1 and in this way, there were 37 strategy items, comprised of three categories of metacognitive (items 1 to 15), cognitive (16 to 34) and socio-affective (35 to 37) strategies. However, the unidirectional type of listening did not facilitate the use of socio-affective strategies much, hence the students used very few of the socio-affective strategies in their listening processes. The mean use of socio-affective strategies was very low amongst all participants (Mean=.83, SD=1.20). Therefore, after tabulating all the categories of strategies,

the decision was taken not to include socio-affective strategies for the main analysis (see Vandergrift, 2003b). For further discussion, only metacognitive and cognitive strategy data were analysed. The data entered into SPSS were screened for any anomalies and any missing values and outliers were dealt with.

5.2.1.2 Justification of doing non-parametric tests with data in non-normal distribution

This section purports to justify the use of non-parametric tests with data in non-normal distribution. To this end, following the detailed procedure of checking the assumptions for parametric tests e.g., Levene's tests and Normality tests in Chapter 4, a detailed description of how much the quantitative data elicited via think aloud protocols meet or violate the assumptions of the parametric tests is illustrated in Appendix 5B. As revealed by Levene's tests and the normality tests, whilst overall strategy use failed to show homogeneity of variance ($p<0.05$), think aloud task scores amongst all participants and the LSLs, and use of cognitive strategies amongst all participants and the groups separately did not show normal distribution. Overall, the tests results show more violence than conformity. Although parametric tests of data with some violations of normality can yield robust results if the sample size is reasonably large (Pallant, 2007), this is not the case in this study. Given that this dataset did not meet all the four assumptions of the parametric tests, and that the sample size (15 LSLs and 15 MSLs) was very small, the parametric tests might not produce robust results. Therefore, the decision was for non-parametric tests to be performed for the content analysis of the think aloud protocols to address RQ3.

5.2.2 Results and findings of the content analysis

To see the differences between the LSLs and the MSLs in their task-based, on-line strategy use, the think aloud protocols were analysed quantitatively by computing means, correlations and Mann Whitney U Tests in SPSS 24. The mean use of overall strategies and metacognitive strategies was higher amongst the MSLs. The Spearman's rho Correlations showed a significantly strong, positive correlation between the two listening performances under two test conditions, and between think aloud task scores and metacognitive strategy use, and a number of individual strategies. Mann Whitney U tests also indicated significant group differences in their use of metacognitive strategies, and a number of individual strategies. Therefore, the results show a significant relationship between students' listening performance and their use of listening strategies. However, it is not possible to show the direction of the relationship in such a correlational study. Sections 5.2.2.1, 5.2.2.2, and 5.2.2.3 illustrate the group differences by presenting their mean use of strategies, significant correlations between think-aloud task scores and strategy use, and significant group differences by calculating Mann Whitney U tests.

5.2.2.1 Mean use of task-based, online strategies

The participants' mean use of task-based, online strategies showed higher use of overall strategies, and metacognitive strategies amongst the MSLs than their counterparts. Use of individual strategies also showed differences between the groups.

5.2.2.1.1 Mean use of overall strategies and strategy categories

As seen in Table 5.1 below, the mean use of overall strategies, and metacognitive strategies was higher amongst the MSLs. Whilst the mean use of overall strategies amongst the LSLs was .90 (SD=.20), it was 1.06 (.13) amongst the MSLs. Whereas the mean use of

metacognitive strategies amongst the LSLs was .78 (SD= .28), amongst the MSLs it was 1.20 (SD=.27). However, the mean use of cognitive strategies of the two groups was similar; slightly higher amongst the LSLs (LSLs =1.00, SD= .30; MSLs = .96, SD=.22).

Table 5.1

Mean of overall strategy use of metacognitive and cognitive strategies, and strategy categories.

	All Participants		Less Successful Listeners		More Successful Listeners	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Mean Overall Strategy	.98	.19	.90	.20	1.06	.13
Mean Metacognitive	.99	.34	.78	.28	1.20	.27
Mean Cognitive Valid N (list-wise)	.98	.26	1.00	.30	.96	.22

5.2.2.1.2 Most and least frequently used individual strategies

The five most frequently used strategies by the LSLs were linguistic inferencing, planning, extra-linguistic inferencing, summarisation, and translation respectively (see Appendix 5C for mean use of all individual strategies). On the other hand, the five most used strategies by the MSLs were planning, summarisation, selective attention, questioning elaboration, and translation respectively. As seen in Table 5.2 below, the findings revealed that planning, summarisation and translation were commonly frequently used by both the groups. Whereas inferencing was frequently used by the LSLs, selective attention and questioning elaboration were frequently used by the MSLs. These distinguishing strategies reveal differences between the groups. A comparison of the LSLs' use of the inferencing

strategy with that of their counterparts (LSL=3.93, MSL=.93), extra-linguistic inferencing (LSL=2.60, MSL=1.80), overall inferencing (LSL=2.47, MSL=.93), and the MSLs' use of selective attention (MSL=3.73, LSL=1.93) and questioning elaboration (MSL=2.13, LSL=.60) with those of their counterparts, revealed striking differences between the groups. In addition, the most frequently used strategies indicated differences between the LSLs and the MSLs.

Table 5.2

The five most frequently used individual strategies by the groups

Individual strategies and strategy items	LSL		MSL	
	Mean	Std. Deviation	Mean	Std. Deviation
Planning	3.73	1.22	4.53	1.19
Selective Attention	-	-	3.73	2.34
Linguistic Inferencing	3.93	1.91	-	-
Extra-linguistic Inferencing	2.60	1.72	-	-
Questioning Elaboration	-	-	2.13	1.46
Summarisation	2.13	1.77	3.93	1.22
Translation	2.13	1.96	2.07	1.94
Valid N (list-wise) 30	15		15	

As seen in Table 5.3 below, strategy monitoring and transfer are commonly reported as the least frequently used individual strategies by both the groups. Whilst plan monitoring, imagery, and deduction/induction were least used by the LSLs, auditory evaluation,

paralinguistic inferencing, and reverse question mapping were least used by the MSLs. Out of

these, the use of reverse question mapping (LSL=1.00, MSL=.13) is typical of LSL group.

Table 5.3

The five least frequently used individual strategies by the groups

Individual Strategies and strategy items	LSL		MSL	
	Mean	Std. Deviation	Mean	Std. Deviation
Strategy Monitoring	.00	.00	.07	.26
Plan Monitoring	.00	.00	-	-
Auditory Evaluation	-	-	.07	.26
Paralinguistic Inferencing	-	-	.07	.26
Reverse Question Mapping	-	-	.13	.35
Imagery	.07	.26	-	-
Transfer	.13	.35	.00	.00
Deduction/Induction	.13	.35	-	-
Valid N (list-wise) 30	15		15	

5.2.2.2 Correlations between listening comprehension think aloud task scores, and between think aloud task scores and task-based, on-line strategy use

Spearman's rho was computed to see if there were any relationships between a

subsample of the participants' listening comprehension in the listening test in Phase I and

their listening scores in the think aloud tasks in Phase II, and between the think aloud task

scores in Phase II and task-based, on-line strategy use in Phase II. The results showed a

significantly strong, positive correlation between the two listening performances under the

two test conditions (see Section 5.2.2.2.1 below). Significant positive correlations were also found between think aloud task scores and metacognitive strategy use, and a number of individual strategies (see Section 5.2.2.2.2 below).

5.2.2.2.1 Correlations between listening comprehension and think aloud task scores

The Spearman's rho computed between the students' scores in the listening test in Phase I and the listening scores in the think aloud task in Phase II showed a significantly strong, positive correlation (r=.80, p<.001) (Table 5.4 below). The scatterplot in Figure 5.1 below also supported the strong, positive correlation; however, three of the cases[6] did not exhibit a progressive linear relationship and they were from amongst the MSLs. The possible reason behind these MSLs' non-linear relationship could be that they were either disturbed in concentrating properly during the think aloud tasks or interrupted by the think aloud process itself (i.e., think aloud reflexivity, as reported by a few of them), or they somehow failed to interpret the incoming texts.

Table 5.4

Results of Spearman's rho computed between the listening comprehension and think aloud task scores

			Listening Test Scores
Spearman's rho	Listening Test Scores	Correlation Coefficient	1.00
		Sig. (2-tailed)	.
		N	30
	Think aloud Task	Correlation Coefficient	.80**
	Scores	Sig. (2-tailed)	.000
		N	30

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[6] The three cases are Shuvon (LT=12, TA=5), Shabab (LT=12, TA=4), and Jebun (LT=14, TA=4) as shown in the SPSS serial numbers 29, 27, 21 respectively in Figure 5.9 below (LT-Listening test, TA-think aloud task).

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)
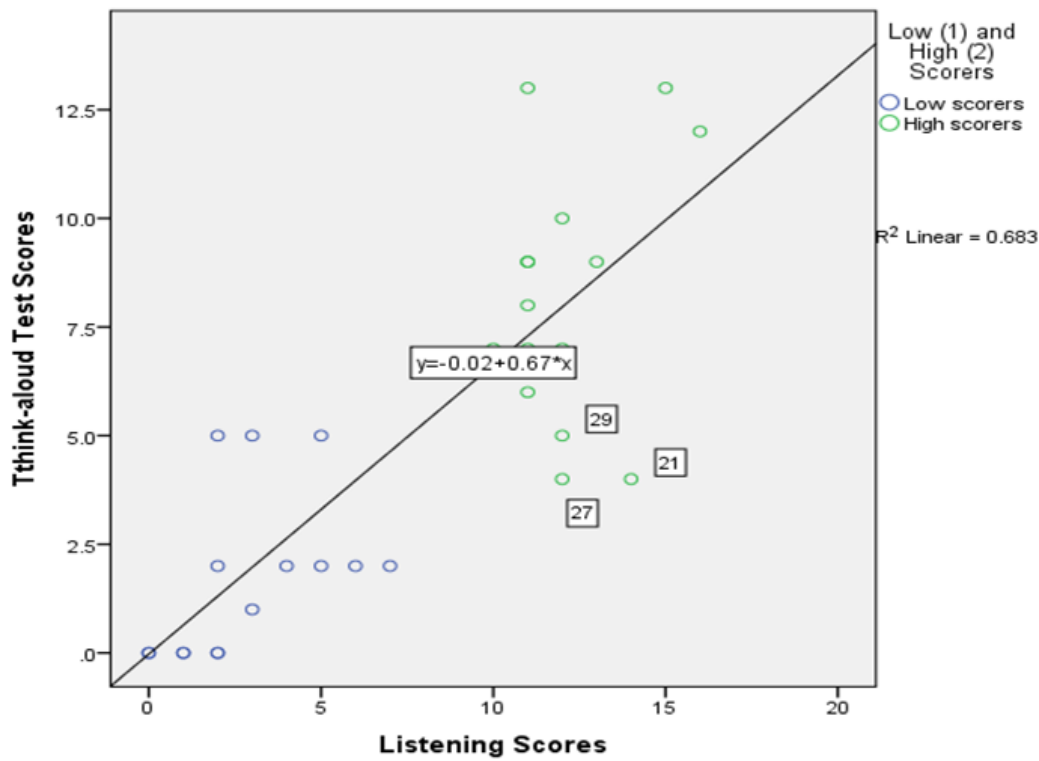
Figure 5.1. Scatterplot of the relationship between the MSLs' and the LSLs' listening test scores and their think aloud task scores.

5.2.2.2.2 Correlations between think aloud task scores and on-line strategy use

This section reveals the findings of the correlations between the participants' think aloud task scores and their task-based, online strategy use in Phase II. The findings revealed a significantly positive correlation between think aloud task scores and use of metacognitive strategies, and a number of individual strategies (after Bonferroni corrections). A description of the correlations of think aloud task scores with overall strategy use and use of strategy categories is followed by those with individual strategies.

Correlations between think aloud task scores and overall strategy use and strategy categories

      The Spearman's rho computed between the think aloud task scores and task-based, on-line overall strategy use, and metacognitive strategy use showed a positively significant correlation amongst all participants; however, cognitive strategy use did not show any significant correlation (see Table 5.5 below). As revealed by the data, the correlation with overall strategy use was moderate (sig. =.41*, p=.025), and with metacognitive strategy use it was strong (sig. = .69**, p=.000). However after Bonferroni correction (p=.01), only metacognitive strategy category reaches significance.

Table 5.5

Correlations between think aloud task scores and use of overall strategy, and strategy categories

			Think aloud task scores
Spearman's rho	Overall strategy use	Correlation Coefficient	.41[*]
		Sig. (2-tailed)	.025
		N	30
	Metacognitive Strategies	Correlation Coefficient	.69[**]
		Sig. (2-tailed)	.000
		N	30
	Cognitive Strategies	Correlation Coefficient	-.25
		Sig. (2-tailed)	.178
		N	30

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Correlations between think aloud task scores and individual strategy use

The Spearman's rho computed between all participants' think aloud task scores and individual strategies showed a significant (positive or negative) correlation for a number of strategies (Table 5.6 below for significant ones) (see Appendix 5D for correlation table for all individual strategies). As seen in Table 5.6, the results showed significantly positive correlations between think aloud task scores and monitoring, production monitoring, double-check monitoring, planning, selective attention, questioning elaboration, and summarisation. The results also revealed significant but negative correlations between think aloud task scores and inferencing, linguistic inferencing, paralinguistic inferencing, reverse question mapping, and transfer. However, after Bonferroni corrections (p=.001), monitoring, double-check monitoring, and summarisation reach positive significance, whereas inferencing, linguistic inferencing, and reverse question mapping reach negative significance.

Table 5.6

Correlations between think aloud task scores and use of individual strategies

			Think aloud task scores
Spearman's rho	Monitoring	Correlation Coefficient	.67[**]
		Sig. (2-tailed)	.000
		N	30
	Inferencing	Correlation Coefficient	-.59[**]
		Sig. (2-tailed)	.001
		N	30
	Planning	Correlation Coefficient	.37[*]
		Sig. (2-tailed)	.044
		N	30
	Selective Attention	Correlation Coefficient	.48[**]
		Sig. (2-tailed)	.008
		N	30
	Production monitoring	Correlation Coefficient	.48[**]
		Sig. (2-tailed)	.007
		N	30
	Double-check monitoring	Correlation Coefficient	.78[**]
		Sig. (2-tailed)	.000
		N	30
	Linguistic inferencing	Correlation Coefficient	-.69[**]
		Sig. (2-tailed)	.000
		N	30
	Paralinguistic inferencing	Correlation Coefficient	-.38[*]
		Sig. (2-tailed)	.039
		N	30
	Reverse question mapping	Correlation Coefficient	-.75[**]
		Sig. (2-tailed)	.000
		N	30
	Questioning elaboration	Correlation Coefficient	.49[**]
		Sig. (2-tailed)	.006
		N	30
	Summarisation	Correlation Coefficient	.67[**]
		Sig. (2-tailed)	.000
		N	30
	Translation	Correlation Coefficient	-.20[*]
		Sig. (2-tailed)	.048
		N	30
	Transfer	Correlation Coefficient	-.37[*]
		Sig. (2-tailed)	.042
		N	30

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

5.2.2.3 Mann Whitney U tests revealing group differences in on-line strategy use

Mann Whitney U tests were run to see group differences in the on-line strategy use, overall strategy use, use of strategy categories, and use of individual strategies between the two listening ability groups. The results indicated that use of metacognitive strategies by the MSL group was statistically significantly higher than the LSL group. The results also revealed significant differences between MSLs and LSLs in their use of the individual strategies. The following sections of 5.2.2.3.1 and 5.2.2.3.2 illustrate group differences in overall strategy use and strategy categories, and in individual strategy use respectively.

5.2.2.3.1 Results of Mann Whitney U tests of overall strategy use and strategy categories

Mann Whitney U tests were run to see whether the two groups – the LSLs and the MSLs differed significantly in their strategic behaviour in the overall strategies of combined metacognitive and cognitive strategies, and metacognitive and cognitive strategy categories separately. The test results showed a statistically significant difference between the two groups' use of overall strategies and metacognitive strategies.

As seen in Table 5.7, the Mann Whitney U test indicated that both overall strategy use and metacognitive strategy use by the MSL group was statistically significantly higher and cognitive strategy use by the LSL group was, however, non-significantly higher (see Appendix 5E for median of use of all strategy categories and individual strategies). However, Bonferroni correction (p=.01) reveals that only metacognitive strategy use by the MSL group was statistically significantly higher.

Table 5.7

Group differences in overall strategy and strategy categories in Mann Whitney U test

	Overall strategy	Metacognitive	Cognitive
Mann-Whitney U	58.00	29.50	104.00
Wilcoxon W	178.00	149.50	224.00
Z	-2.27	-3.45	-.35
Asymp. Sig. (2-tailed)	.023	.001	.723
Exact Sig. [2*(1-tailed Sig.)]	.023[b]	.000[b]	.744[b]

a. Grouping Variable: Less Successful Listeners and More Successful Listeners
b. Not corrected for ties.

5.2.2.3.2 Results of Mann Whitney U tests of individual strategies

This section presents the results of group differences in their use of individual strategies, as shown in Table 5.8 below (see Appendix 5F for details). However, Bonferroni correction (p=.001) reveals that only use of monitoring, double-check monitoring, and questioning elaboration was significantly higher among the MSLs, and use of inferencing and linguistic inferencing was significantly higher among the LSL group.

Table 5.8

Group differences in the use of individual strategies in Mann-Whitney U test

	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2* (1-tailed Sig.)]
Selective Attention	59.00	179.00	-2.25	.024	.026[b]
Self-management	69.00	189.00	-2.04	.041	.074[b]
Monitoring	36.00	156.00	-3.20	.001	.001[b]
Comprehension Monitoring	68.00	188.00	-1.94	.049	.067b
Production Monitoring	56.50	176.50	-2.69	.007	.019b
Double-check Monitoring	31.50	151.50	-3.59	.000	.000b
Inferencing	34.50	154.50	-3.28	.001	.001[b]
Linguistic Inferencing	18.50	138.50	-3.96	.000	.000b
Reverse Question Mapping	55.00	175.00	-2.78	.005	.016[b]
Elaboration	60.00	180.00	-2.19	.028	.029[b]
Questioning Elaboration	38.50	158.50	-3.19	.001	.001b
Creative Elaboration	61.50	181.50	-2.21	.027	.033b
Summarisation	42.00	162.00	-2.97	.003	.003b

5.3 Thematic Analysis

A qualitative analysis uncovered variations in strategy use, which was not discernible through frequency counts in the quantitative analysis, whilst also strengthening the quantitative results by corroborating some findings, for example the MSLs' frequent combination of metacognitive strategies (see Vandergrift, 2003b). A thematic analysis of the think aloud protocols reveal group differences in their orchestration of strategies. However, it also shed light on the MSLs' sufficient linguistic knowledge which may facilitate such

orchestration. As such, thematic analysis was important for an in-depth picture of the trajectories of strategy use between the two listening ability groups. Orchestration of the use of strategies and the potential role of linguistic knowledge behind the listeners' strategic behaviour are presented in sections 5.3.1 and 5.3.2 respectively.

5.3.1 Orchestration of strategy use

Thematic analysis generated three distinct themes that distinguished the MSLs from the LSLs in the way they orchestrated and coordinated strategies (also see Appendix 3K). In so doing, thematic analysis supported the link between strategy use and listening comprehension. This section describes the distinguishing themes relating to their strategy orchestration in detail, with illustrations and examples from their respective protocols[7] in section 5.3.1.1, 5.3.1.2, and 5.3.1.3. Three distinct themes are, however, often inter-connected and depended on each other in order for them to work effectively (Figure 5.2):

- Combination of strategies and flexibility in strategy use

- Interactive top-down and bottom-up use of strategies

- Appropriate and effective use of strategies

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[7]Original excerpts from the students' think aloud protocols in Bengali were translated and then checked by the second coder who is also a native speaker of Bangla, before using them as excerpts.
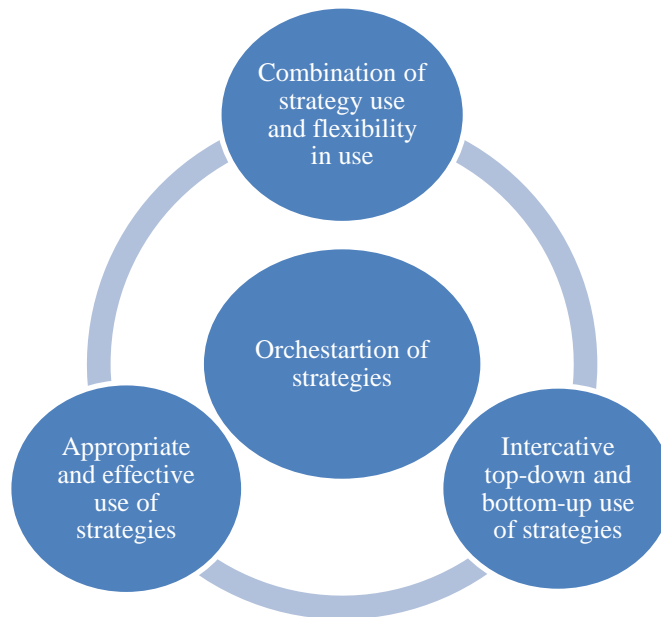
Figure 5.2 Three distinguishing themes in strategy orchestration

5.3.1.1 Combination of strategies and flexibility in strategy use

Qualitative analyses of the students' think aloud protocols revealed that the MSLs were more adept at combining different strategies in comprehending the text or at performing the task at hand. The LSLs also exhibited a combination of strategies in particular cases, however not as frequently as their counterparts or in similar repertoire. Their combinations of strategies differed in terms of frequency, variety, and flexibility.

Frequency

It seems all the MSLs and LSLs used multiple strategies together at some point or other. However, the frequency of combinations by the MSLs (75 times) was almost twice that of their counterparts (41 times). Amongst the LSLs, the frequency of combining for a single participant ranged from 1 to 4 times, whereas amongst the MSLs it was 2 to 10 times.

Varieties of strategy types

The MSLs' combinations of strategies were also wide ranging and in a different fashion in terms of strategy types. The students combined strategies in three different

fashions - combinations of metacognitive strategies only, cognitive strategies only, and metacognitive and cognitive strategies together. The LSLs' pattern of combinations suggested they combined cognitive strategies (66%) more frequently than others (metacognitive strategies only 7%, both metacognitive and cognitive strategies 27%). Conversely, the MSLs' pattern exhibited frequent combining of both metacognitive and cognitive strategies (40%), whilst the frequency of combining metacognitive strategies (31%) and cognitive strategies was similar (29%). This greater use of cognitive strategies by the LSLs and of metacognitive strategies by the MSLs corroborates the quantitative findings. Deployment of both types of strategy together to address a problem at hand was characteristic of the MSLs.

Following is an example of combination of cognitive and cognitive strategies. When in the audio text the teacher and the student were talking about writing an essay on UK supermarkets, Mahbub (a LSL) was guessing this wildly (inferencing). Based on his personal experience (elaboration) of going to library or shopping centre to pass his free time, he guessed the following:

> The man is asking like, if he (the student) has any free time, what he does in free time. He (the student) says that he goes to library and maybe goes for shopping in the UK supermarkets.

Flexibility

The MSLs exhibited more flexibility in their coordination of strategies; whenever they faced any problem with the strategy chosen initially, they judiciously moved forward and chose another strategy/strategy type until they came to a conclusion. As a result, there was a tendency amongst them to go for multiple strategies often, and pick out strategies from a wider range of selections. In the following example, Nahid, a MSL switches between different strategies as required by the task:

Ok, this short passage starts with Melanie and it suggests that she has an infection. So I thought the whole passage is going to deal with diseases and medicine. But suddenly I see (hear) that she is supposed to write something about housing trends. So the topic certainly changes…I need to be more attentive. (*planning, monitoring, and directed attention*).

Overall, it can be ascertained that more successful listeners combined strategies more frequently than their counterparts, and were more flexible in their approach to strategy use, depending on the demands of the task. They also combined strategies in different fashions, being aware of the potential of both metacognitive and cognitive strategies, unlike the LSLs' combinations of cognitive strategies mainly.

5.3.1.2 Interactive top-down and bottom-up use of strategies

Qualitative analyses of think aloud data also show a considerable difference between the MSLs and the LSLs in terms of their incoming text processing. A closer look at the LSLs' and MSLs' processing of listening texts reveals the MSLs' more interactive approach to listening comprehension, whereas the LSLs' approach seems to be complicated. The LSLs showed their frequent preferences to a bottom-up strategy e.g., translation, and a top-down strategy e.g., inferencing; however, this did not happen interactively or effectively. As the data revealed, most often the LSLs concentrated on recognising words and tried to infer the meaning based on only few random words recognised and consequently their inferencing strategy failed to reach at meaning or finding answers to the questions.

The MSLs attended to the incoming text using both top-down and bottom-up processing. They concentrated on listening to the incoming text very carefully, and then processing it at a sentential or global level using co-text, and finally mapped the textual information with their prior knowledge using wider context. Thus, global listening and an interactive approach to text were often characteristic of the MSLs.

Fara, a MSL reported how she solved a problem through global understanding of the text by interactive top-down and bottom-up processing:

> At first, I was just trying to indicate a time. In doing so I found it said 'weekend' as the last date of submission, and I wrote down that as the answer to the question. Then I realised that the question was when Simon would start writing his essay. Then I corrected the answer ('tomorrow').

At first, she concentrated here on the local information by attending selectively as required by the question; then she realised that there were more mentions of time and therefore she looked back at the question by using comprehension monitoring, and from her global understanding of the text she had listened to, she could come up with the right answer, which would not have been possible if she had only attended to the local level.

For the same listening text, a LSL Naila's process of this revealed how she reported on a few words she could only identify. She was thinking aloud:

> A man came and said 'good morning', and then he asked what was happening there. I could hear a word 'weekend' said by the man. I was trying to match other words with questions. Was trying to find out the answer, but I didn't find any answer. Their pronunciation wasn't clear to me.

This excerpt reveals her concentration on the word level trying to translate words as she was processing the text. She was then trying to match the words she could only hear with any questions, by using reverse question mapping strategy but she could not succeed in finding the answer. As the protocols revealed, reverse question mapping was a characteristic almost unique to the LSLs. A LSL, Alim, showed how he generated an answer for a particular question:

> In the middle of the conversation, here I heard one word '20th century.' I am thinking of the last word I heard… But later I heard the word 'sheet'…yes this can be the answer, so I am looking for which question is it…

Thus, he answered 'sheet' for a question because he heard this word only and guessed it as the answer, without even knowing which question this answer might be for. Thus, he

combined bottom-up reverse question mapping with top-down inferencing but failed to find the right answer from inferencing.

The LSLs also depended too much on bottom up processing, and often on translating on a word basis. Often they found they were lagging behind the recording as their translation on a word by word basis took time. Mahbub, a LSL frequently translated when he listened to a text:

> It is said here that 'society' has 'problems' and what is needed to 'develop' the society. I understand 'information,' 'require' means need; I knew their meaning. So matching with this, I am thinking that 'developing society' depends on 'information,' 'industry' means we need to work hard. I was listening to such words. In a word, I was trying to guess what is needed to develop a society. (I) Think these are needed for our country as well.

His excerpt from the protocol implies that he was translating words like 'information,' 'require,' 'develop,' and 'industry,' whilst thinking aloud or mentally. Of course, he was also trying to elaborate on his idea originating from translation of the words with the help of his world knowledge about development of society; however his world elaboration was restricted by his translation of a few words. Although he could at least relate that it was about a society, he misinterpreted the meaning involving 'information' and 'industry,' which should have been related to, "first world societies are no longer industrial societies but information societies." As he failed to understand the overall meaning of the listening text and its purpose, consequently he missed the answer to the target question. It seems he was guessing wildly.

As seen in the content analysis, translation, reverse question mapping, inferencing were negatively but significantly correlated with listening comprehension. Reverse question mapping[8] is a strategy emerged from inductive coding of think aloud protocols. The LSLs were using these strategies frequently but unsuccessfully or the strategies themselves are not

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[8] Reverse question mapping had been defined as a cognitive strategy and listed as number 19 in the strategy taxonomy against which the think aloud protocols were coded for quantitative analysis.

that effective in comprehending a listening text (further discussion on inferencing in Section 5.3.4)

5.3.1.3 Appropriate and effective use of strategies

Another factor that distinguished the MSLs from the LSLs was effective and appropriate use of strategies, even in their same strategy use. The protocols revealed the LSLs' inappropriate and ineffective use of strategies, particularly in the use of planning, maintaining attention, monitoring, inferencing, and elaboration strategies. However, reasons behind their failure in using these strategies effectively can be myriad including lack of sufficient linguistic knowledge.

Planning

Both the groups employed planning strategies to attend to the upcoming tasks before starting the recording. Often it seems that the LSLs would predict what came next from their reading of the question paper and from listening to the instructions in the audio; however, it was the MSLs who tended to both predict what was next and offer strategies to handle the upcoming text by setting goals; the latter was mostly missing amongst the LSLs.

The MSLs showed a critical approach to planning strategies, through using both advanced organiser and organisational planning in order to understand the upcoming tasks from the available information in the question paper, and proposing strategies to understand the incoming text and not to miss it before the recording started. For example, for the second recording section of the think aloud task, participants were again instructed on what to do for questions 11 to 20, and they already had their question paper in hand. Below, the students' listening processes in these excerpts present a striking difference between the two types of listeners:

Sultana, a LSL, "Was thinking… it's said here to read the questions in section 2. So I was reading questions 11 to 20, what was written here and what could be the answer." On the other hand, Hasib, a MSL reported:

> I am thinking that I need to see what is coming. And yes, the lecture would be useful for… um… I should understand from the first line (of the question paper) that it is about a lecture. There are several questions regarding… lecture (advanced organising). Then the thing is that I have to be attentive to the advantages and disadvantages of anything; there are two things for each (item) and in each case, one is given and another thing is blank; for example in case of email there is a blank in advantage and in telephone there is a blank in disadvantage. I have to be careful that I can understand and don't miss it (organisational planning).

Moreover, the MSLs tended to develop a conceptual framework from the very beginning, from a combination of predicting and attending carefully to the listening text. Most of the LSLs reported that they had heard of this, but that they did not reflect on their listening in terms of what they understood about the text against what they were required to do, what next and how. They rarely developed a conceptual framework to check the incoming text against previous understanding (co-text).

Maintaining attention

Maintaining attention made a huge difference between the two listening ability groups. Although both groups reported directed attention as a preferred strategy, the MSLs seemed to use this more frequently, and most importantly they were more successful in maintaining their attention. It seems that the LSLs often lost their attention and easily, and if they lost it, it was hard for them to get back on track. Although they reported they tried to redirect their attention, they were rarely successful. As a result, they often switched between the audio and the question paper to find a match between them but often ended up lost. On the other hand, the MSLs mostly seemed to maintain their attention all through the time of the recording and managed to redirect their attention when they faced a break in concentration.

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Naila, a LSL, lost her concentration just after a few minutes into the second section of the text and until the end she struggled to find out where she was: "mm…talking about offices and… actually my concentration was broken and I was looking outside, so I couldn't understand all the words. I could only understand the word 'office;' I couldn't find any answer." Her protocol shows that her concentration broke at the point when she actually could not understand what she was listening to, maybe because of the larger chunk of listening being cognitively loaded with information about sample size of research, of which she could only understand the 'large population' and was trying to make a wild guess from her prior knowledge of a large population and its demands and consequences in her less developed home country.

She, however, missed the conceptual framework of the research lecture. After the next pause, she realised that she could not find any connection between the question paper and the audio at that point. This condition continued to the end of the audio. She was repeatedly trying to match the audio with the question paper but failed to do so, and as she failed she became frustrated and was blaming herself for why she could not. Although she commented that she understood many of the words whilst listening, she forgot them after the listening ended. This was because she could not redirect her attention to the task and listening, and whatever she could hear by chance she forgot due to being distracted; she was not listening consciously and purposefully, and thus ended up lost. Another LSL, Maha also reported that her concentration broke due to incomprehension. The reasons for the LSLs' loss of concentration could be that they did not listen purposefully, or got stuck on unknown words. They could not understand the text due to lack of sufficient linguistic knowledge or limited perception ability; as a result, repeated incomprehension of the text caused lapses in concentration.

The MSLs, however, often could manage to redirect their attention and to maintain their attention. Zisan, a MSL reported, "actually I was thinking about the previous one, that's why I missed this one." Nevertheless, he did not stop here just because he thought he missed it, rather he tried to exploit his short term memory to think even further and to attend to the following sentences. He continued:

> Um…Jennifer helps her publication … library. um…heard the word 'magazine' to help her analysis. Publication, library, stacks system, I heard these words. Now if they have talked about library stacks, that library has lots of stacks, then I would probably use the word 'stack.'

He rightly found out the answer for question 6, which was 'stack system.' Fara, another MSL commented that although she missed the information, she did not give up; rather she maintained her attention until the end of that part, and finally she found the answer. Therefore, maintaining attention and persevering were also characteristic of the MSLs.

Monitoring

There lay qualitative differences between the two groups in terms of their deployment of the monitoring strategy too. Both the LSLs and the MSLs seemed to use the strategy of, for example, monitoring comprehension, and which was also coupled with another strategy. However, the LSLs' deployment of this strategy often seemed to fail to generate meaning. To illustrate this, excerpts from a LSL and a MSL are given below. Mahbub, a LSL, reported:

> How much I understood, I got it right, as I understood 'library,' and 'supermarket' completely. I was trying to understand against the question asked by the speaker, 'if she had any free time and what she does in her free time'? I was trying to understand the next part matching this question.

As seen from the above excerpt, he was trying to check his comprehension based on his hearing of two words. Looking back at his understanding of the previous listening excerpt, he seemed to be guessing the question again based on a few words he happened to hear. He comprehended the question of the previous speaker completely wrong and guessed

her reply as her going to the library for reading and the supermarket for shopping, as her pastimes. It seemed that the student missed developing a conceptual framework for the speakers' discussion on writing an essay. Therefore, monitoring comprehension was not effective here since it was linked to a wrong guess based on a previous wrong guess. This also illustrated with an indication that wrong or wild guess may stem from limited lexical access which also may lead to a flawed conceptual framework.

Hasib, a MSL said, "Sir asked something about this student Jennifer. And the first question is…this time I should make sure that I have seen and understood the question correctly. Because I misunderstood what the question was asking for." Here, he was checking his understanding of the question itself correctly, because earlier he became confused between what he was supposed to do and what Simon was supposed to do (monitoring comprehension). He further reported:

> So this time I didn't want to make the same mistake of failing to identify the question's inquiry. Since Jennifer was asked about 'what,' and what I need to do, I need to differentiate between the questions -what question is what.

Here, he was trying to be more specific to understand what he was required to do (problem identification). "And I was trying to pay careful attention." He was also maintaining his attention.

In the above excerpt, the MSL exhibited an awareness of previous failure and so this time checked his comprehension carefully. His use of the monitoring comprehension strategy became effective when it was coupled with problem identification and directed attention strategies. It is again, the potential of one strategy that is linked to the use of other associated strategies that helps the comprehension of a particular task at hand.

Inferencing

Inferencing was reported by the LSLs more frequently; more than twice, and the negative correlation reached significance. However, the LSLs used this strategy

unsuccessfully, often guessing wildly, based on mostly a few words heard and processed locally, and because of their inappropriate use of prior knowledge. Conversely, the MSLs' use of inferencing was judicious and was coupled with problem identification, and monitoring etc.

Mahbub, a LSL, reported:

Maybe the man was asking her what she used to do in her free time. So, she was saying that she went to the library and a UK supermarket maybe for shopping - I was hearing like this. And I couldn't understand all the words.

This was so wild a guess from the listener's part. He could only hear 'library' and 'supermarket,' and along with the idea of free time, generated in his mind a wild story, which had no connection with the listening excerpt at hand, as the man in the audio was asking if she would get enough time to research what sorts of things the supermarkets do. It seems he even could not understand any of the sentences. Moreover, the rest of his understanding of the text showed his process of comprehension was based on a few words only and on associating those words with his personal experience or world knowledge. Like him, many of the LSL group associated the idea of sample size and population with a large population and its problems in the country in the later part of the listening.

On the other hand, Shahim, a MSL, reported:

The answer for Question 6 has been given. It's said here that Jennifer found some publication in the library…she probably said the publication is about UK supermarkets, and this publication from the library helped her. That's it. From this I guess that she got some publication about UK supermarkets and this helped her in her analysis.

This student was successful in his inferencing, because he built on the conceptual framework he developed from the beginning of the talk.

The MSLs were often successful in their use of strategies e.g., inferencing. The think aloud protocols by Shahim and Mahbub revealed that whilst Shahim was successful all the three times he used inferencing for comprehending the text or finding the answers, Mahbub

was successful only once out of seven times he used inferencing strategy. Two things to note here that the LSL had more attempts and that he ended up in failure most of the times. Since the LSL was weak at decoding, so taking refuge in inferencing frequently but since he was capitalising on insufficient words decoded, their inferencing was incorrect. On the other hand, the MSL needed to attempt fewer times, since he was confident in his decoded information and most of the times he attempted he was successful as this was based on a sufficient amount of information to make an inferencing (also see Section 5.3.2).

Elaboration

The MSLs elaborated more frequently; however, the LSLs also elaborated, based on their world knowledge, academic knowledge and sometimes creatively.

As mentioned in Section 5.3.2, Mahbub, a LSL, frequently translated when he listened to the text. Whilst translating words like 'information,' 'require,' 'develop,' and 'industry,' he was also trying to elaborate on his ideas based on his general knowledge of the development of society. He seemed to use world elaboration ineffectively, and which was restricted by the few words he could translate. He seemed to be unclear about the concept developed in the listening text, rather he connected ideas incoherently, based on only a few words he translated; he failed to comprehend the text globally. This also indicated his lack of sufficient linguistic knowledge on which he could capitalise for further processing of the incoming text. He also used academic elaboration, as he understood after hearing phrases like 'anything else' that the conversation was going to end: "he was saying something I couldn't catch…about 'housing.' Last of all, he said 'anything else;' I can understand this as my class teacher asks us this when the class lecture ends. That's why I can catch this easily." Similarly, the approach of identifying familiar discourse markers like 'anything else' and 'thank you' was a common tendency of the LSL group.

5.3.2 Potential role of linguistic knowledge behind strategic behaviour

Thematic analysis of the groups' protocols went beyond their orchestration of strategies and suggested a potential role of their linguistic knowledge behind their frequent and effective use of strategies. It was clear from the protocols that the MSLs were using strategies frequently and in an orchestrated and sophisticated manner; however, a closer and careful look at their orchestration seemed to show that the LSLs' frequent and effective use of many strategies was restricted by their limited linguistic knowledge. A similar view is also shared by Goh (1998a). One of the limitations of my study is that I did not measure and control the groups' linguistic proficiency which might have an impact on the relationship between strategy use and listening comprehension.

It seems the MSLs' were more able to access and recognise more words possibly due to larger vocabulary size or better segmentation abilities which facilitated their frequent and effective use of the strategies. This also facilitated their automatic processing of the text in real time. This provided first an attentional space for thinking beyond the word level and using of strategies. The LSLs' being more occupied with cognitive strategies seem to block their attention for higher-order strategies i.e., metacognitive strategies. Second, some strategies are available and accessible once a certain level of input processing takes place. In such situation, elaboration, monitoring strategies might not be available unless a certain level of processing takes place. Third, capitalising on insufficient amount of words decoded, some strategies e.g., inferencing turn out to be unsuccessful.

It seems the MSLs used metacognitive strategies frequently and their use of strategies was interactive. Conversely, the LSLs' strategic behaviour, even whilst combining strategies, was mostly cognitive. They seemed not to have that space of thinking beyond the text and regulating and controlling themselves to approach the text. Again, in interactive listening, a limitation in bottom-up or top-down approach is compensated by each other. It is apparent

that the LSLs were engaged with either too much bottom-up processing by using mainly translation strategy or too much top-down processing by using mainly inferencing strategy. Approaching the text interactively, therefore, does not happen among the LSLs. The LSLs' pre-occupation with bottom up processing suggests their inadequate perceptual processing ability; therefore, they seem to be stuck with recognising words, which obstructs their space for global processing. Although the LSLs used inferencing frequently, it was mostly in vain because of capitalising on a small amount of information decoded, and thus ended up in incorrect inferencing. They seemed to take frequent refuge in inferencing whenever their decoding was inefficient. In section 5.3.1.2., the LSL protocols of Naila and Mahbub revealed that they could recognise only few words and desperately tried to find a question for which they thought the word(s) recognised might be the answer, by inferring wildly and incorrectly based on incorrect proposition created from few random words which they thought were key words. This also implies that they even could not differentiate the key, important words from whatever unnecessary words they recognised.

On the other hand, the LSLs' incorrect inferencing explains their activation of schema or prior knowledge mostly incorrectly and thus leading to inappropriate use of elaboration. This consequently leads to an incorrect conceptual framework for processing the next part of the text. As seen above, Mahbub failed to understand the overall meaning of the listening text, and looking back at his understanding of the previous listening excerpt, he seemed to be guessing the question again based on a few words. Comprehending the question of the previous speaker completely incorrectly, he misunderstood the next question and guessed her going to the library for reading and the supermarket for shopping, as pastimes. Thus, Mahbub also developed a flawed conceptual framework.

Sufficient linguistic knowledge, therefore, can influence MSLs' frequent and orchestrated use of strategies as they have more lexical access and automaticity of processing.

Conversely, LSLs' lower and ineffective use of many of the strategies stems from their insufficient linguistic knowledge and thus less automaticity. It seems that for the LSLs to benefit from strategy use, a threshold level of linguistic knowledge needs to be acquired first. The LSLs' problems due to linguistic insufficiency are also apparent in their verbal reports in Chapter 6.

5.4 Conclusion

This chapter presented the results and findings of task-based, on-line listening strategy use elicited via think aloud protocols. Employing mixed-methods in analysis i.e., content analysis and thematic analysis, this chapter revealed both quantitative and qualitative differences in on-line strategy use between two listening ability groups. Both descriptive tests and inferential tests of means, correlations, and Mann Whitney U Tests revealed significant differences between the MSLs and the LSLs in their overall use of task-based, on-line strategies, use of metacognitive strategies and a number of individual strategies. The differences were then reinforced by thematic analysis of their orchestration and coordination of on-line strategy use, which revealed the MSLs' frequent combining of strategies and flexibility in strategy use, interactive top-down and bottom-up use of strategies, and appropriate and effective use of strategies. However, the thematic analysis of the protocols further suggests that a threshold level of linguistic proficiency might act as a facilitator in their orchestration of strategies and effective use of them. Overall, both use of strategies and sufficient linguistic proficiency facilitating those strategic repertoire together may explain the MSLs' better success in listening. The next chapter, Chapter 6, focuses on the results and findings of the two listening ability groups' MK of EFL listening.

Chapter 6 Results and Findings 3: Phase II

Metacognitive Knowledge about EFL Listening

6.1 Introduction

This chapter analyses semi-structured interview (see Appendix 3H) data elicited from same sub-sample of participants who participated in think aloud protocols, to answer RQ3- "What perceptions do the less successful listeners and more successful listeners have of EFL listening?" Data were coded and analysed following categories of MK by Flavell (1979), and subcategories mainly by Goh (1997, 1999, 2000) and as emerged from my data (see Appendix 3L). The students reported extensively on all three categories of MK, and the findings reveal considerable differences between LSLs and MSLs in terms of their knowledge of different factors of person, task, and strategy. MSLs showed greater awareness in terms of articulating a number of factors of person knowledge, task knowledge and strategy knowledge, and they were more specific in identifying their strengths and weaknesses, aspects of tasks and how to be strategic in dealing with problems and difficulties faced. Conversely, the LSLs tended to deal with more text-oriented processing and bottom-up strategies to address the problems at hand. Whereas MSLs placed more emphasis on motivation and persistence in their efforts and consequently showed more exposure to spoken texts, LSLs seemed to be less motivated and less persistent in their efforts and thus had less exposure to spoken text. I first examined their frequency distribution, then the qualitative differences in their report of each of the categories and subcategories. Analysis of interview data on MK are presented with a comparison between the two listening ability groups; with the overall MK first in Section 6.2, then a comparison of their person knowledge, task knowledge, and strategy knowledge in turn in Sections 6.2.1, 6.2.2, and 6.2.3 respectively.

6.2 Metacognitive Knowledge

In this section, the data analysis includes a description of the results and findings regarding MK, comparing the two listening ability groups. The comparison of frequency of mentions revealed considerable differences between the two listening ability groups on their MK, with greater awareness among the MSLs (LSLs 443, MSLs 589). Although the groups differed slightly in their person knowledge (LSLs 226, MSLs 270) and task knowledge (LSLs 148, MSLs 191), they differed strikingly in their strategy knowledge (LSLs 69, MSLs 128); MSLs' strategy knowledge was almost double that of their counterparts.

Comparison of their overall MK and the three categories separately is shown visually in figure 6.1 below.
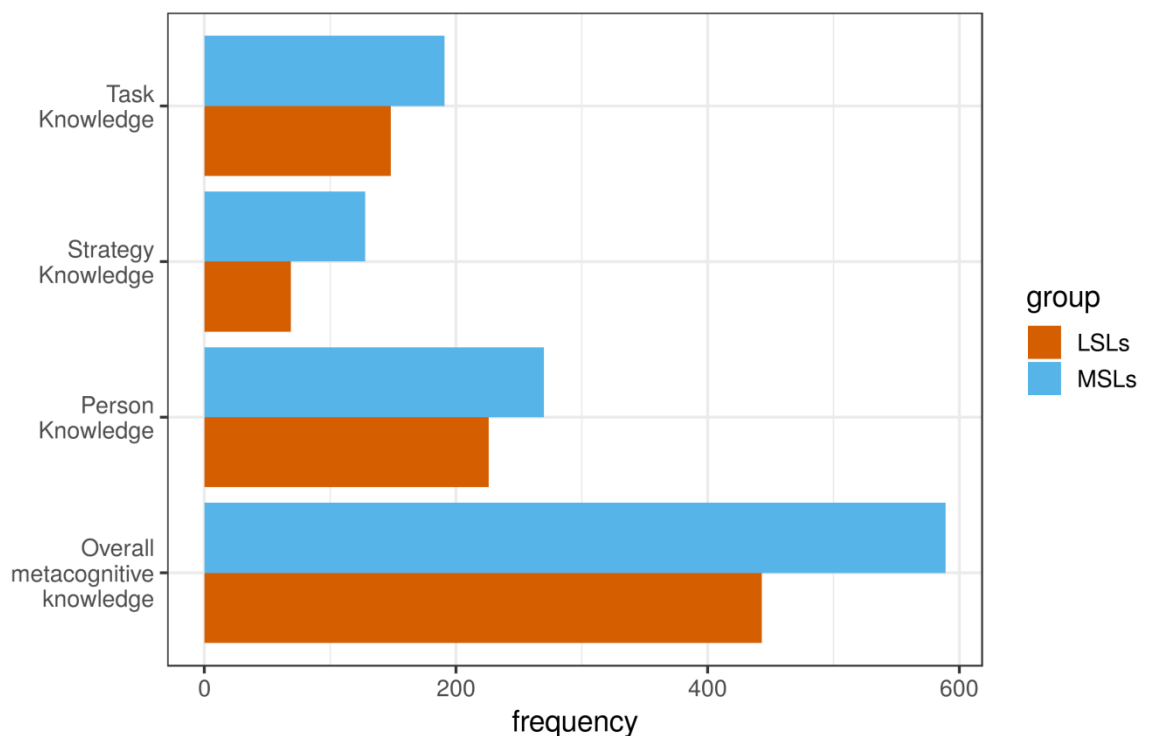
Figure 6.1 Comparison of the groups' overall MK and its three categories

However, frequency distribution did not in itself include all the justifications of the differences between the two listening ability groups; indications of bigger differences were seen when looking in-depth into their reports and concentrating qualitatively on different factors associated with each category separately. This in-depth exploration is documented in detail in the subsequent sections.

6.2.1 Person Knowledge

This section includes an analysis of GL knowledge and listening self knowledge as parts of person knowledge. Findings revealed slight differences between the two listening ability groups in their overall person knowledge (LSLs 226, MSLs 270), and in GL knowledge (LSLs 73, MSLs 104) and listening self knowledge (LSLs 153, MSLs 166) separately (see Figure 6.2). However, findings revealed group differences in a number of subcategories of person knowledge under both GL knowledge and listening self knowledge, not only in terms of frequency always (see Table 6.1 below) but also qualitatively.
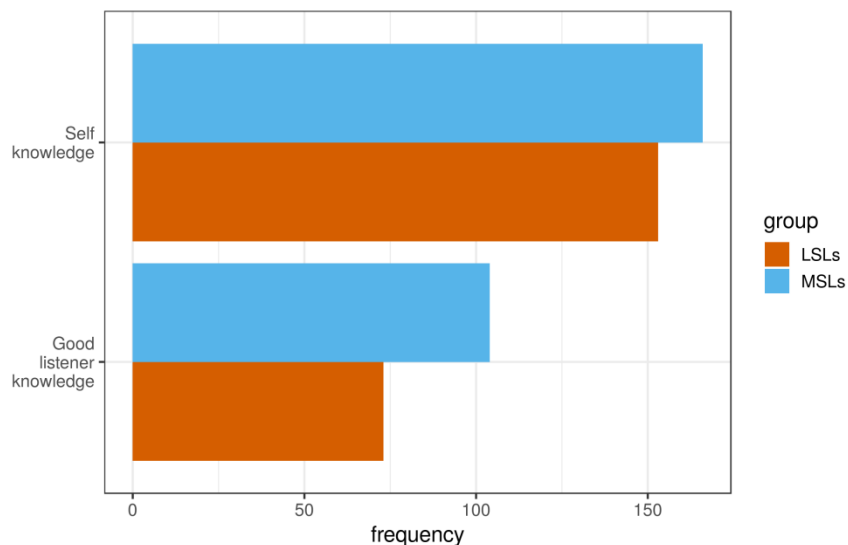
Figure 6.2 Groups' frequency of mentions of listening self knowledge and GL knowledge under person knowledge.

Table 6.1

Person knowledge, its types and subcategories

Category	Types of Person knowledge	Subcategories	LSLs	MSLs
Person knowledge	Good Listener knowledge	Linguistic factors	22	21
		Motivation, perseverance, and exposure	5	18
		Strategies	20	40
		Miscellaneous Factors	26	25
	Total		73	104
	Listening self knowledge	Cognitive processes	1	6
		Motivation, perseverance, and exposure	3	20
		Self-concept	31	31
		Problems during listening	53	38
		Obstacles to listening development	14	7
		Learners' Needs	51	64
	Total		153	166
Total			226	270

Specifically, which factors contributed to the differences in their person knowledge are analysed below, along with a discussion of GL and listening self knowledge.

6.2.1.1 'Good' Listener Knowledge

Primarily interview questions 1 and 10 elicited data on what makes a GL and strategies of a GL. Four different issues emerged from the analysis of data: the linguistic knowledge; motivation, perseverance and exposure; strategies, and miscellaneous factors associated with a GL. These GL attributes were considered as influential factors facilitating 'good' listening comprehension and development in a GL. GL knowledge pertained to the differences between LSLs and MSLs. Figure 6.3 exhibits the broad factors attributed to a GL by the two listening ability groups.
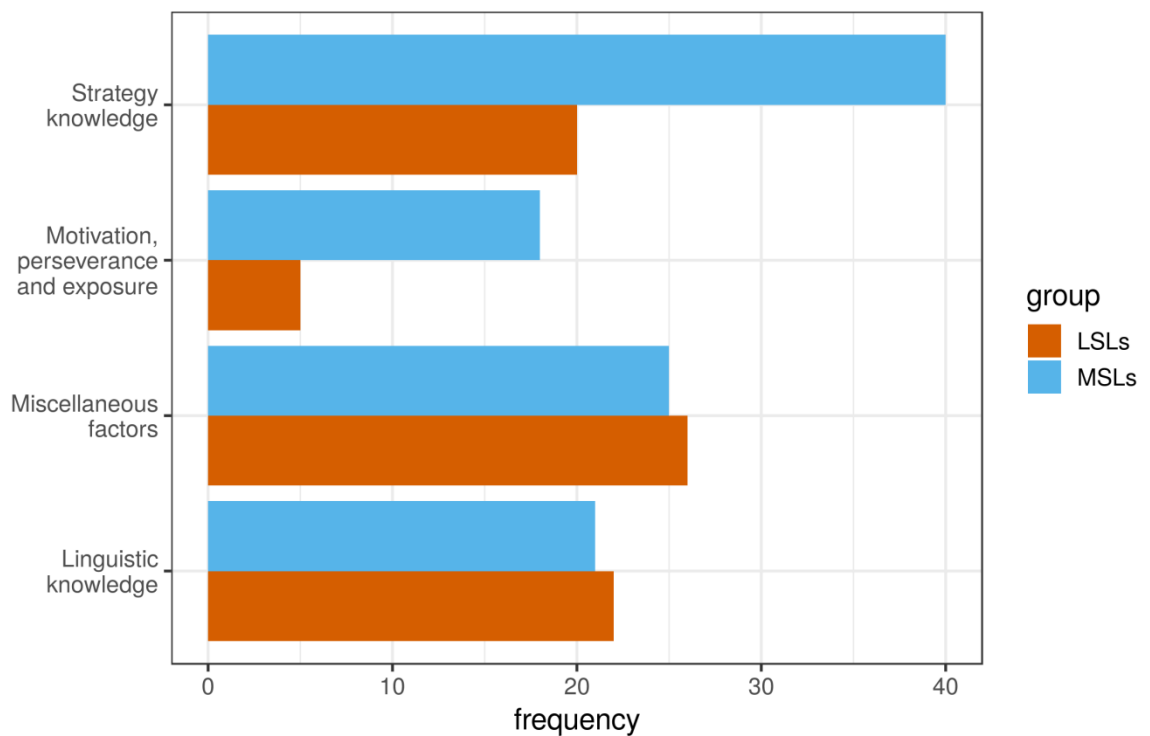
Figure 6.3 Group differences in GL factors

The following description sheds light on how the two groups were similar or different in terms of their frequency of mentions of each subcategory and the qualitative differences in them as appropriate.

6.2.1.1.1 Linguistic knowledge

Linguistic knowledge includes aspects of language pertaining to good listening. Linguistic knowledge (of vocabulary and grammar, of pronunciation and prosodic features) is a prerequisite for better listening, and a predictor of better listening comprehension. In response to what makes a GL, listeners expressed their perceptions of a GL as associated with linguistic factors along with other factors. They reported three linguistic factors, of which two were reported by about half or more of the students interviewed. Awareness of linguistic factors was reported in similar frequency by both the LSL and MSL groups (LSLs 22, MSLs 21). Whilst LSLs seemed to be more aware of pronunciation and vocabulary, MSLs revealed greater awareness of prosodic features.

Although both groups reported on the importance of knowledge of pronunciation and accent, Shabab's (MSL) excerpt below shows his understanding in an articulate manner, which consequently reveals his awareness of knowledge of pronunciation. To illustrate their perceptions of pronunciation and vocabulary, some of the excerpts have been put below:

Mahbub (LSL): A good listener knows accurate pronunciation of almost all words…

Shabab (MSL): Suppose, if I pronounce the first vowel sound of 'vigour' like that of 'rifle', (I am) learning wrong pronunciation unknowingly just following rifle… a GL learns pronunciation of all words individually. If only I know the right pronunciation I will be able to understand what's being said….otherwise if somebody pronounces 'vigour' the right way, the word will become unknown to me, a different word.

Again, despite the similar frequency of mentions by both groups, e.g., Shahin emphasised vocabulary for better perception of all words, without showing much awareness other things for decoding:

> Shahin (LSL): … good word knowledge, so can capture easily…techniques (among us are) same but maybe GL's vocabulary is high so they understand quickly when listening.
>
> Shahim (MSL): Sometimes, I miss even known vocabulary because of pronunciation.
>
> Kabir (MSL): (A GL) will notice the speaker's tone and intonation… what actually they are meaning, what are given emphasis etc.

6.2.1.1.2 Motivation, perseverance and exposure

Students' reporting on motivation, perseverance and exposure revealed a large difference between LSLs (5) and MSLs (18). It was basically MSLs who perceived motivation to learn to listen as an attribute of a GL, and who persevered in their trying and exposed themselves to listening. The students felt motivated by family, surroundings and themselves. Whilst 18 MSLs reported motivation, perseverance and exposure to listening as GL attributes, only five LSLs reported so. MSLs reported that a GL had to have an interest in interacting with and good exposure to English language and culture.

Having an interest in English language and culture

Five MSLs perceived that having an interest in the target language and culture was a significant factor in facilitating listening. To illustrate their perceptions, some excerpts are given below:

> Nahid (MSL): Curiosity and eagerness comes first (then concentration)…If I am interested I give effort (attention) and thus listen well.
>
> Simul (MSL): The good result gainer or the good listener may have more interest and interaction with that language…

Attribute of perseverance

The MSL group frequently believed that GLs have the attribute of perseverance; they can continue listening with patience and repeatedly.

> Shabab (MSL): …Suppose there are five questions on a topic, he (GL) has got the answer of the last one too, but still he is not giving up listening to the end…

Good exposure to English language and culture

From the students' reporting, it can be assumed that good exposure from an early stage in life facilitates better listening to/learning of the target language, and interestingly, the more successful listeners reported they had exposure to English from childhood. For example:

> Piyal (LSL): Beyond vocab and grammar knowledge, he (a GL) practises more, listens more, from childhood, so he is used to speakers' expressions.
>
> Tasnuva (MSL): … (A GL) watches English movies or others from childhood …I was encouraged by my family to watch English movies more from my childhood.

Although both Piyal and Tasnuva considered exposure to spoken English from childhood important, Tasnuva had that exposure to watch English movies from childhood. The MSLs were well aware of interest as motivating factor hence they exposed themselves to more opportunities to listen to English, even from childhood, consequently leading to better listening skills.

6.2.1.1.3 Strategies

The students commented on strategic factors associated with a GL; these mainly included a GL's use of metacognitive and cognitive strategies. This section presents reported GL strategies by classifying them according to the Listening Strategy Taxonomy (see Appendix 3J) adopted, whilst analysing think aloud protocols for these students' task-based, online strategy use as in Chapter 5. A GL as strategic was reported more frequently by the MSLs; their frequency of mentions was double that of their counterparts (LSL 20, MSL 40).

Both metacognitive and cognitive strategies were reported more frequently by MSLs; their mentions of metacognitive strategies were more than double (LSL 12, MSL 28). That is, MSLs attributed strategic behaviour to a GL more often than their counterparts; a GL's use of metacognitive strategies implied that MSLs were aware of GLs planning, managing, controlling, and monitoring their performances when listening.

Frequently reported GL strategies

Frequently reported strategies, metacognitive or cognitive, are illustrated below (see Table 6.2) with excerpts from students' interviews. Directed attention was frequently reported by both groups of listeners, although in varied degree. Whilst planning, selective attention, and elaboration were reported by the MSLs, inferencing was reported frequently by the LSLs.

Table 6.2

Frequently reported GL strategies

Strategies		LSLs	MSLs
Metacognitive strategies	Directed attention	10	14
	Planning	-	5
	Selective attention	-	5
Cognitive strategies	Elaboration	-	8
	Inferencing	5	-

Directed Attention

Directed attention was frequently reported by both groups, by almost all the MSLs and two thirds of the LSLs. Directed attention was an important strategy employed by GLs as revealed in excerpts below, by both LSLs and MSLs. However, Nazim was also aware that he could give only 50% attention to listening. Kabir believed that ignoring all distractions, a GL listened, and he himself too could listen at least 50% even he was busy with writing down points, and developing arguments for debate. For example:

> Nazim (LSL): … I don't think I follow the techniques a GL does….for me, perhaps I concentrate 50%,…I think a GL gives 100% concentration.
>
> Kabir (MSL): …ignoring distractions, a GL listens…

Planning

The following excerpts show students' belief that GLs prepare for listening, plan for it and predict the incoming text. However, Nazim only reported planning as a GL strategy, whereas Tasnuva directly related this to her own listening. Again, Kabir believed that a GL would activate schema to predict what would come next.

> Nazim (LSL):… (a GL) should read the question paper as much as I could when I got it, otherwise it would be difficult to catch whilst listening.

Tasnuva (MSL): (I) prepare myself, and read the questions so that I can focus on key words from the question. I think a GL also listens this way.

Kabir (MSL): …understand topic…understanding from prior and topic knowledge what next…

Selective attention

This strategy was reported by only MSLs, and frequently. For example:

Farah (MSL): To me, catching the key words is necessary… even after listening to full conversation.

Jebun (MSL): A good listener checks if s/he is understanding right…maybe s/he is watching movies and finds a confusion then s/he makes sure from the subtitle that s/he has understood right.

Elaboration

Elaboration was frequently reported by MSLs, as many as 8 times.

Students (6 MSLs) revealed that a GL should attend to detailed information. To illustrate their perceptions, some of their ideas are given below. For example:

Nahid (MSL): A GL has good sensory skill, listens minutely and all details (even unnecessary things) with same level of concentration all through.

A student, a MSL, reported that a GL needs to cross-check between the question paper and the recording:

Hasib (MSL): In test, (GLs) try to match the thing (between questions and recording)…

Inferencing

Inferencing as a strategy was reported frequently by the LSLs. They thought that GLs should have the ability to infer and guess when they missed something they heard.

Sultana (LSL): A GL has the ability to guess the thing even if he misses it or doesn't understand something.

Mahfuz (LSL): (A GL) has to have a prior knowledge of a topic… so s/he will use that to guess and understand better.

Less frequently reported strategies

Self-management was less frequently reported by both the groups. Whereas monitoring and summarisation were reported by only a few of the MSLs, substitution of words with synonyms was reported by only a few of the LSLs. However, some of the LSLs believed that if they missed any words they could use any synonymous words based on their understanding, often guessing:

> Nizam (LSL): Once a GL told me that if he could not catch the target word he used the synonym of that word as synonyms were also accepted.

6.2.1.1.4 Miscellaneous factors

I grouped some other factors associated with good listening as miscellaneous factors; these were beyond linguistic, motivational, and strategic factors of a GL. Despite similar mentions by both groups (LSLs 26, MSLs 25), in-depth observation revealed important differences between the groups. Amongst miscellaneous factors, frequent listening and more practice were reported frequently by both the groups. Whereas ability to understand the meaning quickly, and effective memory were reported frequently by the LSLs, the MSLs reported ability to grasp the main ideas and intended meaning, and listening with purpose, as factors associated with GLs; none of the LSLs reported the latter two. However, out of the less frequently reported factors, having scope to check comprehension was mentioned by only one LSL.

Frequently reported factors

The MSLs tended to reveal that a GL had to have the ability to grasp the main ideas and intended meaning, having goals and purpose in listening (see Table 6.3 below). Whilst the MSLs believed that GLs are more goal-oriented and can differentiate between important and unimportant ideas and go beyond the literal meaning, the LSLs believed that GLs should

simply practise time and again and understand the text quickly, without being aware of how to do practice and understand quickly.

Table 6.3

Frequently reported miscellaneous factors

Miscellaneous Factors	LSLs	MSLs
Frequent listening and more practice	12	8
Ability to understand the text quickly	7	-
Ability to grasp main ideas and intended meaning	-	5
Listening with purpose and goal	-	5

Frequent listening and more practice

Both MSL and LSL groups believed that a GL practises listening by frequently listening to English.

Imran (LSL): A GL may practise more and more e.g., song, movies with subtitle.

Tasnuva (MSL): I watch English movies from childhood. If I practise more, I can adapt more…continuous listening will make a GL.

Ability to understand the listening text quickly

The LSL group frequently believed that a GL has the capability to understand quickly whatever s/he hears.

Sultana (LSL): …catching meaning of the sentence swiftly

Ability to grasp the main ideas and intended meaning

The MSLs also frequently believed that a GL is able to grasp the main ideas and intended meaning, and can distinguish between important and unimportant information.

Hasib (MSL): A GL can differentiate between important and unimportant ideas… not only what is said but why it is said, what it really means…

Listening with purpose

The MSLs frequently perceived that a GL listens with purpose and with a goal in mind.

Nahid (MSL): …because a GL likes to listen (with interest) and with a sense of purpose e.g., to be a good speaker.

Less frequently reported factors

Less frequently mentioned factors were effective memory, good sensory perception, good interpretation skills, and opportunity to check their listening comprehension. Out of these factors, effective memory seemed to be an important factor according to the LSLs, since three of the LSLs compared to one of the MSL mentioned this. The LSLs believed good memory to be an advantage, possibly because whilst processing the incoming text they often forgot what they heard or could not remember the answer when writing down it. This refers to the cognitive load in memory and LSLs often thought this was because of limited storage in the memory. This might be because they seemed to be often unable to transfer the 'load' from the short-term memory to the long-term memory after parsing the information for utilisation; therefore, this inhibited storage of the previous input whilst proceeding to the next. Therefore, LSLs equated memory with good listening. For example:

Sultana (LSL): GL has good memory, they can remember almost all they hear, mmm…I forget just after listening.

6.2.1.2 Listening self knowledge

The students' reports on the listening self generated as many as six subcategories. The frequency of reporting on listening self knowledge was almost the same between the LSLs and the MSLs; however, they differed in terms of some of the subcategories. As revealed in the data, cognitive processes, motivation and exposure to the language, and learners' needs were frequently reported on by the MSLs, whereas problems with listening, and obstacles to development were more frequently mentioned by the LSLs (see Figure 6.4). Self-concept was

reported in the same frequency; however this subcategory revealed a huge difference between the groups, which lay in their contrastive concepts about themselves as listeners, their self-assessment, and their self-efficacy.
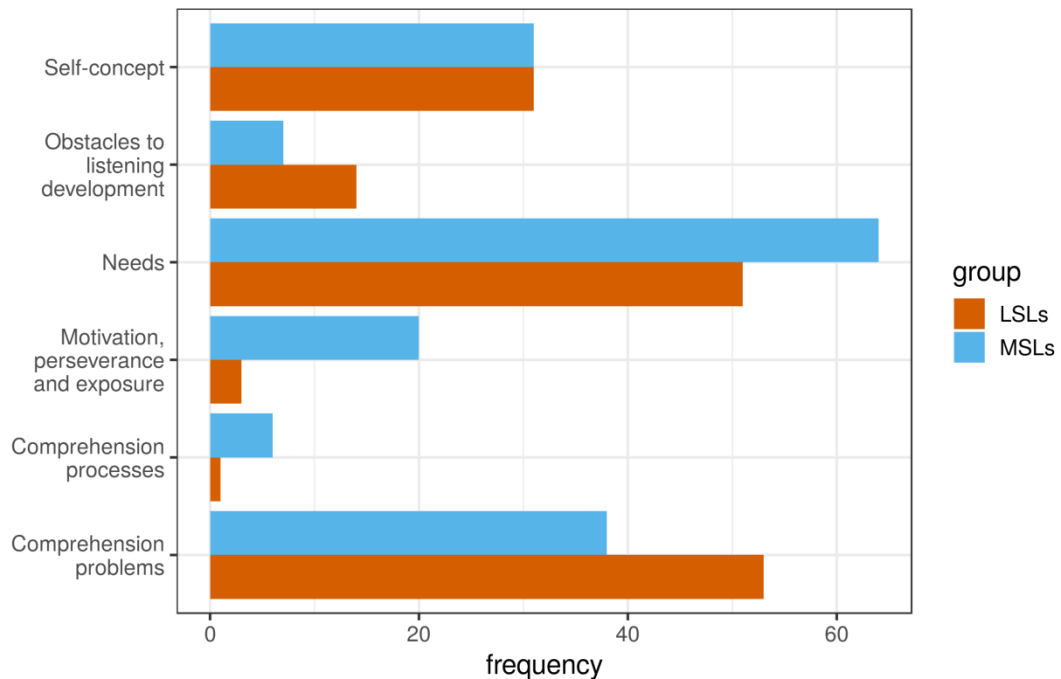
Figure 6.4. The groups' awareness of the listening self

6.2.1.2.1 Cognitive processes during listening

The students showed their awareness of listening processes. Verbal data revealed students' awareness of three types of cognitive processes. Two of them were mentioned by only the MSLs: global listening, and think of words and spell them out mentally. Conversely, translate part or whole into the L1 was mentioned by one LSL. This shows that the MSLs were more aware of the cognitive processes, whilst the LSL was concerned only with translating. Thinking of words and spelling them out mentally was only reported by one MSL, Farah, when she reported that she felt confused with spelling, therefore she would check it and whenever she came across something new she would try to memorise and note it down for future use.

Global Listening

Global listening was reported by 5 MSLs alone. This seemed to be an important top down listening skill for the MSLs. For example:

Jebun (MSL): If unknown word, note it in head then consult it at the end or in break. Usually don't pause, only when that creates much problem to understand the thing.

6.2.1.2.2 Motivation, perseverance and exposure

The students, who felt they were motivated by family, teachers or self and had an interest in, and interaction with and exposure to the target language, were mostly the MSLs. They also revealed their perseverance in listening. This was also congruent with their perceptions of the motivation, perseverance and exposure to the target language of the GLs. Whereas 12 MSLs reported on their interest in and motivation to listen to and exposure to English listening from an early stage in life, only one LSL reported so. This revealed a huge difference between the LSLs and the MSLs in their motivation and listening experiences in terms of being self-motivated or motivated by family or friends. The MSLs loved to listen to English songs, and to watch movies, and TV series on personal level, which revealed their integrative motivation to learn to listen. In contrast, only one LSL thought he felt motivated to learn better English, and this was because he needed a good job abroad, which revealed his instrumental motivation.

Motivated by family, surroundings, and self

The MSLs' reports showed that they often found themselves motivated either by their family, friends or self-motivated.

Jebun (MSL): English movies, news, other programmes, from childhood (encouraged by family).

Hasib (MSL): Motivated by teachers, some are role models (both in school and in University), follow their lectures very carefully and with interest… Impressed by few friends' listening skills- Rakib can write down almost all teacher is saying, can tell all from the lectures. I wonder what Rakib has possessed!

Kabir (MSL): Feel need to practise British English, in EFL situation its tough, future plan to travel an English country to excel my English.

Perseverance and interaction with and exposure to target language

Again, MSLs frequently reported that they were interested in target language and culture; therefore they were more exposed to target language and culture mostly virtually via English songs, movies and TV series on screen, even from childhood for some of them. They also believed that unless there was more interaction with the target language and culture it was not possible to understand their sarcasm etc. They also showed that they should continue their listening even after difficulties and by solving them.

Arif (MSL): From class 7/8 (I) follow commentary on football or cricket matches… also try to practise speaking out following them.

Simul (MSL): Linguistically same maybe, but they couldn't understand the sarcasm due to lack of attachment with English language and exposure to sarcasm and such situations etc.

6.2.1.2.3 Self-concept

Listening self-concept can influence one's ability to function as a listener, to use the listening skills they possess (Goh, 1998a; Wolvin & Coakely, 1996). Self-efficacy is amenable and higher self-efficacy can lead to better achievement, willingness to face challenges and to give effort (Graham, 2011; Mills, Pajres & Herron, 2006). According to Graham (2011), instructors can strengthen self-efficacy by activities for developing sense of instrumentality i.e., the awareness that there is a relationship between what one does (e.g., strategies used) and learning outcomes. Therefore, insight into listeners' self-concept is important to intervene and tailor any instruction to make change. The students, in this study, expressly commented on their self- concept in terms of self-assessment, perceived improvement, and self-confidence in future performance, in response to interview questions 2 and 3. It seemed that both groups were equally aware of themselves as listeners; however,

they possessed contrastive self-concept. This insight into the two listening ability groups' self-concept revealed how the LSLs were different from the MSLs, which eventually might inform treatment of these students.

Self-assessment

All the 30 students assessed themselves on their present listening abilities. In their mind, all of them assessed their abilities as compared to a 'good' listener[9]. Against a mental representation of a GL, the students rated themselves within a range of 20% to 80% or from beginner level to fairly good/GL level. However, their self-assessments revealed a kind of true picture when compared amongst themselves i.e., between the LSLs and the MSLs, with a few exceptions who over/underrated themselves when compared to their listening test performance in this study. The LSLs rated themselves within a range of 20% to 45%; conversely, the MSLs rated themselves within a range of 50% to 80% usually.

Most of the LSLs were not satisfied with their listening abilities. Some of them rated themselves at only 20%, which was true because they did not score anything in the listening tests. Many of the MSLs, however, rated themselves as quite good, which did indeed reflect their performance. To illustrate their perceptions, some examples are given below:

Imran (LSL): Still in root level, need more and more practice as its not mother tongue.

Naila (LSL): I think I am in lower level compared to a GL, may be up to 20%.

Some of the MSL students also made over or under estimations of their abilities. Two of the LSLs and one of the MSLs over-rated themselves. To illustrate over-rate, some examples are given below:

Piyal (LSL): Compared to a GL, my ability is 65%.

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[9] A concept of a 'good' listener differs from person to person, nothing objective. Some of them considered a native listener as a GL, whilst some of them thought of a local listener, e.g., teachers, successful classmates.

Hasib (MSL): A class friend who is much better in listening though some other skills might be less than me, because he watches movies from childhood, compared to him if he is 90/95%, I is 75/80%.

An example of under-rating is given below:

Anny (MSL): After all, I am at medium level.

Perceived improvement

Two thirds of the students perceived that their listening skills were better than before, and they articulated the probable reasons behind their improvement. Again, their perceptions revealed differences between the two groups. More LSLs, almost 87%, perceived that their abilities had improved from before, because they were now exposed to listening to English at the undergraduate level. Some of the students found there was a slight improvement on before. This was the case mostly with the LSLs who were not satisfied with their listening abilities and their progress with this. The LSLs (e.g., Ashim, Naila, Sultana) thought they had some listening abilities, compared to almost nothing as was the case before ; for some before it was just zero percent (e.g., Mahfuz, Ruhan). Mahin also made it clear that he had improved to some extent with pronunciation, from listening to teachers' lectures, and watching movies. This was because, as some of the students stated, before starting their BA in English, they had very limited experience of listening to English other than during the lectures in their English classes, and even these lectures were not all in English all the time. To illustrate their perceptions, some examples are given below:

Mahin (LSL): A bit improvement with pronunciation (from watching movies & teachers' lectures)

Mahfuz (LSL): I can remember that in my first class in Listening, I did not understand anything. Now feel that I can understand many words. If I can continue practising regularly, I hope I can do better.

Conversely, more than 50% of the MSLs perceived they had improved on before and this was because of maturity, more exposure, and more effort. Some of the MSLs assessed

their improvement by mentioning their limited use of subtitles for movies or for the lyrics of songs. Another important reason for improving on before was more exposure to listening, by attending classes all in English and also by practising with friends in English. This was the case with MSLs, most of whom had already been exposed to English listening from childhood through watching English movies, TV series or listening to English songs. To illustrate their perceptions, some examples are given below:

> Shahin (LSL): Developing than before e.g., can catch some casual English used in movies. Previously I needed subtitle in movies, which also created problem, but not now, can read subtitle and can listen too.

> Shuvon (MSL): Of course, much improvement than before. It happened that at college level we had limited scope to listening in English except in two subjects in English. But now, I have to listen to almost all lectures in English.
> Simul (MSL): Habit of listening songs and movies from childhood (class6/7)…Now excelling more maybe because of maturity, more listening songs and watching movie now…Previously I needed to download lyrics first; now if not too speedy I understand lyrics, then check with lyric and its almost matched.

Self-efficacy

About one third of the students, 5 MSLS and 4 LSLs, believed they could do better in future. The LSLs were improving slowly from almost the lowest level of listening ability and they felt that if they practised more they could do better in the future. In contrast, the MSLs had the confidence that they were improving and were now at a satisfactory or good level, and that if they continued to practise they would do even better in the future. To illustrate their perceptions:

> Mahbub (LSL): I don't lose heart; I can if I try well. If I listen whilst reading from book I can understand, thus became confident (following which part is stressed which not).

> Anny (MSL): After entering the department I found my English is getting better as I am mixing and discussing with other friends. Now it is improving; like before I needed subtitle to watch movie, now I can understand without subtitle. Sometimes face problems but improving and I feel I need to do better continuously.

6.2.1.2.4 Problems during listening

The students' verbal data also revealed a number of problems students faced whilst listening; these were comprehension problems. The students reported 17 kinds of problems (13 in perceptual processing, 2 in parsing, and 2 in utilisation phases), which were identified in three phases of listening comprehension as defined by Anderson (2010): the perceptual processing, the parsing and the utilisation phases. Data showed that the students were more aware of the problems related to perception; 13 problems were reported during the perceptual processing phase, whilst only two problems were reported in each of the remaining phases of parsing and utilisation. Unlike existing studies (e.g., Goh 2000), problems were frequently reported by the LSLs, which show that the LSLs were more aware of the problems, particularly in the perceptual processing phase. However, a greater number of problems were reported by the MSL group, four problems by the MSLs alone. Both groups frequently reported at least one problem in each phase of comprehension. Figure 6.5 shows the groups' differences over the three phases.
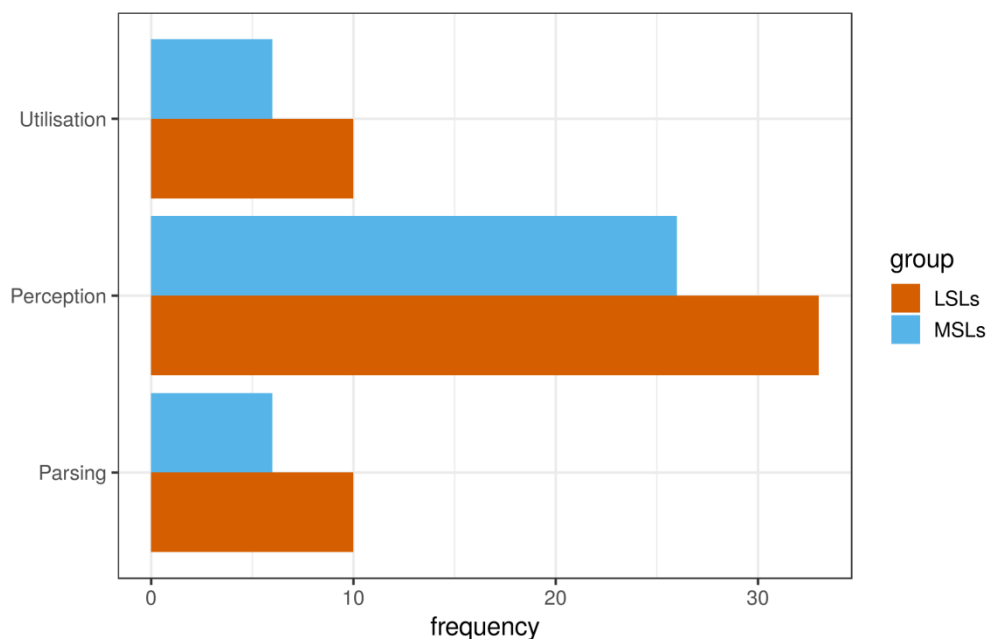
Figure 6.5. Group differences in the three phases of listening comprehension

Frequently reported problems

Seven problems in the three comprehension phases were reported most frequently by the students, six of them were in the perception phase, one in the parsing phase, and one in the utilisation phase. Table 6.4 exhibits them below.

Table 6.4

Frequently reported problems

Comprehension Phases	Comprehension Problems	LSLs	MSLs
Perceptual processing	Missing next part or losing track whilst stuck on the previous part	6	8
	Cannot keep concentrating	5	-
	Cannot recognise sounds of words known already in written form	5	-
	Writing down the answers, taking notes, using subtitles, which interrupts listening	7	-
	Missing the start due to anxiety or unpreparedness	5	-
Parsing	Forgetting what was heard already	8	5
Utilisation	Understanding individual words, but can't get overall meaning or intended message	7	5

The LSLs frequently reported seven problems and the MSLs reported three, in the three phases of listening comprehension. Both the MSLs' and the LSLs' reported at least one problem frequently in each of the phases: missing the next part or losing track whilst stuck on the previous part (perception), forgetting what was heard already (parsing), and

understanding individual words but not the overall or intended meaning (utilisation). Besides, the LSLs reported four more frequent problems in the perception phase.

Perceptual processing phase

Both the MSLs' and the LSLs' most common problem during the perceptual processing phase was: missing next part or losing track whilst stuck on the previous part. Data show that the LSL group had more perceptual problems, as frequently reported by them, and this highlighted some unique characteristics of the LSLs. The LSLs often lost their concentration, maybe due to incomprehension or out of anxiety. This problem might be related to their other two problems of not being able to concentrate on two or more things at a time and being anxious, and thus missing the start or other parts as well. The LSLs' problem of not recognising the sound of words known already in written form might indicate a gap between their interaction with written English and spoken English, as these students seemed to be better exposed to written English. Frequently reported problems are described below.

Missing next part or losing track whilst stuck on the previous part

This problem was reported frequently by both groups. Students often found they missed the next part(s) since they were stuck on some unfamiliar or unknown words or ideas, or did not understand the previous text. However, it was the LSLs who often lost track, as they found it hard to redirect their attention and to track where the listening text had moved on to.

> Ruhan (LSL): … Then I miss many words, when I give attention to one word, a key word in the question. Whilst giving attention for this key word, other words and sentences are gone, I cannot grasp them. At this point, a tension works in me if I can answer the following questions.

> Jebun (MSL): Of course sometimes thinks, GL never gets stuck but she does. She thinks she needs to practise more and do better not to get stuck if something she doesn't understand or misses.

Cannot keep concentrating

This problem was frequently reported by the LSLs. They often found themselves not

listening, but rather distracted.

> Naila (LSL): Often my concentration breaks, I cannot give concentration. Just thinking what are they saying… cannot give full concentration to listening, sometimes I get distracted by some other thoughts.

> Anny (MSL): Sometimes after listening for a certain period of time, concentration breaks, so miss some words or parts.

Cannot recognise sounds of words known already in written form

This problem was reported by 5 LSLs, compared to only one MSL. The LSLs found that they failed to catch some word(s) that they knew in written form. It seemed this was due to how the students pronounced these words: they pronounced them differently and wrongly, or simply they were not familiar with the pronunciation of those words. It suggests that the students were better exposed to reading and writing than listening and speaking. To illustrate their perceptions, some examples are given below:

> Ruhan (LSL):I miss sometimes because for example, for not understanding their pronunciation style. A word I pronounce in a way, they pronounce in different way. Now I can understand this problem that for this I miss to catch many words.

> Mahfuz (LSL): Again, sometimes maybe I know the word but they pronounce it differently, not like mine, so it needs practice.

Doing more than one thing at a time interrupts listening

As reported frequently by the LSLs, this problem occurred when they needed to write down answers, take notes, or use subtitles etc., whilst listening to or watching movies. They could not concentrate on two or more things at a time. To illustrate their perceptions, some excerpts of what they said are given below:

> Mahfuz (LSL): …when looking at subtitle, I miss to hear what is spoken, so listening hampers.

> Simu (MSL): I can't answer whilst listening, it hampers listening… memorise and write down later in break or at the end.

Missing the start due to anxiety or abrupt beginning

This problem was frequently reported by LSLs. For instance, Imran faced problems with catching the start, sometimes due to a sudden beginning:

Imran (LSL): Sudden beginning, or starting after pause causes problem for me, I can't catch first few words.

Parsing and Utilisation Phases

With regards to the frequent mentions of problems in the parsing and utilisation phases, although both groups frequently reported the same problems, the nature of the same problems differed for the two groups. Forgetting the words heard (parsing) was reported by more than 50% (8) of the LSLs and as the data revealed, they forgot just after hearing the words. In the case of understanding individual words but not getting the overall or intended meaning (utilisation), I coded both under overall meaning or intended meaning. Their verbal reports show that whilst the LSL group often failed to perceive even the overall meaning of the text, the MSLs struggled more with obtaining the intended meaning of the text. The groups also differed in the amount of words they understood, as perceived by a number of the students; the MSLs could understand almost all the words, whereas the LSLs could understand at best 50% of the spoken words. The utilisation phase thus revealed a difference between the two groups; the LSLs could not understand more than 50% words and often could not get the overall meaning from what they heard. The vocabulary size is an issue that might cause a number of problems and restrict the LSLs' automatic processing and even use of strategies as indicated in chapter 5 as well.

Forgot what was heard already

This problem was reported frequently by both the groups. They thought they could understand the words whilst listening, but only the next moment when they attended to the

next part or they were about to answer or talk about it, they would forget what they had

heard. To illustrate their perceptions, some examples are given below:

> Naila (LSL): Again, sometimes I hear and understand some words but … when asked, sometimes I can remember 1/ 2 words, but cannot complete the whole sentence, I forget.
>
> Nahid (MSL): …in unknown topic even if I hear I forget quickly and can't incorporate later.

Can understand individual words, but can't get the overall message or intended meaning

This problem in the utilisation phase was also frequently reported by both groups. They

believed they understood almost all the words, however could not understand the overall

message; therefore the problem was with the global understanding of a listening text. To

illustrate their perceptions, some excerpts of what they said are given below:

> Mahbub (LSL): I think I understand almost all (words), but can't interpret or translate in mother tongue swiftly, can't process them quickly.
>
> Nahid (MSL): in unknown topic even if I hear all I forget quickly and can't incorporate later.

The excerpts included above reveal how the nature of the same problem differs

between a LSLs and a MSL. Mahbub forgot what he heard since he could not translate or

process the meaning, whereas Nahid could understand almost all the words, however could

not incorporate them later into use, since he could not parse them and transfer them from his

short term memory to his long term memory. It seems that Mahbub had problems with literal

understanding of many of the words he heard, whereas Nahid could perceive the literal

meaning of the words heard whilst listening, however he could not obtain the intended

meaning of the text maybe due to lack of appropriate prior knowledge.

Less frequently reported problems

Amongst the less frequently reported problems, the problems reported by a few MSLs only were losing attention due to concentrating too hard (2), losing attention to details (2), attention fluctuating due to shifts in tone or themes (1), could not identify the unfamiliar words spoken (1). Some of the MSLs seemed to be aware of these problems. However, the LSLs' not reporting these problems does not mean they did not face these problems; rather, they just might not be aware of facing these problems. Conversely, only two of the LSLs reported that incomprehension caused a break in comprehension for them. One of the problems in utilisation reported slightly more by the LSLs, they were not able to use strategies they planned for may be due to being occupied on word-level, or anxiety.

6.2.1.2.5 Obstacles to listening development

This section presents the individual characteristics and the social issues that work as obstacles to listening development amongst the Bangladeshi EFL learners. As reported by the students, two types of obstacles to listening development were reported: one's own personality and the social environment. The LSLs reported these as obstacles twice as often (LSL 14) as their counterparts (MSL 7). Whilst personality factor hindered the LSLs (10) frequently, social environment was frequently mentioned by the MSLs (6). Blaming own personality amongst the LSLs can be due to their lack of motivation, being an introvert or simply because they blame themselves. It is obvious from the findings that although both groups found an unsupportive social environment to be an obstacle, to two thirds of the LSLs one's own personality was an obstacle to listening development.

One's own personality

More than one quarter of the students, 10 LSLs and 1 MSL, commented on their listening experiences, which indirectly revealed that their own personalities hindered them in their listening development. Surprisingly, almost all of them were LSLs. It seemed that the LSLs were too concerned with their own 'low' personality, often arising from negative self-concept, lack of motivation and frustration.

Some of them felt they became nervous and fearful when attending to listening. Some examples are given below:

> Alim (LSL): I feel hesitant at the beginning of a listening and consequently become nervous; as a result if I even know the techniques I cannot use them… the concentration breaks
>
> Mahbub (LSL): …sometimes frustration… I sometimes try to ignore listening module and think of balance doing better in other modules.
>
> Some of them were not aware of other ways or strategies s/he or a GL could employ.

Some students thought they used strategies, however felt frustrated that their listening skills were still not improving. To illustrate their perceptions, some examples are given below:

> Shahin (LSL): Never think of practising in different ways for improving listening.
>
> Lovely (LSL): I don't think I use all those techniques but I am also not aware of what these are. I know there is a difference between me and a GL but don't know what makes this difference.

The social environment

One third of the students, 4 LSLs and 6 MSLs, commented that the social environment was a hindrance for them in developing their listening abilities. The EFL context in Bangladesh provided almost no scope for using English and for listening to others in English in other than an educational domain. Moreover, the existing English educational system did not provide opportunities to listen (except to random teachers' lectures) in school and at the college level. A number of students perceived that there was less scope to practise listening

and speaking in their earlier educational lives, for example at school and in college; only at the tertiary level did they have access to practising English and to listening to teachers and their peers in English in an academic environment. The socio-cultural environment in Bangladesh did not encourage practising English publicly and positively, therefore students felt shy about practising in public, even with groups of peers. The lack of logistical and technical support was also reported by a few of the LSLs as a hindrance to their listening development. To illustrate their perceptions, some examples are given below:

> Arif (MSL): Sometimes speak with friends in department, but outside department people don't take positively, as our mother tongue is Bangla.
>
> Naila (LSL): Teacher gave us 10 movies to watch at home as an assignment, but I stay in a mess and I don't have laptop.

6.2.1.2.6 Learners' needs

These were needs the students explicitly commented on, not the needs that emerged from their listening problems and obstacles. These needs are grouped into five categories: more exposure and practice, practice in specific areas of listening skills, practice in metacognition, purpose of listening, and logistical and environmental support. A needs analysis revealed that both the LSL and MSL groups were much aware of their needs and the awareness was considerably higher amongst the MSLs (MSLs 64, LSLs 51). Almost all the students thought they needed more practice and more exposure to the target language to enhance their listening competence in that language, irrespective of their previous listening experiences. Many of them commented on particular areas of listening skill, for example, vocabulary, pronunciation and accent. Figure 6.6 shows the groups' differences in broad categories of learner needs.
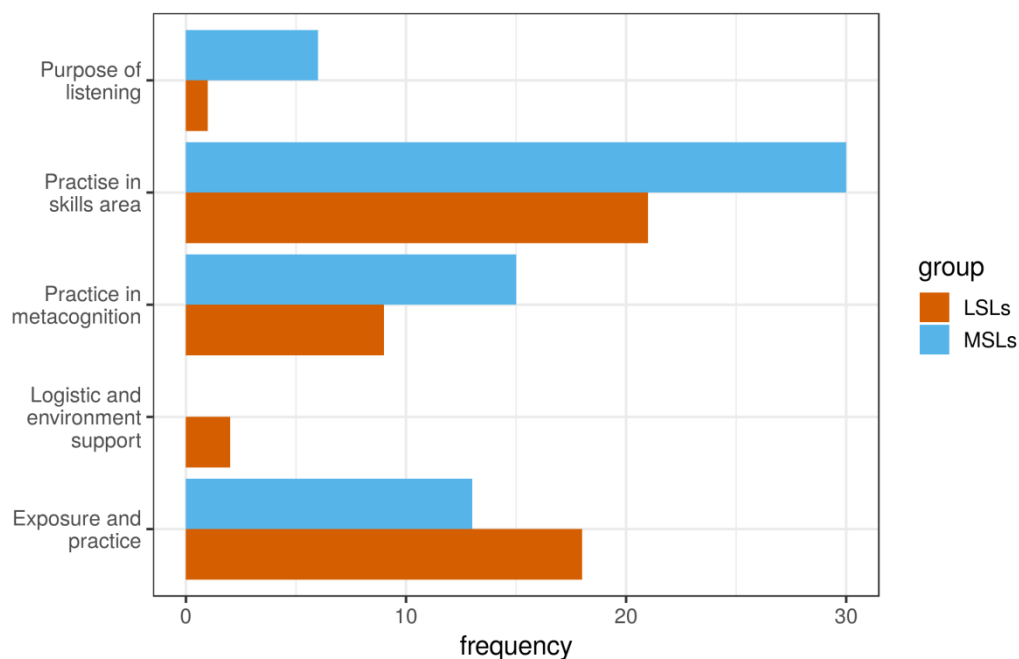
Figure 6.6. Group differences in learner needs

Frequently reported learner needs

Some needs were frequently mentioned by both the groups (see Table 6.5 below). Frequently mentioned by the LSLs were: need more classroom practice (more exposure and practice), practice with listening exercises (practice in specific areas of listening skills). In contrast, practice with different topics and input (practice in specific areas of listening skills) and to enhance strategic knowledge (practice in metacognition) were frequently mentioned by the MSLs.

Table 6.5

Frequently reported learner needs

Frequently reported needs		LSLs	MSLs
More exposure and practice	Need more exposure and practice continuously and repeatedly	10	8
	Need more classroom practice	5	-
Practice in specific areas of listening skills	A good repertoire of vocabulary	7	10

	More practice with pronunciation and accent	8	10
	Practice with different types of topics and input	-	5
Practice in metacognition	Practice with listening exercises	5	-
	Practice with someone competent in English or a native speaker	5	6
	To enhance strategic knowledge	-	5

More exposure and practice

Both groups felt that their listening practice was not enough and needed more exposure, irrespective of their previous listening experience. Whilst many of the MSLs, being self-motivated, had been exposed to English listening from an early stage in life, most of the LSLs appeared not to have been exposed to spoken English until their undergraduate level of study, except very limited exposure only when their teachers and peers read out loud in English classes at school and college. Moreover, more classroom practice seemed to be important to mostly the LSLs, whilst more MSLs emphasised that continuous practice was important at home or outside of class. The probable reason for the LSLs' emphasis on more classroom practice could be that they were more dependent on classroom practice and were not aware of how to practise on their own, unlike the autonomous MSL learners. Excerpts from the students' reports on these two frequently mentioned needs:

Maha (LSL): I think I need to listen more as I didn't have this habit from childhood or before.

Zisan (MSL): Since I am in Bangladesh, so I have to speak in Bangla and listen to Bangla almost always. Therefore, if I want to speak in and listen to English but I am not getting that much scope. I feel if I could live in a situation/context where I could listen in English most of the time…I would get more exposure, so more improvement would be possible.

Practice in specific areas of listening

Practice with vocabulary, pronunciation and accent were commonly mentioned by the groups and in almost a similar vein; however, they differed in their level of vocabulary and pronunciation skills. For instance, the MSLs reported that they needed to practise with different Englishes, like UK English, American English, and Australian English etc., as they were aware of different accents. The LSLs, however, reported that they needed to practise with listening exercises; first with the local accent and then with native English. The possible reasons for this could be that firstly, they were mainly familiar with such types of listening practice because many of them were already exposed to listening exercises in listening classes; and secondly, they might only be interested in doing better in a listening test. By contrast, the MSLs seem to be aware of different types of listening input, like conversation, lectures, audio and video etc., and of various different topics and themes of their interest and from which they could gain knowledge, whilst also learning to listen. Examples include:

> Mahfuz (LSL): I think it's better if we start with normal, I mean, Bengali English as we understand this much (local speaker's English),…because it's difficult for us to understand UK English first…
>
> Alim (LSL): Continuing activities already doing and practice from Cambridge IELTS books.
>
> Nahid (MSL): I tried outside classroom, but I think I need to try more, more with different accents and pronunciation, with different types of topics…need to listen to new topics more and more.

Practice in metacognition

The students reported on the need for practice in metacognition, and both the groups felt the need to practise with somebody competent in English or a native speaker; however, the MSL group also frequently reported the need to enhance strategic knowledge. For example:

> Imran (LSL): Feel need of a native or good speaker to communicate with them, who will check and find out his mistakes/errors.

Hasib (MSL): I think I need to be more strategic in listening mm…find out the ways to listen better and for practising listening.

Less frequently reported needs

Only few students reported less frequently on different needs including 2 LSLs' need of access to logistical support and a congenial environment.

Although both groups reported that they had difficulties with speedy speech in the obstacles in listening comprehension section, 3 MSLs reported that they would practise to address this issue in order to cope with speed. For example:

Jebun: I faced problem with speed, I needed more practice with speedy speech or dialogue.

Few from both groups reported that they needed opportunities to check their comprehension and enhance their listening, with 3 MSLs reporting that they needed to practise more not getting stuck.

Imran (LSL): Feel need of a native speaker to communicate with them, who will check and find out his mistakes/errors… Need to check how much I take from a conference, need to find out the problems and how to overcome those.

Jebun (MSL): Of course sometimes thinks, GL never get stuck but I do. I think I need to practise more to do better and not to get stuck even if I don't understand or miss something.

A few students from both groups reported that they needed something both educational and recreational. However, 3 MSLs, yet to start their listening classes, felt that they would do better if they had an academic activity which would bind them in a routine to practise listening regularly:

Arif (MSL): Like to be bound with any course which forces me to work or practise, and this regularity would make it effective for me….maybe a course on listening can help identify all the possible techniques for listening comprehension.

Two students (LSLs), however, explicitly expressed that their education had been restricted due to a lack of logistical supports and a congenial environment:

Naila (LSL): Teacher has asked us to watch 10 movies, but I stay in a mess (privately managed students' accommodation), so without laptop I cannot watch them at mess.

They did not have a laptop of their own and lived in a private student accommodation with other friends in a room, with also no scope to watch television. Therefore, there is a financial issue which also affects a few of the LSLs' listening development.

6.2.2 Task Knowledge

Task knowledge is the knowledge of what learners know about the purpose, demands and nature of tasks at hand (Wenden, 1991) and also "knowing about features of different types of spoken texts, such as the respective discourse structures, grammatical forms, and phonological features of words and phrases as they appear in connected speech" (Vandergrift, & Goh, 2012, p. 86). Verbal data revealed four types of task knowledge: learners' knowledge of factors affecting listening comprehension, input useful for developing listening, practices for developing listening, and the nature of L2 listening. Task knowledge revealed differences between the LSLs and the MSLs; the MSLs showed considerably greater awareness of task knowledge (LSLs 204, MSLs 247), especially in input useful for listening development (LSLs 20, MSLs 39) and nature of L2 listening (LSLs 8, MSLs 16) (see Figure 6.7).
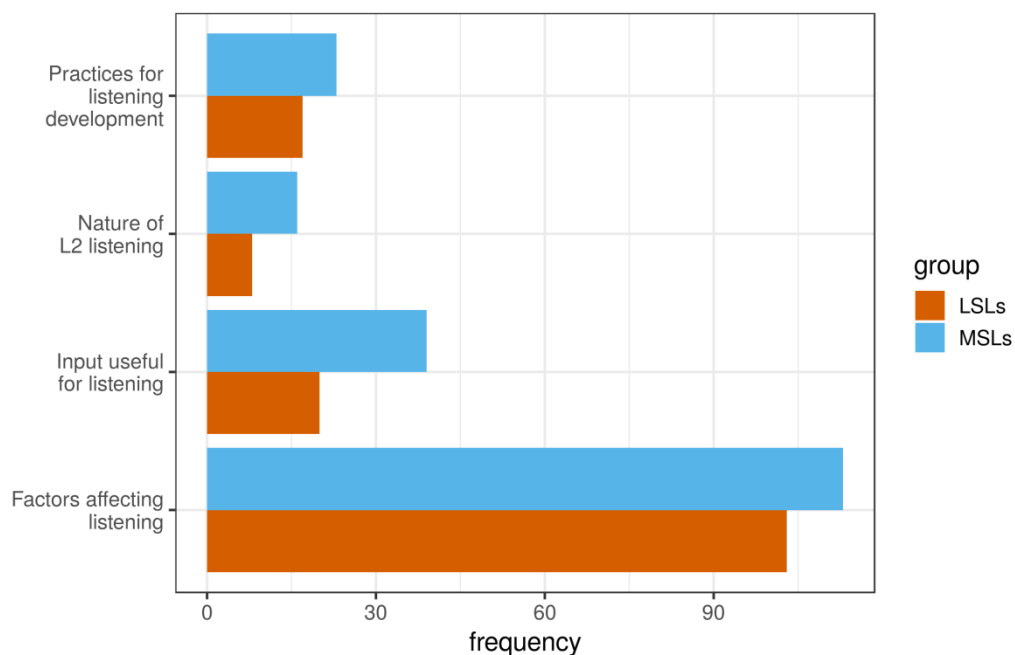
Figure 6.7. Group differences in the subcategories of task knowledge

6.2.2.1 Factors affecting listening comprehension

The students reported on different factors that affected their listening, positively or negatively. The inhibiting factors were not problems listeners face during listening as described in section 6.2.1.2.4. Whilst problems during listening were specific instances where listeners' comprehension was obstructed, inhibiting factors here refer to the reasons for those problems (Goh, 1999). Factors can be grouped into five types associated with five external and internal factors involved in listening, as identified by Rubin (1994) and Goh (1999). As the verbal reports in my study reveal, the 23 factors identified have been grouped into these five types: text, task, listener, speaker, and the environment and EFL context. Factors revealed group differences; whereas the MSL group reported considerably more on factors associated with text, speaker, and the environment and EFL context, the LSLs reported more on listener and task factors. It seems that the LSLs basically reported on listeners' physical and psychological factors such as stress, anxiety, fatigue, and their problems with task, for example, problems with understanding questions and its formats, and with performing two or

more things at a time. Figure 6.8 shows the groups' differences in terms of the types of factors.
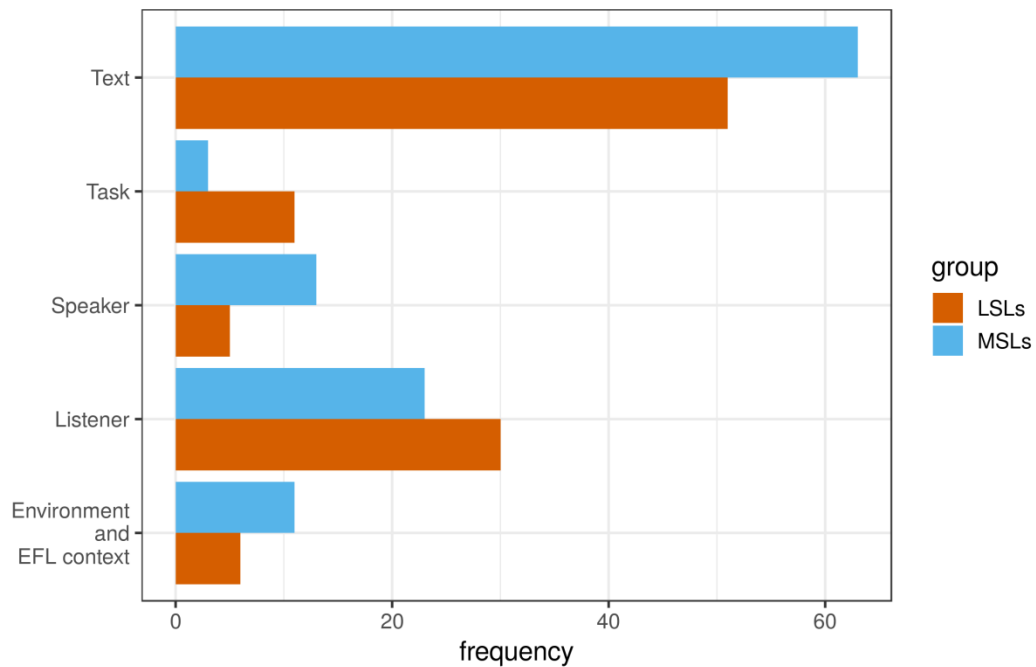
Figure 6.8. Group differences in their awareness of five factor types affecting listening

Frequently reported factors

Many text factors and listener factors were reported frequently by both the groups; at least one-third of the students from each group mentioned these factors (see Table 6.6 below). However, a closer look at the data revealed the MSLs' and the LSLs' approaches to these factors, and if these factors affected them positively or negatively. Whilst the LSLs frequently mentioned factors such as abrupt beginnings (text), physical and psychological conditions (listener), and doing more things together (task), the MSLs frequently mentioned accent (speaker), physical conditions and the EFL context (the Environment and EFL context).

Table 6.6

Frequently reported factors affecting listening

Factor group	Frequently reported factors	LSLs	MSLs
Text	Speech Rate	12	9
	Vocabulary	11	9
	Subtitles and lyrics	6	14
	Types of input	6	13
	Visual support	5	7
	Prosodic features	5	5
	Abrupt beginnings	5	-
Speaker	Accent	-	7
Listener	Pronunciation skills	12	13
	Topic and prior knowledge and experience	7	8
	Physical and psychological states, e.g., anxiety, fatigue	5	-
Task	Doing two or more tasks at a time	7	-
Environment and EFL context	Physical conditions such as noise, acoustics, timing, and environment etc.	-	5
	EFL context	-	6

Pronunciation, Speech rate, and Vocabulary

These were the most frequently reported factors by both the groups. These are three most frequently reported factors by the students: pronunciation (25), speed (21), and vocabulary (20). The groups seemed not to differ in terms of their frequency of mentions of pronunciation (LSLs 12, MSLs 13), speech rate (LSLs 12, MSLs 9) and vocabulary (LSLs 11, MSLs 9); although reporting on speech rate was slightly higher amongst the LSLs. The students reported how knowledge gap of these inhibit their listening or expertise in these facilitated listening. Despite similar frequencies of mentions of these factors, the students' reports showed differences in their perceptions; these are discussed below.

Pronunciation

The students explained how pronunciation affected their listening. Some of them perceived that the similar pronunciation of different words created a problem. When the spoken form did not correspond to the graphic representation, this caused a problem, as Bangladeshi EFL students are exposed to written form mainly; therefore although they knew the words in written form, could not identify them when pronounced in speech. Excerpts are given below.

> Shabab (MSL): …a GL learns pronunciation of all words individually. If only I know the right pronunciation I will be able to understand what's being said….so if somebody pronounces 'vigour' [unlike 'rifle'] right way the word will become unknown to me, a different word.

> Shahin (LSL): Our English is different from English English… some words don't match with their spellings.

> Imran (LSL): Problems with pronunciation of similar words… I missed but friends can…due to pronunciation, says 'good' instead of 'goat'.

Speech rate

More than two thirds of the students found that the rate of speech affected their listening. For 12 LSLs and 9 MSLs speed was a major problem. However, 'speed' was defined differently by the LSLs and MSLs; even normal conversation or speech delivery seemed to be speedy for the LSLs, whereas the MSLs considered (rap) songs or other such speedy dialogues etc. as speedy. Excerpts are below.

> Mahfuz (LSL): …Goes fast, yes it would be better if goes bit slower. For speed, some words become incomprehensible.
> Maha (LSL): Don't listen to song much, songs go fast, so sometimes problem to catch.

> Kabir (MSL): Listen to lots of songs; if rap songs go fast, I need to download the lyric to solve the problem of incomprehension…

Vocabulary

Two thirds of the students (11 LSLs and 9 MSLs) reported that vocabulary was an important influential factor in listening. However, the LSLs seemed to be more affected by the lack of appropriate knowledge of vocabulary, as many of them could hardly make use of 50% of the vocabulary covered in a listening text; they even reported that they could not understand the questions properly. There could be two possible reasons – knowledge of vocabulary and knowledge of grammar. Vocabulary was an important factor because unless they knew even the literal meaning of words, they could not process the text for overall or intended meaning. Excerpts are below.

> Mahfuz (LSL): Sometimes, a new word is a problem. In the test, almost 50% words were unknown to me. In British English, many words are new…
>
> Shuvon (MSL): I know my vocabulary level is not that high…I cannot retain all words, sometimes whilst catching some words, some other words get missed. So, I needed to concentrate more so that I do not miss, try to keep listening, and later on prepare a summary.

Visual support, knowledge of prosodic features, Topic and prior knowledge

Again, these are the factors on which both the groups reported in similar frequency. However, their experiences with these factors were different. Whilst the LSLs reported that having knowledge of prosodic features was important in understanding a listening text, which meant they needed to enrich their knowledge of prosodic features, on the other hand the MSLs reported that they used their knowledge of prosodic features to process the incoming text. In the cases of visual support and prior knowledge, again the MSLs seemed to report instances of these factors affecting their listening which were specific, deep and critical. Conversely, the LSLs used visuals at a surface level. For example, it seemed they sometimes solely depended on visuals as they hardly understood an oral text, or they referred to their use of prior knowledge and experience, for example if they had listened to the song once before.

The transfer of similar knowledge or experience from an academic situation or elsewhere often did not take place. Excerpts are below:

> Imran (LSL): …because of some person's intonation pattern, I can understand half, cannot another half.

> Sultana (LSL): …understand because I heard the song before…

> Shahim (MSL): Actually, in some cases, I answer from my past knowledge of a subject, because I have an idea of it already…Not because my listening level is better than my friend.

Subtitles and lyrics and types of input

These factors were reported more than twice as often by the MSLs. In the case of using subtitles and lyrics, LSLs usually used subtitles to watch movies, because without them they faced problems. The MSLs, however, used subtitles only when they missed some words or failed to understand something. The same happened with lyrics whilst listening to songs. A MSL reported that not using subtitles actually helped develop listening and skills of assumption. For example:

> Piyal (LSL): …watch movies, use subtitle (helpful) whilst watching movies …without subtitles difficult to understand only from listening.

> Simul (MSL): Without subtitle, helps develop listening skills much, assumption skills.
> Mahin (LSL): My favourite is watching movie, no pressure just for entertainment.

> Shahin (LSL): Favourite class practice is listening to teachers' lectures, because it's slow and formal. I listen and take notes if necessary/ main points.

Abrupt beginnings, Physical and psychological states, Doing more than one task

These were frequently mentioned factors reported by the LSLs. Abrupt beginning was a factor that was reported on more frequently by the LSL group. However, the data revealed that what they meant by abrupt was not always clear-cut; rather, as they often missed the start of a listening they found the start abrupt. Examples are given below:

> Imran (LSL): Sudden beginning or starting after pause…causes problem.

Mahbub (LSL): In test, I feel nervous when it says 'once only'…

Mahin (LSL): But task completion (test) is an anxiety, creates pressure

Naila (LSL): If I want to write the answer or looking at the question, I miss listening.

Accent, Physical conditions and the EFL context

These are the factors frequently reported on by the MSLs. The MSLs were also aware of the physical conditions and the EFL context which affected listening.

Accent

Some MSLs felt they needed to practise the different accents of different nations, such as the UK, the USA, and Australia:

Kabir (MSL): UK and USA movie different in pronunciation, e.g., schedule, so sometimes need subtitle.

Jebun (MSL): I understand both British and American accent, still need more practice with different types of topics with different accents.

Physical factors such as noise, acoustics, and the environment

The MSLs showed their awareness of how the physical conditions of the environment affect listening.

Kabir (MSL): Sometimes problems of sound system, room etc.

Arif (MSL): …watch movie at night in solitude.

The EFL Context

The MSLs also frequently mentioned that the EFL context in Bangladesh was not conducive to practising listening and therefore to improvement.

Farah (MSL): From childhood, I like to listen to good pronunciation and try to speak in English at home. There is very little scope to listen and speak in English in school and college.

Arif (MSL): Sometimes speak with friends in department, but outside department, people don't take positively as mother tongue is Bangla.

Less frequently reported factors

Some less frequently reported factors also revealed some differences between the LSLs and the MSLs. Amongst them, the importance of the topic and interesting topics, and delivery of speech were reported on by only the MSLs, whereas knowledge of grammar, and understanding of question papers were reported on by only the LSLs, and memory mostly by the LSLs.

Important and interesting topics

Three MSLs commented that listening also depended on the importance of the topic and the person speaking.

> Kabir (MSL): … it also depends on if the topic interesting and if the man speaking important to me.

> Nahid (MSL): I am not comfortable with new topic… I like to listen on topics I feel interested at like geopolitics.

Delivery of speech

Four MSLs found that delivery of speech and tempo rate affected their listening.

> Shuvon (MSL): Ya, sometimes it happens, some teachers speak very fast, so can't catch all, again some teachers speak so slowly so miss to catch.

> Zisan (MSL): …sometime spoken half loudly half slowly… so catch all.

Memory

Memory capacity affected listening. According to some students, mostly the LSLs, an efficient memory could facilitate listening. Four students, 3 LSLs and one MSL, mentioned this. Examples include:

> Mahbub (LSL): …whilst listening to recording I forget what was said before… memory not good enough.

Hasib (MSL): Impressed by few friends' listening skills, Rakib can write down almost all teacher is saying, can …remember all from the lectures. I wonder what Rakib has possessed!

Knowledge of grammar and understanding questions

Three LSLs perceived that knowledge of grammar is important for listening, and understanding questions also influenced their listening. They found multiple choice questions easier to follow and answer.

Sultana (LSL): Sometimes even don't understand the question…

Alim (LSL): … I check from question paper … if it's fill in the gaps I look for such words in Listening.

6.2.2.2 Input useful for developing listening

The students' awareness of listening input that was useful for better listening comprehension and its development was reflected in their preferences for listening to certain types of input like movies or songs or listening exercises, etc. Their awareness of 10 types of input useful for listening development revealed considerable differences between the groups. Six out of 10 were reported by both groups, although at variable frequencies; however, the remaining four were reported by the MSLs alone: these were talks/public lectures, talk shows, documentaries, and audio. The LSLs definitely used audio for listening practice; however, they were not aware how audio can be a useful input. The MSLs also reported songs as a useful input. More of the LSLs did listening exercises maybe because it was done in the class, conversely a few of the MSLs reported it and reasoned out that it created a sense of competition in the class and a chance to assess themselves. The LSLs seemed to be less aware of other types of input the MSLs used and which could be practised for their variety of modes and usefulness.

Frequently reported input

Movies and TV series were frequently mentioned by both of the groups, songs and teachers' lectures by the MSLs only, and listening exercises by the LSLs only (Table 6.7).

Table 6.7

Frequently reported input

Input useful for listening development	LSLs	MSLs
Movies and TV series (for visuals, subtitles and entertainment)	6	9
Songs (portable and entertaining)	-	8
Listening exercises (for competing, assessing, and for specific listening skills)	6	-
Teachers' lectures (for input and motivation)	-	6

Movies and TV series

Half of the students (6 LSLs and 9 MSLs) reported that they loved to watch movies, for their visuals, subtitles, and entertainment. Examples of comments include:

Marzan (LSL): I like watching movies… I follow how they pronounce, how they express their emotions facial expressions and gestures… how they speak and behave in formal and informal situations. I follow their expressions and try to practise myself.

Shahim (MSL): yes, reason behind watching movies…like I heard something but it meant something else and I can get it from their body language and expressions…

Songs and Teachers' lectures

These types of input were frequently mentioned by the MSLs. Songs were included for their portability and for entertainment. Teachers' lectures were thought to be motivating, informative, and easy to understand because they were formal. Excerpts of comments include:

Jebun (MSL): Listen songs more because songs are difficult to catch, some words are said differently and in complex way, so if I can understand songs understanding others would be easier.

Simul (MSL): Favourite songs, listen daily anytime anywhere, because it's convenient/portable. Whilst movie needs time, space, situation, concentration, visuals.

Hasib (MSL): Feel motivated by teachers; some are role models (both in school and in university), follow their lectures very carefully and with interest... also like note taking in the class.

Listening exercises

The LSLs reported that they liked doing listening exercises, mostly in the classroom. Their awareness of these types of listening practice could be explained by the fact that they had almost completed the course on listening and speaking by the time interviews took place. Many of the MSLs were, however, due to start the listening module at that time. Although the LSLs frequently reported this input as useful, they were rarely able to comment on how useful it was. Very few of the MSLs also reported this input as useful. For example, for Farah, it was different type of listening which needed to be practised to find answers like in the IELTS and be assessed on. Excerpts are below.

Sultana (LSL): …Listening to a man speaking in audio recording…when it stops, one of us will be asked and s/he has to tell what s/he listens. I like this activity because I need to be aware and it's also a practise of pronunciation.

Shimu (MSL): …Different activities are done in class, like we are shown video of conversation, some movie excerpts, and English songs…it's like a competition in the class.

Farah (MSL): I do not think they (peers) practise listening seriously… they listen to songs or watch movies, but do not do like me i.e., by identifying answers (doing listening exercises)… which is very useful.

Less frequently reported input

Other input useful for listening development was mentioned less frequently by the students. However, input like talks/public lectures, talk shows, documentaries, and audio only were mentioned by only the MSLs, although by only a few.

Two of the MSLs found talks/ public lectures both inspirational and informative:

Shabab (MSL): Besides talks, I listen to lectures, by downloading them. Very recently, I listened to two lectures … and feel inspired very much. Their lectures (in English) are very inspirational.

Two of the MSLs commented on watching documentaries on English news channels, saying that these were informative, and that the English used was standard and clear.

Zisan (MSL): BBC National Geography or Discovery channels…I love to watch documentaries they air. I think these are very informative…this can broaden my knowledge. Besides, their English is standard.

Two of the MSLs commented on their practice with audio only:

Nahid (MSL): I like listening to BBC radio… it demands full concentration, I need to listen very attentively and carefully so I don't miss anything… and thus I check how much I can listen and comprehend by listening alone.

6.2.2.3 Practices for listening development (mainly perception skills)

The students reported a number of practices that they did to develop their listening. The students reported five ways that were employed by them to practise listening. The MSLs reported on slightly more often, although the difference is almost negligible, the practices they usually did to develop listening. However, frequent listening was the way of practicing reported on more by the MSL group, whereas practising listening exercises was mentioned frequently by the LSL group. Practising pronunciation was slightly more often mentioned by the MSLs, and both the groups practised improving their vocabulary for better listening comprehension. Practising prosodic features was less frequently mentioned and mostly by the MSLs.

Frequently reported practices

As seen in Table 6.8, practices for developing listening, and practising pronunciation and different accents were reported frequently by both groups; however, practising with listening exercises was mentioned frequently by the LSLs, whilst frequent listening was mentioned often by the MSLs.

Table 6.8

Frequently reported practices for listening development

Practices for listening development	LSLs	MSLs
Practising pronunciation and different accents	5	8
Improving vocabulary and grammatical knowledge	5	5
Frequent listening	-	6
Practising with listening exercises	5	-

Practising pronunciation and different accents

Thirteen students, 5 LSLs and 8 MSLs, reported that they practised pronunciation and accents for better listening.

Mahin (LSL): Watch movies sometimes, check pronunciation from online dictionary… Try to practise elision 'fair & lovely' from teachers' lectures or movie

Nahid (MSL): He listens from interest e.g., Geopolitics is his area of interest, so listen extensively. He listens to international seminars on geopolitics where different experts talk - it's great because he can learn about the matter and the accents of people from different countries.

Improving vocabulary and grammatical knowledge

Ten students, 5 LSLs and 5 MSLs, practised improving their vocabulary:

Alim (LSL): If possible consult dictionary (Oxford /Cambridge) for pronunciation or words

Hasib (MSL): If unknown words are found note them down and consult later…for unknown words use dictionary or Google.

Frequent listening

Six MSLs reported that they practise by listening frequently, and regularly.

Arif (MSL): Often practise through BBC, FM radio news, watch movie at night in solitude, & listening commentary and practising speaking after listening

Nahid (MSL): Without trying (conscious) now a GL, because of listening years after years. Maybe it's subconscious motive to improve listening.

Practising with listening exercises

Five LSLs reported that they practised with listening exercises to improve their listening abilities.

Sultana (LSL): Sometimes listen to CD for listening and speaking practice…sometimes practise from that book; if I do it time and again, I will be able to understand the words or pronunciation…sometimes listen song together with friends and check how much we understood individually first.

6.2.2.4 The nature of L2 listening

The students reported on six issues related to the nature of second/foreign language listening; six issues were mentioned by the MSLs and five by the LSLs. Listening as an integrative skill, and an active skill was frequently mentioned by the MSLs; and the latter was only reported on by the MSLs. Other issues were less frequently mentioned by both of the groups. Interestingly, the LSLs were also similarly aware of the similarities and dissimilarities between skills, and between an L1 and an L2.

Frequently reported issues

Listening as an integrative and active skill is frequently mentioned by the MSLs. These two issues showed a considerable difference between the two groups' attitudes to listening as a skill, and thus shaped their approaches to the listening process. Listening as an integrative skill was mentioned by 5 MSLs, but only 1 LSL. The MSLs were more aware that listening is such a skill, the learning of which also facilitates learning of other skills. Again, the MSLs frequently reported on listening being an active skill, not a passive one, showing their awareness that any sort of listening whether unidirectional or interactional requires active participation on the listener's part to receive the incoming information and then to respond or at least react accordingly.

Table 6.9

Frequently reported aspects of the nature of L2 listening

The nature of L2 listening	LSLs	MSLs
Listening as an integrative skill	-	5
Listening is an active skill, not passive	-	5

Listening as an integrative skill

Five MSLs commented that listening was an integrative skill; that is listening helps in learning other skills, for example speaking.

> Jebun (MSL): One movie at least twice, first time just watching on, second time with full concentration on each and every word, for pronunciation…this also helps know how to speak.

> Kabir (MSL): Listening is related to speaking; if not a good listener, can't communicate better, and speak better.

Listening is active, not passive

Only 5 MSLs commented that listening was not a passive but rather an active skill, which required a response or at least a reaction from the listener.

> Shabab (MSL): …communication is something… when you listen you create a reaction and thus response, it is not merely hearing……. in communication listening comes first… if I can't listen to him/her accurately, my response will be different and incorrect…

Less frequently reported issues

These are dependence on other language skills, differences from listening to an L1, comparing with other language skills, similarities with skills acquisition of an L1. These are reported only by a few from each group. Interestingly, the LSLs were also similarly aware of the similarities and dissimilarities between skills, and between an L1 and an L2.

6.2.3 Strategy Knowledge

Strategy knowledge comprises strategies that assist listening comprehension, strategies that assist developing listening, and strategies that do not always work, as classified by Goh (1997). These strategies have been further identified and grouped into metacognitive, cognitive, and socio-affective strategies following the taxonomy adopted in Chapter 5 for tapping into students' task-based on-line strategies from think aloud data. However, a new strategy, 'listening by repeating' emerged from interview data, and which was defined as a cognitive strategy. All these strategies were mentioned by the students either in retrospect from their past experiences of using them and which were useful, or in speculation, where they thought certain types of strategies might be useful in certain situations. At the same time, the students were also aware of some of the strategies that did not always work. Both the LSL and MSL groups mentioned a number of strategies in each type of strategies, that is strategies assisting listening comprehension, strategies assisting listening development, and strategies that do not always work. However, verbal data revealed differences in their frequency of mentions of strategies and choice of certain types of strategies, either more or less than their counterparts.

The MSLs' frequency of mentions of strategies in total was almost twice that of their counterparts (MSL 128, LSL 69). It seems the MSLs were much more aware of the strategies that helped them develop their listening skills; they reported almost 4 times more than the LSLs (MSLs=27, LSLs=8). This also shows that the LSLs were comparatively more aware of strategies that assisted their comprehension during listening than the strategies that could develop their listening. Figure 6.9 shows the groups' differences in their awareness of the three types of strategy knowledge.
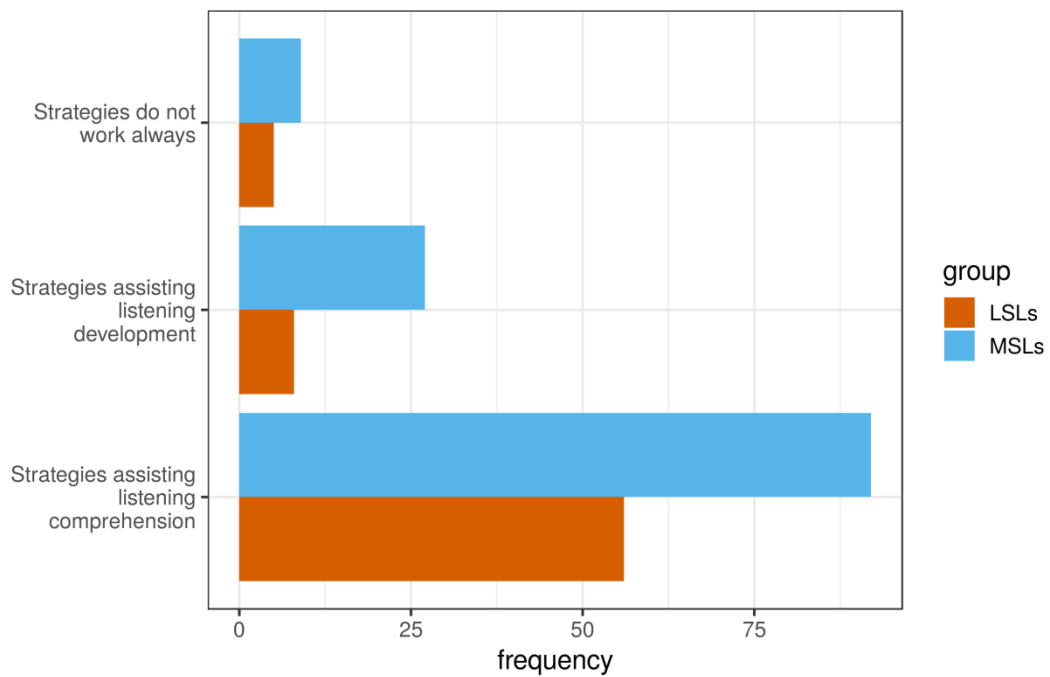
Figure 6.9. Group differences in their awareness of the three types of strategy knowledge

6.2.3.1 Strategies assisting listening comprehension

Both the groups reported that they used metacognitive, cognitive and socio-affective strategies for listening comprehension; however, the frequency of mentions of each of the strategy categories was much higher in the MSL group than in that of their counterparts. Figure 6.10 shows the groups' differences in the three categories of strategy that assist listening comprehension and Table 6.23 shows the differences in detail.
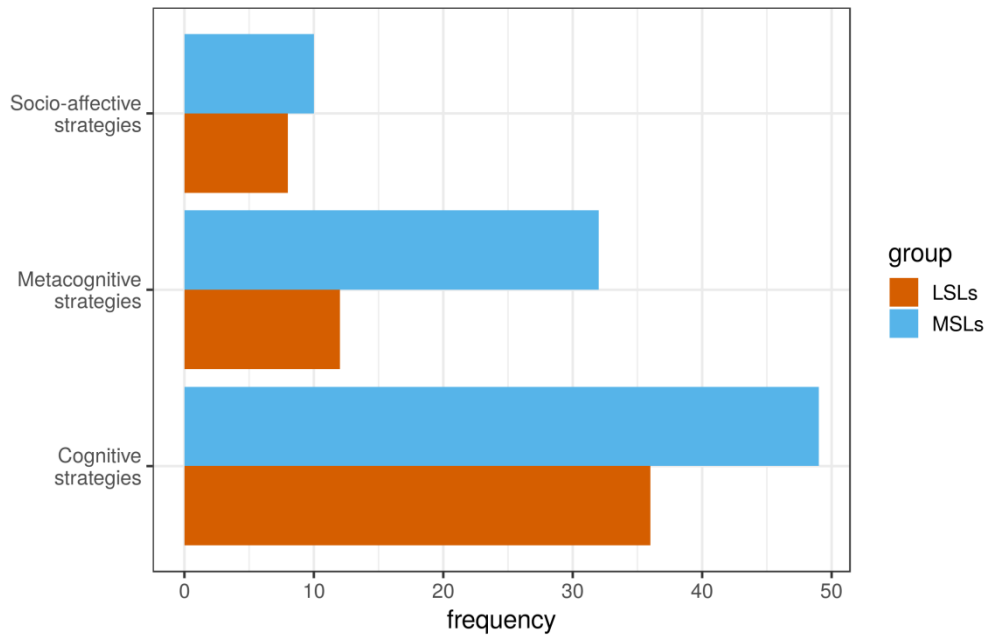
Figure 6.10. Group differences in strategy categories that assist listening comprehension

Frequently reported strategies

The students frequently mentioned four metacognitive strategies, four cognitive strategies, and one socio-affective strategy (see Table 6.10). However, the MSLs and LSLs reported on these differently. The following discussion sheds light on their knowledge of strategies with examples of their comments.

Table 6.10

Frequently reported strategies for listening comprehension

Strategies assisting listening comprehension		LSLs	MSLs
Metacognitive strategies	Self-management	-	11
	Directed attention	5	8
	Planning	-	5
	Selective attention	-	5
Cognitive strategies	Inferencing	12	9
	Elaboration	11	18
	Repeated listening	5	12
	Taking notes	-	5
Socio-affective strategies	Cooperation	6	4
	Asking for clarification	-	5

Metacognitive strategies

The MSL group reported more on the use of metacognitive strategies than their counterparts, which also support their use of these strategies in on-line strategy use. Whilst the MSL group frequently reported self-management, planning, and selective attention, directed attention was frequently mentioned by both groups. These strategies are illustrated below with excerpts.

Directed attention

Eight MSLs and 5 LSLs said that they tried to give their full attention, to ignore

distractions, and to maintain their attention during listening and performing tasks. Comments included:

> Naila (LSL): I try to give full attention, although sometimes it does not work.
> Jebun (MSL): … I catch the words as I was fully concentrated, even on unimportant things.

Self-management

More than two thirds (11) of the MSLs reported that they tried to self-manage themselves to accomplish a task or to maximise the use of what they knew. Comments included:

> Tasnuva (MSL): I thought that I need to listen well and carefully, attentively stopping doing other things or thinking others.

Planning

Five MSLs reported they prepared themselves for upcoming listening text and the tasks, and proposed techniques to handle them. Comments included:

> Kabir (MSL): (I plan) to concentrate on key words, prediction, eye contact, lip reading, pronunciation.

Selective attention

Five MSLs reported that they listened by giving selective attention to specific things in the listening and performing tasks. Comments included:

> Shabab (MSL): Most of the time, every talk conversation has some peak points I think, some points are highlighted…so usually listen those with attention…

Cognitive Strategies

Strategy of inferencing was frequently mentioned by both groups, with a slight higher mention by the LSLs; this seems to be similar tendency as in on-line. The number of mentions of elaboration and listening by repeating were more frequent amongst the MSLs.

Inferencing

Twelve LSLs and 9 MSLs reported that they used guessing and inferencing based on

linguistic and extra-linguistic and contextual clues, if they missed anything or failed to understand something whilst listening. The LSLs tended to use the strategy of inferencing slightly more often. The strategy of inferencing was further divided into linguistic and extra-linguistic inferencing:

Linguistic inferencing

Seven LSLs and 3 MSLs tried to understand the meaning from the context, discourse markers, repetitions etc.:

> Mahbub (LSL): once I can't catch few words but from repeated use of 'Importance & English' I guess it's about importance of English, though I can't catch the key word but understand the meaning of the speech.

Extra-linguistic inferencing

Five LSLs and 6 MSLs reported that they tried to understand from visuals and body language when listening to videos. Comments included:

> Anny (MSL): In movie, sometimes goes fast so it also breaks in concentration, then need to understand from the scenes.

Elaboration

Eleven LSLs and 18 MSLs, reported that they used elaboration to understand the spoken text. Elaboration was further divided into world elaboration, academic elaboration, between parts elaboration, and imagery.

World and academic elaboration

Five LSLs and 10 MSLs, reported that they used topic knowledge, prior knowledge and experience to understand the text. Comments included:

> Arif (MSL): No problem with teachers' lecture because I know it's a lecture on King Oedipus

Between parts elaboration

Five LSLs and 7 MSLs reported that they tried to elaborate using the context and co-text, through global listening of the text. Comments included:

Kabir (MSL): Prefer listening to the total thing at a time without any pause (for interpretation) so I understand the relation between sections; otherwise it loses interest and attention.

Imagery

One LSL and 1 MSL said that they tried to imagine what they heard so that they could understand better and recall details later on:

Shabab (MSL): Suppose in audio, I am listening to a lecture… say an example is given, so I imagine that situation and the person taking to or about.

Listening by repeating

More than half of the students, 5 LSLs and 12 MSLs, reported that they repeated the audio when they missed a word(s) or could not understand clearly. It seemed the MSLs listened by repeating more than twice as often as their counterparts. Comments included:

Piyal (LSL): Problem of speed in movies, sometimes I need to repeat something for 3-4 times to understand.

Kabir (MSL): If no resource (is available) then repeat it…(If I) miss key word which has a twist in my first listening then I repeat.

Taking notes

The MSLs (5) frequently reported taking notes. They believed they could understand better and recall information if they wrote down key words or information. Comments included:

Simul (MSL): (I) often take notes whilst listening, so I cannot forget.

Arko (MSL): When listening to audio or anything, I prefer taking notes…

Socio-affective Strategies

The frequency of mentions of socio-affective strategies was almost the same in both the groups (8 LSLs and 10 MSLs). Out of three types of such strategies reported, cooperation

was frequently mentioned by the LSL group, and asking for clarification was frequently mentioned by the MSL group.

Cooperation

Ten students, 6 LSLs and 4 MSLs, reported that they asked their peers or neighbours if they did not understand something or missed the answer. For example:

Piyal (LSL): If can't understand some of teacher's expressions ask somebody next to me or later.
Tasnuva (MSL): If this is important lecture, later I borrowed the lecture notes from friends.

Asking for clarification

MSLs frequently reported asking for clarification; when they faced a problem understanding the teachers' lectures they asked the teacher to clarify in the class or in the teacher's room after the class. For example:

Tasnuva (MSL): If it's in the class, (I) ask teacher to repeat the point.

Arko (MSL): If I miss something or don't understand, I sometimes even go to teacher's room and request…

Less frequently reported strategies

The frequency of mentions of self-monitoring (metacognitive), resourcing (cognitive) strategies was slightly higher amongst the MSLs. The strategies of summarising (cognitive) and self-encouragement (socio-affective) were mentioned by only the MSLs, whereas reverse question mapping, repetition, and translation (cognitive) were mentioned by only the LSLs.

Monitoring, resourcing

It seems that the MSLs monitored their comprehension, used resources slightly more frequently than their counterparts. Excerpts are included below:

Piyal (LSL): In listening test, if played twice, first time I write down the confusions and check in second time listening in the class test.

Arif (MSL): Whilst watching movie, see subtitle, consult unknown words from mobile dictionary.

Summarising and self-encouragement

These strategies were mentioned by only the MSLs. Three MSLs reported that they tried to understand the text by summarising and even if they missed something, they tried to solve the problem with summarisation:

> Hasib (MSL): I try to understand and remember the summary of the lecture, what target meaning is conveyed…although I miss info, try to pick the key points and understand the thing at hand.

A MSL called Anny encouraged and motivated herself that she was learning new things:

> Anny (MSL): A technique to grow interest is to say to own self that ok I am learning new things, that's good. It's in lectures.

Reverse question mapping, repetition, and translation

These strategies were reported by only the LSLs.

Two LSLs focused on a few words from the listening text and mapped these to the questions to find the answers:

> Mahbub (LSL): But try to focus on top (key) word, and match this with question then guess the answer…

A LSL reported that she rehearsed mentally. Another LSL reported that he translated whilst listening and this took time, therefore he could not keep pace with the recording.

> Lovely (LSL): It happens if I concentrate to write down the answer I miss listening, so sometimes I try to answer at the end of the recording, so I need to memorise the answers or note down briefly whilst listening.

6.2.3.2 Strategies assisting listening development

The students reported a number of strategies that they used for the purpose of developing their listening skills. The MSLs reported these strategies more than three times than their counterpart, which means that they were more than 3 times more aware than the

LSLs about how to develop their listening skills. Even taking each of the categories of strategy separately, the MSLs showed a higher degree of awareness compared to that of their counterparts. It was not only frequency of mentions that was higher; the MSLs also reported a greater number of strategy items that they used to develop listening. Therefore, there was a huge difference between the groups in awareness of strategies that assist in developing listening. Figure 6.11 shows the groups' differences in the three categories of strategy that assist the development of listening.
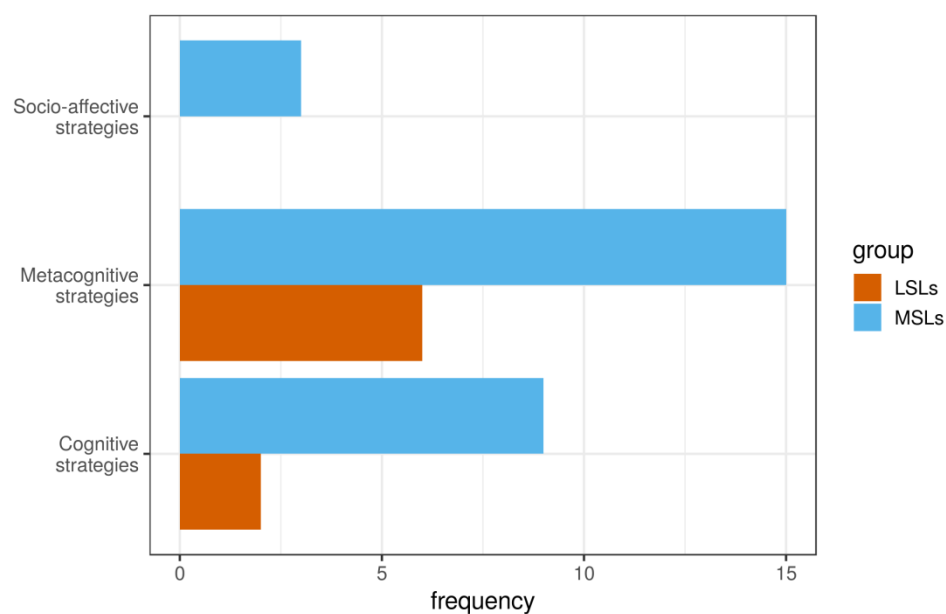
Figure 6.11. Group differences in the three categories of strategy assisting the development of listening

Frequently reported strategies

Data revealed that two metacognitive strategies and one cognitive strategy were frequently mentioned by only the MSLs.

Table 6.11

Frequently reported strategies for developing listening

Strategies assisting developing listening		LSLs	MSLs
Metacognitive strategies	Self-management	-	7
	Monitoring	-	5
Cognitive strategies	Elaboration	-	6

Metacognitive Strategies

Amongst the metacognitive strategies reported here, self-management and monitoring were mentioned frequently by the MSLs.

Self-management

Seven MSLs reported that they sought opportunities, and managed themselves for better listening. Comments included:

Shabab (MSL): …seek for conferences e.g., one held in Daffodil University few days back… so that I can meet and listen to foreigner, i.e., English, how they pronounce…

Monitoring

Five MSLs commented that they checked their comprehension against available resources to develop their listening skills. Comments included:

Simul (MSL): I needed to download lyrics first, now if not too speedy I understand lyrics, then check with lyric and its almost matched.

Cognitive strategies

Elaboration

The MSLs frequently reported that they used elaboration as a strategy to develop their listening abilities. In the excerpts below the students are using personal elaboration and between parts elaboration strategies:

Zisan (MSL): Sometimes, whilst listening I try to remember any similar instances I had before…

Kabir (MSL): I like to listen to the whole thing at a time…mm because one part helps to understand the other.

Less frequently reported strategies

There were other strategies, which were less frequently mentioned by the students in each of the groups. The strategies mentioned by mostly the MSLs were planning (a metacognitive strategy), taking notes and substitution (cognitive strategies), and cooperation and taking the emotional temperature (socio-affective strategies). There were no mentions of socio-affective strategies by the LSL group.

Planning

This metacognitive strategy was mentioned by both groups, however by fewer in number (2 LSLs, 3 MSLs). The students revealed that they were planning to do particular activities to enhance their listening skills and to do better in the future. Comments included:

Mahbub (LSL): I am planning to practise more, particularly English news, so I need dish (Internet) at home…

Hasib (MSL): I am thinking to watch more British movies or TV series.

Note taking

Two MSLs reported they noted down new and important words or points to learn them.

Farah (MSL): Always I try to memorise and note down later on new words or ideas.

Substitution

One MSL reported his own technique for solving the problem at hand; he practised different tactics for solving a single problem if the previous one did not work better.

Kabir (MSL): In dictation classes, I tried different ways to catch and understand the words.

Cooperation

One MSL remembered that he and his friend learned while cooperating each other.

Shuvon (MSL): Our Wahida madam would speak so speedy whilst writing down on the board… I planned with a friend that he would write down from board and I would

listen to what she would say. After class, we would discuss the idea based on what he had written and what I had listened to.

Taking the emotional temperature

Two MSLs commented on their emotions, with which they felt they needed to do better in listening.

Hasib (MSL): It's a shame if being a student in English he can't listen or speak well, so trying, not only the literal meaning but why and how.

6.2.3.3 Strategies that do not work always

Some of the students also reported that some strategies did not work always for them. They are listed in Table 6.12 below. Although all these strategies were less frequently mentioned by the groups, the MSLs seemed to be more aware of what types of strategies do not always work, and when or why, compared to their counterparts.

Table 6.12

Strategies that do not work always

Strategies that do not work always		LSLs	MSLs
Metacognitive strategies	Selective attention	0	2
	Planning	0	2
Cognitive strategies	Inferencing	3	3
	Elaboration	1	1
	Reverse question mapping	1	0
	Resourcing	0	1
Total		5	9

Inferencing and elaboration commonly reported as not always working for both the groups. Three LSLs and 3 MSLs found that guessing did not always work. Comments included:

> Imran (LSL): When can't catch starting easily, just guess (based on heard words, for example), sometimes even after thinking a lot can't figure out.

> Kabir (MSL): In song some words sometimes go unuttered or in contraction, so speed and pronunciation problems happen, sometimes I guess the words and it go wrong.

One LSL and 1 MSL reported that this strategy did not always work.

> Ruhan (LSL): … whilst watching movies, if I use subtitle I can't concentrate on watching the movie, I find myself looking at subtitle.

The LSLs' also revealed that reverse question mapping did not always work for them:

> Alim (LSL): Understand some words then try to put one in the blank (in question) and if I think this matches I take it (synonym) as an answer.

By contrast, the MSLs reported that selective attention, planning, and resourcing did not work well for them:

> Shabab (MSL): …best way is listening without bearing anything in mind…if I have something in my mind that I will hear this, I will just look for that word or thing… as a result I am not listening to other information attentively.

> Nahid (MSL): …sometimes pre-assumption obstructs to listen the right thing (e.g., looking for name of subject as pre-assumed).

> Kabir (MSL): …sometimes consulting dictionary even does not ensure right word with right meaning used.

6.3 Conclusion

Verbal data revealed that both groups of students had extensive awareness of all kinds of metacognitive knowledge. A comparison of the two groups of listeners' metacognitive knowledge revealed that despite some similarities between the groups in terms of a number of subcategories, particularly in terms of person knowledge, the MSLs showed greater awareness in their task knowledge and strategy knowledge. In person knowledge, in contrast to the LSLs' greater awareness of listening problems and obstacles to listening comprehension and the development of listening skills, the MSLs were more aware of the cognitive processes in listening, motivation and exposure to and persistence in L2 listening in the listening self knowledge. In relation to self-concept, both the MSLs and the LSLs showed a high degree of awareness of themselves as listeners, which revealed the LSLs' negative self-concept in contrast to the MSLs' positive self-concept. The MSLs were also more aware of what makes a GL, particularly a GL's motivational and strategic factors in GL knowledge. The MSLs' showed considerably greater awareness of task knowledge, particularly input useful for listening, and the nature of L2 listening. The MSLs' awareness of strategy knowledge was also almost twice that of their counterparts. The next chapter, Chapter 7 Discussion discusses the findings in Chapters 4, 5, and 6 by interpreting the findings and locating them in existing literature, and develops a model of a GL based on the findings.

Chapter 7 Discussion

7.1 Introduction

The purpose of this chapter is to discuss the findings in Chapter 3, 4, and 5, and to provide interpretative insights into them and reconstruct the significance of the findings of this study in relation to the existing literature, whilst showing the original contribution of the study. This study set out to investigate tertiary EFL learners' metacognition in EFL listening, specifically the relationship between tertiary learners' perceived, off-line strategy use and listening comprehension, the differences between two listening ability groups in their tasked-based, on-line strategy use, and the groups' MK about EFL listening in Bangladesh. In doing so, this study filled research gaps, as revealed in Chapter 2, in existing literature on metacognition in L2 listening. Further, this study made an original contribution by proposing a tentative model of a GL based on overall findings in answering the research questions.

Existing literature has two lines of inquiry in addressing metacognition in L2 listening: listening strategy research and research on metacognitive knowledge about L2 listening. However, research on metacognition from a holistic perspective is very limited, and we are not yet confident about the underlying nature or strength of the relationship between metacognition and L2 listening comprehension. Literature on strategy use and on metacognitive knowledge reveals research gaps: inconclusive relationship with listening comprehension, methodological shortcomings, paucity in research, and partial treatment e.g., of MK. The present study filled these gaps by answering the three research questions formulated in Chapter 2 (see Sections 7.2, 7.3, 7.4).

Besides answering three research questions, this study presented further original contributions by triangulating different types of data. Triangulation was done for two main

purposes. First, triangulation of all strategy data collected under three different conditions in two phases of the study via three different instruments - questionnaire, think aloud protocol and interview showed: a) a rigorous methodological approach, and consequently demonstrated the suitability of certain types of data collection tools for strategy research; and b) supported the findings of the task-based, on-line strategy use as being more convincing in contrast to the findings of self-report questionnaire data (see section 7.6). Second, triangulation of: a) the MSLs' off-line and on-line strategy use, b) the MSLs' MK (except for the part about GL knowledge); and c) both the MSLs' and the LSLs' GL knowledge (under person knowledge) tried to develop a tentative model of a GL in the EFL context of Bangladesh.

In the subsequent Sections of 7.2, 7.3, 7.4, and 7.5, I discuss the findings of results of Chapters 4, 5, and 6 by interpreting and locating them in existing literature. This is followed by a discussion of the triangulation of the strategy data in Section 7.6. Section 7.7 presents the development of a tentative model of a GL from a holistic metacognitive perspective, by triangulating and synthesising the MSLs' off-line and on-line strategy use (as revealed in Chapters 4 and 5), the MSLs' MK (as revealed in Chapter 6, except for the section of GL knowledge), and both the MSLs' and the LSLs' GL knowledge (under person knowledge, as revealed in Chapter 6) followed by the conclusion in Section 7.8

7.2 (Almost) No Significant Relationship between Listening Comprehension and Perceived, Off-line Strategy Use Elicited via the Questionnaire

The answer to RQ1 is that there is (almost) no significant relationship between listeners' perceived strategy use and their listening comprehension, except in the case of a few of the individual strategies. A convincing reason for the non-significance might be that the self-report data elicited via questionnaire may have had some shortcomings. Prior to a

discussion of the findings of RQ1, a brief discussion is presented on the listening levels and the pattern of perceived, off-line strategy use amongst tertiary-level EFL learners in Bangladesh.

Bangladeshi EFL learners' listening comprehension levels and pattern of strategy use

Looking at listening performance in the listening test, the Bangladeshi tertiary-level EFL learners' average listening performance was very poor (M= 4.81 SD=3.07, against 20 discrete marks). The difference between average listening scores amongst the LSLs (3.88) and the MSLs (10.88) mean a large effect size (g=3.64). Out of 388 participants, only 52 participants scored 50% or more and formed the MSL group in this study. Therefore, it seems that most of these tertiary-level EFL learners (87%) were low achieving listeners. This might explain lack of within-group variability, which could have potential effect on the non-significant correlations between perceived strategy use and listening comprehension. Two of the possible reasons behind the poor performance in listening could be: the very "input-poor environment" (see Zhang, 2001) of the EFL context in Bangladesh, and late exposure to listening (whatever the amount) in comparison to reading, writing (mainly from tertiary level).

Concerning strategy use, the findings suggest that Bangladeshi tertiary-level EFL learners did not frequently employ listening strategies; they used them only moderately (M=3.46). Therefore, there is a room for instruction to make these learners more aware of strategy use. Unlike Teng's (1998) participants' higher use of cognitive strategies out of the three categories in a Taiwanese EFL context, the use of metacognitive strategies was slightly higher amongst Bangladeshi EFL learners. Their most frequently used five strategies were also metacognitive strategies: directed attention, problem identification, planning, selective attention, and self-management. There seems to be a room for Bangladeshi tertiary EFL learners to be more aware of other types of strategies as well and of strategies in general.

No significant link between learners' listening comprehension and strategy use, except a few of the individual strategies

Leaners' perceived strategy use shows no significant link between their listening comprehension and overall strategy use and use of strategy categories. However, a few of the individual strategies show significant link, positive or negative, with listening comprehension.

The non-significant finding between listening comprehension and strategy use is incongruent with previous studies such as Chao (1996), Teng (1998) and Liu (2008). Liu's (2008), significant correlation *(p<.05)*, however, was not always the case when comparing three groups of advanced learners, upper intermediate and lower intermediate learners in metacognitive or cognitive strategies. However, the present study is mostly congruent with Serri et. al. (2012). One possible reason for Serri et al.'s (2012) finding could, however, be the lack of a robust methodology, as previously mentioned in Chapter 2.

There could be four possible interpretations of the lack of significant correlation between perceived strategy use and listening comprehension in the present study. First, questionnaire by nature might drive the learners to answer favourably (Imhof, 1998). Thus, these findings also raise a validity question in terms of the listening strategy questionnaire used in the study or questionnaires in general. Second, there could be lack of sensitivity of the questionnaire in tapping into strategy use; the students were not readily aware of the strategies they use, they only reported perceived strategy use in retrospect, therefore, not when doing a specific task, which could have triggered task-specific strategies. This is also a limitation of the study. However, a questionnaire as a strategy elicitation tool might have some limitations in terms of tapping into such highly mental processes of strategy use in listening (see Section 7.6.2). Third, frequent use of strategies might not accompany better listening. A larger repertoire of strategies and frequent use may not guarantee better

performance rather coordination of strategies and effective use of them may do so. However, the role of frequent use of strategies cannot be dismissed altogether, since this current study also revealed a positive correlation with task-based, on-line strategy use which also lends support to existing studies who found a positive correlation (see Section 7.3). Therefore, the first two reasons seem to be more convincing. Fourth, there might be a floor effect because the listening test seems to be hard for this population of participants and most of these tertiary-level EFL learners (87%) scored at the bottom of the scale. This could be a potential reason for the non-significant correlations between perceived strategy use and listening comprehension. This is another limitation of the study.

A few of the individual strategies were, however, weakly correlated with listening comprehension. Elaboration was slightly positively and translation was negatively, although slightly, correlated with listening comprehension. A positive link between listening comprehension with elaboration supports the findings of Chao (1996) and Liu (2008). This finding may suggest that the use of elaboration could predict better performance, although weakly. However, unlike Teng (1998), this study found a negative link between listening comprehension and translation. Teng's (1998) findings, however, might be limited by the data collection and analysis procedure. The negative correlation with translation indicates that the frequent use of this strategy might slow down performance or it may not be an effective strategy. This was an indication that an analysis of task-based strategy use, both content and thematic analyses, seemed to offer.

7.3 Significant and In-depth Differences between Two Groups in their Task-based, On-line Strategy Use Elicited via Think Aloud Protocols

The answer to RQ2 is that the two listening ability groups differ significantly in their task-based, on-line strategy use, particularly on metacognitive strategies and the MSLs

deployment of strategies is more sophisticated, flexible and effective. The findings on on-line strategy use, however, shed further light on the potential role of linguistic knowledge behind their strategic behaviour.

Before looking at the findings, it is useful to see that there is a significantly positive correlation between students' listening performances under two test conditions – the listening test in Phase I and the think aloud test in Phase II. This reveals that the groups performed mostly consistently as LSLs and MSLs.

The groups' task-based, on-line strategy use reveals significant and considerable differences in strategy use among them and these findings are, to a great extent, in congruence with a number of existing task-based, on-line strategy use studies (e.g., O'Malley et al., 1989; Vandergrift, 2003b; 1997b). However, the present study differs considerably from these studies on the frequent but ineffective use of inferencing by the LSLs which might be explained given their insufficient linguistic knowledge and/or inappropriate prior knowledge. The following subsections 7.3.1 and 7.3.2 discuss the quantitative and qualitative differences in the groups' use of strategies respectively.

7.3.1 Quantitative differences in task-based strategy use

This section discusses the quantitative differences between the LSLs and the MSLs in their task-based, on-line strategy use. The findings of the Pearson correlations reveal a positively significant correlation between listening comprehension and metacognitive strategies. Mann Whitney U tests also reveal significant group differences in their strategy use. Together the results suggest significant differences between the two listening ability groups in their task-based, on-line strategy use. However, it is not possible to show the causal relationship in this correlational study.

Differences in metacognitive strategy category

The finding of significant relationship of listening comprehension with on-line use of metacognitive strategies contradicts that of perceived, off-line strategy use. The possible reasons were explored in Section 7.2. The two listening ability groups' significant difference in metacognitive strategy use lends support to Murphy (1985), Vandergrift (2003b, 1998, 1997b), Henner Stanchina (1987).

Differences in the use of individual strategies

There were also significant differences between the groups in their use of a number of individual strategies under the metacognitive and cognitive strategy categories.

There were significant differences between the groups in their use of monitoring and double-check monitoring (metacognitive strategies) and elaboration, questioning elaboration, and summarisation (cognitive strategies). These suggest that the MSLs frequently monitor and double-check their comprehension and this differentiates them from the LSLs. Significant differences in monitoring is also found in Henner Stanchina (1987) and O'Malley et al. (1989), Vandergrift (1997b, 2003b). The MSLs also elaborated on what they listen by using their personal and world experience etc., and they also checked their elaboration by questioning their comprehension and that they often summarised what they heard to comprehend overall meaning. The MSLs' significantly higher use of elaboration and questioning elaboration supports Henner Stanchina (1987) and O'Malley et al. (1989), and Vandergrift (2003b) respectively.

On the other hand, negative correlation was found in the use of inferencing, linguistic inferencing, and reverse question mapping. Reverse question mapping is a new cognitive strategy that emerged from the data and this strategy was mainly reported by the LSL group. The LSLs' preference for inferencing is surprisingly incongruent with some of the existing

studies such as O'Malley et al. (1989), and Smidt and Hegelhimer (2004). Whilst these studies revealed inferencing as an effective strategy and the MSLs were using it to fill gaps in understanding, the present study found that the LSLs were using it more frequently than their counterparts but mostly ineffectively. The present study reveals that the MSLs seem to use inferencing frequently, but the LSLs use it even more frequently, as is revealed in interview data. LSLs' more frequent and ineffective use of inferencing strategy may stem from their insufficient information decoded, as indicated by the qualitative analysis of their protocols (see Section 5.3.1.3, also see Section 7.5.2, for details).

7.3.2 Qualitative differences in task-based, on-line strategy use

Qualitative analysis of the think aloud protocols reinforces the differences between the groups in their strategy use by uncovering the way they coordinate or orchestrate different strategies whilst performing listening tasks. The analysis further uncovers the potential role of linguistic knowledge which might affect their orchestrated or even frequent use of strategies. The potential role of linguistic knowledge, uncovered in Section 5.3.2, is also seen in students' verbal reports about their metacognitive knowledge, and is discussed later on in Section 7.5.2.

The findings of the thematic analysis of their protocols in Chapter 5 uncover three distinct, but often interconnected, themes; the ways the strategies are deployed by the groups. They are:

- Combination of strategies and flexibility in strategy use

- Interactive top-down and bottom-up use of strategies

- Appropriate or effective use of strategies

Since a quantitative analysis fails to uncover how a given strategy is employed or the combinations of strategies, or even the effective or appropriate use of particular strategies

(Vandergrift, 2003b), looking into strategy use qualitatively is necessary. Even when some studies, for example Peters (1999), failed to identify any differences in frequency, they found qualitative differences in strategy deployment between the groups.

Both the groups combined strategies but their way of combining differed in terms of frequency, flexibility, and the varieties of strategy type. The combinations used amongst the MSLs happened almost twice as often as those of their counterparts. MSLs exhibited flexibility in strategy use and moved to another potential strategy if the previous one was not sufficient in generating meaning or comprehension. This is also found in Murphy (1985), Bacon (1992a, b), Vandergrift (2003b), and Graham et al., (2008). Whereas the MSLs tended to combine both metacognitive and cognitive strategies more frequently, the LSLs combined cognitive strategies more frequently. This combination of different types of strategies towards a greater understanding of the text is called a 'cluster of strategies' by Graham et.al. (2008), and Graham and Macaro (2008), an 'orchestration of strategies' by Vandergrift (2003b), and "links in a fence or the molecular units that bond together to form the double helix of a molecule of DNA" by Murphy (1985, p.38). Vandergrift (2003b) revealed how a skilled listener Nina combined inferencing and questioning elaboration strategies together to verify her comprehension. O'Malley et al. (1989) also revealed effective listeners' combining of, for example, elaboration and monitoring, inferencing strategies.

Another theme that distinguishes the MSLs from the LSLs is their interactive use of top-down and bottom-up strategies. Both of the groups use top-down and bottom-up strategies; however, the MSLs seem to use them interactively and they combine them more often than their counterparts. The LSLs' frequent use of translation and reverse question mapping shows that they are more prone to bottom-up processing; however, they also use top-down strategies, mostly the inferencing strategy. It seems that the LSLs use too much bottom-up translation or too much top-down inferencing; their range of strategies, especially top-down

strategies, is limited. In addition, their use of top-down and bottom-up strategies seems loose and separate, not interactive. Moreover, their use of inferencing is often ineffective, which is discussed further at the end of this section.

The LSLs' frequent use of translation and reverse question mapping shows that they are more prone to bottom-up processing. This translation from word to word eats up their time, which they could use for metacognitive interpretation of the text; as such they are only doing surface level processing of the text. Reverse question mapping, a bottom-up strategy, is almost uniquely used by the LSLs when they failed to find a correspondence between the question and the recording or failed to fully understand the questions. It is like picking out something with your eyes closed, since you have no option other than to write an answer in a test; if it is correct, it is bonus. This strategy is a test strategy, typical amongst the LSLs. This finding corroborates Vandergrift (2003) and O'Malley et al. (1989). As in Vandergrift (2003), although both Rose (a less skilled listener) and Nina (a more skilled listener) engaged in translation (bottom-up processing), it is Nina who went further by using world knowledge and text knowledge to elaborate on what she heard (top-down processing). Similarly, O'Malley et al. (1989) revealed effective listeners' interactive approach in top-down and bottom-up processing, whilst segmenting and parsing chunks of spoken text; conversely the LSLs' bottom-up processing is at the word-to-word level. As they could not parse the streams of words they heard and sent them to their long-term memory for utilisation, this creates a cognitive load in their short-term memory, and the words begin to fade away from their memory to make space for new incoming input. As such, they tended to forget what they have heard. This problem was often reported by the LSLs, which is also reported in Goh (2000) in the perception phase of comprehension.

On the other hand, the MSLs exhibited an interactive approach to meaning-making. They tended to be flexible in their strategy use, as required by bottom-up and top-down approaches

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to processing the text. Thus, they used strategies being aware of the purposes of the task. In so doing, the MSLs are characterised as goal-oriented (O'Malley et at., 1989), and more dynamic (Vandergrift, 2003b) listeners.

Another factor that distinguishes the MSLs from the LSLs is the effective and appropriate use of strategies. The protocols reveal the LSLs' inappropriate use of strategies, particularly in the use of planning, maintaining attention, monitoring, inferencing, summarisation, and elaboration strategies, making them less successful in their use of strategies, and hence in listening comprehension. Goh (2002) also found the effective use of strategies by MSLs, despite many similar strategies between the two listening ability groups. Vandergrift (1997b) found qualitative differences in the use of prior knowledge, inferencing, prediction, summarisation, and monitoring. Both the groups employed the planning strategy to attend to the upcoming tasks before starting the recording. Often it seems that the LSLs predicted what might come next from their reading of the question paper and from listening to the instructions in the audio; however, it is MSLs who tended to both predict what is next and offer strategies to handle the upcoming text by setting goals. The latter is almost missing amongst the LSLs. It seems the LSLs often lost their attention easily, and when they lost it, it was hard for them to get back on the track; although they reported that they tried to redirect their attention, they were hardly ever successful. For example, both a LSL and a MSL might use monitoring comprehension, and also coupled this with another strategy; however, the LSL's deployment of this strategy failed.

Inferencing is a strategy, which is reported on by the LSLs more frequently, more than twice that of their counterparts and the quantitative analysis also reveals a significantly negative correlation with this strategy. This is because the LSLs used this strategy unsuccessfully, often wildly based on mostly a few words heard and their inappropriate use of prior knowledge, whilst the MSLs' use of inferencing is judicious and coupled with

elaboration, monitoring, etc. However, it is apparent from the LSLs' protocols that they might lack sufficient linguistic knowledge to capitalise on for top-down processing.

7.4 Considerable Differences between the Two Groups in their Metacognitive Knowledge Elicited via Semi-structured Interview

The answer to RQ3 is that there are considerable differences between the two listening ability groups in their metacognitive knowledge about EFL listening.

The groups considerably differed in metacognitive knowledge both in terms of frequency of awareness and in in-depth. A comparison of frequency distribution of overall MK reveals considerable differences between the two groups (LSLs 443, MSLs 589) like Goh (1998a), who revealed a huge difference between the two listening ability groups. Amongst the categories of MK, whereas person knowledge (LSLs 226, MSLs 270) and task knowledge (LSLs 148, MSLs 191) show considerable differences between the groups, a striking difference is revealed in their strategy knowledge (LSLs 69, MSLs 128). This difference in strategy knowledge also corroborates MSLs' significantly greater use of particularly metacognitive strategies in Chapter 5. However, it seems that Bangladeshi EFL learners are less aware of strategy knowledge compared to their person knowledge and task knowledge and compared to strategy knowledge Goh's (1998a) listeners revealed. Apart from quantitative differences, qualitative differences are also revealed when looking in-depth into their perceptions and beliefs of EFL listening.

7.4.1 Considerable differences in Person Knowledge

Both the LSL and MSL groups reported in a similar frequency on GL knowledge and listening self knowledge under person knowledge; slightly greater GL knowledge amongst the MSLs. However, they differed considerably in certain subcategories of each of the GL

knowledge and listening self knowledge. Qualitative analyses of their perceptions show a considerable difference between the groups in these specific factors. As mentioned in Chapter 6, unlike existing research on MK, which explores knowledge of the listeners themselves basically as person knowledge (e.g., Goh, 1997; 1998a), this study looks into two types of persons: the listeners themselves and their knowledge about a GL. Therefore, the listeners' perception about themselves as listeners and their perception of a GL have been termed as listening self knowledge and GL knowledge respectively in this study. Therefore, any reference to existing literature regarding person knowledge should be made to listening self knowledge only. Unlike existing studies (e.g., Goh, 1998a; Vandergrift, 2002), this study reveals a high degree of students' listening self-knowledge, compared to strategy knowledge.

7.4.1.1 GL knowledge

Four types of factors - linguistic, motivational, strategic, and miscellaneous - associated with a GL, pertain to the differentiations between the LSLs and the MSLs. Although the groups do not differ much in their report on linguistics and miscellaneous factors of a GL, the MSLs show considerably greater awareness of motivational and strategic factors. I try to locate the overall findings of GL knowledge within previous studies in section 7.7.4.

Differences in awareness of certain linguistic and miscellaneous factors

Whilst the LSLs were slightly more concerned with vocabulary and pronunciation as attributes of a GL, the MSLs were concerned with a GL's attention to prosodic features along with vocabulary and pronunciation. The MSLs' awareness of prosodic feature makes them conscious of attending to this factor as well, in order to better perceive and comprehend an incoming text. GLs are more goal-oriented, able to differentiate between important and unimportant ideas, and go beyond the literal meaning. The LSLs believed that GLs do more

practice and repeatedly and have the ability to understand the text quickly. This reveals the LSLs' greater concern about perception of words and figuring out the meaning of the text and more listening practice for successful comprehension of these. As such, the LSLs seemed not to think of other variables interacting here. The LSLs' association of good memory with a GL reflects to the LSLs' cognitive load whilst processing incoming texts. Schema theory in cognitive psychology indicates that LSLs often could not process text and transferred the meaning from short-term memory to long-term memory after parsing and this creates a cognitive load in the short-term memory. Consequently, the LSLs forgot the previous information in order to hold onto the new information. This is also apparent from their comprehension problems.

The MSLs' greater awareness of motivational and strategic factors

Awareness of GLs' motivating factors reveals a marked difference between the MSLs and the LSLs. Unlike the LSLs, the MSLs were exposed to English language and culture from their childhood through TV, media etc., by being motivated either by themselves or family. Goh (1998a) also found a link between more exposure to and experience of the target language and better listening. Whilst Goh's (1998a) participants were basically exposed to previous formal learning experience, my participants had not had that opportunity; rather they exposed themselves to it on a personal level through listening songs and watching TV series and movies etc. It might be the MSLs' integrative motivation (interest in English movies and culture) which seems to be a distinguishing factor for their better listening.

A GL is strategic was reported twice by MSLs than their counterparts and this shows the MSLs' greater awareness of strategies, particularly metacognitive strategies. The MSLs are, therefore, more aware of the important role of strategies in their listening performance. This also corresponds to their greater strategy knowledge in Section 7.4.3.

7.4.1.2 Listening self knowledge

Although listening self knowledge shows no considerable differences in terms of overall frequency, differences lie in certain aspects and qualitatively. Finding of overall listening self knowledge corroborates Goh's (1998a) negligible differences between the listening ability groups in their person knowledge[10]. However, Goh's (1998a) study lacks a further discussion of group differences with a closer look at individual factors and in-depth qualitative interpretations of some of the aspects of person knowledge. In this study, whereas MSLs were more aware of factors like cognitive processes, motivational factors, and needs, the LSLs reported more on listening problems and obstacles to listening development. Although reported in the same frequency, self-concept subcategory reveals a huge difference between the groups. These are discussed below in Sections 7.4.1.2.1, 7.4.1.2.2, and 7.4.1.2.3.

7.4.1.2.1 The LSLs' greater awareness of comprehension problems and obstacles to listening development

Unlike Goh (2000, 1998a), the LSL group tended to report more on their problems during listening comprehension, and obstacles to listening development. However, it is the MSL group who showed greater awareness of different types of problems during listening comprehension. Moreover, the LSLs' nature and treatment of individual problems was often different from that of the MSL group. The LSLs seem to be more concerned with their personality as an obstacle to develop their listening proficiency.

Problems during listening

The majority of the problems (13 out of 17) are associated with perceptual processing, mostly arising from decoding and attention and concentration problems, as is also true for Goh (2000), although this study reveals a larger number of problems. However, same problems reported by the groups are not similar in terms of the extent of difficulty of the

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[10] As mentioned in section 7.4.1, listening self knowledge and listening self-concept in this study correspond to Goh's (1998a) person knowledge and listening self, to a great extent.

problems, as also noticed by Goh (2000). For instance, three problems (one in each phase) frequently reported by both groups are: missing next part or losing track whilst stuck on previous part (perception), forgetting what has been heard already (parsing), and understanding individual words but not the overall or intended meaning (utilisation). The LSLs seem to lose track more frequently. Despite missing the next part, whilst the MSLs can redirect their concentration and somehow keep on track, this does not often happen to the LSLs; they lose track and feel lost despite their efforts to redirect their attention. This could also explain the LSLs' unsuccessful use of the directed attention strategy in Chapter 5. However, this perception problem, reported by almost 50% of the total students, seems to be a common and frequent problem amongst EFL learners in Bangladesh. This has serious consequences for their listening.

Again, although frequently mentioned by groups, two parsing and utilisation problems are not same in the nature and degree of difficulty. Forgetting the words heard (parsing) was reported on by more than 50% of the LSLs and they forget just after hearing the words, whereas it sustains for some time after hearing among MSLs. In the case of understanding individual words but not getting the overall or intended meaning (utilisation), the LSL group faced this problem because they could not absorb the overall meaning, whereas the MSLs' problem was that they could not get the intended meaning despite sometimes understanding the overall meaning. This comprehension problem is also shown in Graham (2006).

The LSLs' frequent mentions of the utilisation problem is, however, incongruent with Goh (2000); as argued by Goh, it is more likely that the low ability listeners hardly ever go beyond the perception or parsing phase, because of limited proficiency and inadequate processing capacity (p, 68). In contrast, in this study the LSLs also try to utilise whatever they have understood by activating schema (wrong or right), and this is evidenced by their frequent use (often ineffective) of the inferencing strategy. The LSLs' problems with parsing

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and utilisation, the higher level according to Anderson, further imply that the three phases in Anderson's model do not necessarily happen sequentially.

It seems the LSLs' frequent problems with perception are inter-connected; problems with concentrating, recognising sounds of words known already in written form, doing two or more things at a time e.g., writing down the answers and missing the start. The LSLs often lose concentration maybe due to incomprehension or out of anxiety; this might be related to their other two problems of not being able to concentrate on two or more things at a time and missing the start or the following parts. Moreover, their problem with recognising the sounds of words known already in the written form refers to a gap between their interaction between written English and spoken English. The possible reason behind this is quite different in an EFL context like Bangladesh, unlike an ESL context of Singapore in Goh's (1998a) study. As mentioned in Chapter 1, in the public education system in EFL Bangladesh, students are basically exposed to reading and writing until Grade 12. As a result, they hardly get the chance to create a map between the graphic representation of words and their pronunciation in spoken form, when many of the English words are notoriously different in written and oral forms (Maniruzzaman, 2006). Overall, the LSLs' above mentioned frequent problems in perception may stem from: a) less exposure to spoken English; b) weaker segmentation ability; and c) linguistic insufficiency e.g., vocabulary (also see Sections 7.5.2).

Obstacles to listening development

The groups' awareness of the obstacles to listening development namely own personality and social environment reveals a great of the EFL context of Bangladesh. Although both the groups are aware of the obstacle of the social environment, LSLs tend to frequently blame their own personality. Some LSLs feel anxious and nervous and they fear listening. Some of them think they are trying, but feel frustrated as they cannot improve as

per expectation; thus, being frustrated they often tend to neglect this skill, as revealed by a few of them. Thus, LSLs hold a negative concept of listening skills and of themselves as listeners, as also discussed in Section 7.4.1.2.3. As to the social environment, both groups perceive that on the one hand, the EFL context in Bangladesh provides almost no opportunity for listening in any other domains other than academic domain, on the other hand, the socio-cultural environment does not take practising English publicly positively; therefore, students feel shy about practising even with a group of peers. It seems that a lack of logistics and technical support, for example a laptop, is also a hindrance to the LSLs' listening development, as reported by some of them. Therefore, socio-economic factors also seem to be intertwined with other factors in listening development.

7.4.1.2.2 The MSLs' greater awareness of the cognitive processes, motivation and exposure, and learner needs

The MSLs are more aware of cognitive processes in listening, impact of motivational factors and exposure to the target language for developing listening. They are also more aware of their needs in doing better in listening than that of their counterparts.

Cognitive processes and Learner Needs

Although the LSLs talk more about their problems, the MSLs are more aware of the cognitive processes underlying listening and able to articulate their needs for better listening.

Unlike the LSLs, the MSLs are more aware of the cognitive processes interacting in the listening processes. MSLs frequently reported that they also listen to a text globally to comprehend the meaning of the text. Their greater awareness of global listening suggests the MSLs' preference for top down listening processing. However, the students' fewer reports on cognitive processes indicate that Bangladeshi EFL learners are less aware of the cognitive processes in listening, as compared to Goh's (1997) Singaporean ESL students. One possible reason is that the students in my study reflected on listening experiences in general, which

might have failed to trigger the cognitive processes involved whilst listening, as opposed to the students in Goh (1997) who wrote down, in diaries, their reflections on specific listening tasks then completed.

Whereas the LSLs feel they need more classroom practice and with listening exercises, the MSLs feel the need for practising with different topics and input and enhancing strategic knowledge. This reveals striking differences between the groups. The LSLs seem to be familiar with mainly what is introduced in the classroom, without being aware of learning autonomously and with different options. The MSLs' greater awareness of different input and topics corresponds to their greater awareness of different input useful for listening in Section 7.4.2.2. Their greater awareness of the role of strategies also corresponds to their greater strategy knowledge in Sections 7.4.3 and 7.4.1.1.

Motivation, perseverance and exposure

Motivation and exposure to listening marks a remarkable difference between the MSLs and the LSLs. Being self-motivated, the MSLs often listen to English songs, or watch English movies and TV series and so on, even from childhood. They also do not give up if encountering problems and obstacles; an attribute of perseverance is noticed among the MSLs. They have developed an interest in the target language and culture. Conversely, only one LSL reported that he feels motivated to listen to and learn English with a view to going abroad for a better job. This reveals a huge gap between the groups in terms of their motivation to listen, and have more exposure to and experience with listening, to English. It might be MSLs' integrative motivation that might urge them to listen and learn the target language and culture (see, Gardner & Lambert, 1972). The MSLs' greater awareness of motivational factors is also evident from the fact that they frequently attributed motivation to be a characteristic of a GL. MSLs' greater awareness of motivation and experiences is also reported by Goh (1998a).

7.4.1.2.3 Listening self-concept revealing a striking contrast

It seems that both groups possess the same amount of awareness of their listening self-concept; however, their very self-concepts expose how different they are. Whereas the MSLs have a positive self-concept, the LSLs show a negative self-concept. Their self-concepts seem to be a true calibration with performance in two listening tests in this study, to a great extent. Their concepts about themselves in terms of self-assessment, perceived improvement, and self-confidence in future performance i.e., self-efficacy reveal huge differences between the groups. This in-depth knowledge of self-concept can inform the treatment of differing listening ability groups. Learners with positive self-concept or self-efficacy seem to have better control over and knowledge of learner strategies (Victori, 1999), and effective listening also depends on learners' self-efficacy for listening, on their confidence in their ability to comprehend the input (Graham, 2011).

The LSLs were not satisfied with their listening abilities and reasoned out that this was due to their limited exposure to listening in English; they could listen in English only through some teachers' lectures in English in schools, and a module on listening and speaking only at the undergraduate level. Goh (1998a) also found negative perception almost exclusively amongst low ability listeners. In contrast, most of the MSLs boast of their listening abilities and they were exposed to English listening through watching movies, TV series, and through listening to English songs, mostly from their childhood apart from academic domain. Whereas many of the LSLs thought they could hear well than before as of almost zero percent prior to their undergraduate studies, the MSLs perceived their improvement as due to more exposure, much effort, and maturity. Whilst the MSLs were more or less satisfied with their improvement, the LSLs' feelings were mixed: some show satisfaction that at least they were improving, and some others were frustrated with their improvement. Most of the MSLs have confidence that they are improving and are already at a

satisfactory or good level and if they continue their efforts and practice they will do even better in the future and reach the level of a GL. This suggests that students' self-efficacy is positively linked to their listening proficiency, as also revealed by Chen (2007). As argued by Graham (2011) and Graham and Macaro (2008), self-efficacy is crucial to the development of effective listening skills, and metacognitive awareness, i.e., listening strategy instruction, has the potential to boost self-efficacy. Bandura (1997) also claims that low self-efficacy is linked to anxiety.

7.4.2 Considerable Differences in Task Knowledge

The students are aware of four types of task knowledge and the MSLs showed greater awareness of each of these subcategories, particularly of input useful for developing listening and of the nature of L2 listening. The study suggests that along with being aware of factors and practices, the LSLs need to be more aware of a variety of input, those that can be useful for them for their different interests and for developing different listening skills. They also need to be aware that listening, being an active skill, requires active participation and active processing, and that the integrative nature of listening can benefit them with language input for other skills development.

7.4.2.1 Differences in their knowledge of factors affecting listening and listening practices

Their verbal reports reveal slight differences in overall frequency of their knowledge of factors that affect listening and the practices they do to enhance listening. However, their knowledge of some factors or practices differentiates themselves. The LSLs mostly reported on how they were negatively affected by certain factors and their more orientation with listening exercise as almost a sole listening practice.

Factors affecting listening

Students' extensive awareness of what affects their listening, negatively or positively, is revealed in their report of as many as 23 factors under five different types. The groups differ in their awareness of different types of factor. Slightly higher frequency among the MSLs lends support to Goh (1999). Whereas the MSLs show greater awareness of text, speaker and environment and EFL contextual factors, the LSLs show greater awareness of listener and task types. The LSLs' greater awareness of task type factors is, however, incongruent with Goh (1999). In task type here, the LSLs however reported on their problems with a task basically, for example on problems with understanding questions and formats, and performing two or more things at a time. The possible reason is that they might have less experience of listening or limited vocabulary, which cause a sense of fear and anxiety of missing anything and thus obstruct them in doing multiple tasks.

The LSLs seemed to be more concerned with their problems and weaknesses and thus report mostly factors negatively affecting their listening; conversely, the MSLs seemed to show a balanced awareness of both positive and negative factors, which shows that they are equally aware of their strengths and weaknesses. Therefore, a detailed and in-depth analysis of how factors affect them provides an insight into the differences between the two listening ability groups' awareness of factors. Being aware of only the problems is not the end point; rather finding ways to resolve these problems and difficulties and being aware of factors that can enhance their listening is important. Thus, the LSLs would feel more motivated to learn and capitalise on their strengths, and tackle their nervousness, anxiety, and the frustration that arise from their negative self-perception.

Despite both groups' frequent mentions of speed, vocabulary and pronunciation, differences lie in the way and the extent to which the factors affect them. Speed is defined

differently by the LSLs and the MSLs; even normal conversation or speech delivery seems to be speedy to the LSLs, whereas the MSLs treated (rap) songs or other much speedier dialogues etc. as speedy. The LSLs seemed to be affected more by this, although both the groups find speech rate to be an influential factor in comprehending incoming text. English, being a stress-timed language, unlike syllable-timed language Bangla (Maniruzzaman, 2006), and its elision, assimilation, etc., is heard speedier to Bangladeshi EFL students' ear, also may be because of lack of automaticity (Buck, 2001). Concerning vocabulary, the LSLs seem to be more affected by the lack of sufficient vocabulary knowledge, as many of them could hardly make use of 50% of the vocabulary covered in an incoming text; they even reported that they sometimes struggle to understand the questions properly, which is again possibly due to linguistic knowledge e.g., insufficient vocabulary and grammar knowledge. Studies (e.g., Bonk, 2000; Mecartty, 2000; Staehr, 2009) also found a positive link between linguistic knowledge and listening performance.

Regarding pronunciation, however, both groups similarly report that it has a greater impact on their listening. They report that similar pronunciation of different words creates a problem. When the spoken form does not correspond with the graphic representation, this causes problems, as Bangladeshi EFL students are more and first exposed to something written; therefore, although they know the words in written form, they cannot identify them when pronounced in speech. Because of syllable-timed language Bangla, their L1 rhythmic pattern seems to hinder their listening of EFL. Moreover, EFL learners in Bangladesh, unlike Goh's (1999) Chinese ESL learners in Singapore, have very limited exposure to listening to English outside of the classroom. Therefore, in contrast to Goh (1999), Bangladeshi EFL learners report extensively on pronunciation as an affecting factor for listening, the highest mentioned factor reported on by them.

The factors of visual support, knowledge of prosodic features, topic and prior knowledge and experience affect the groups differently; since they approach the factors for different purposes. Although both the groups felt that knowledge of prosodic features is important to understand a listening text, only the MSLs reported use of them to process the incoming text. The MSLs seemed to use visual supports and prior knowledge to check their comprehension and use these factors creatively and critically. Conversely, the LSLs used them superficially, for example, they sometimes solely depend on e.g., visuals when they hardly understand the oral text. Transfer of similar knowledge or experience from an academic situation or elsewhere often does not take place. Again, one possible reason is their limited decoded information to capitalise on for further association.

Subtitles and lyrics, and types of input are reported on more than twice as often by the MSLs. Whereas the LSLs usually needed to use subtitles whenever they watch a movie because without them they struggle to understand, most of the MSLs used subtitles only when they have missed some words or failed to understand something. However, a number of the MSLs reported that they used to use subtitles frequently but now they can understand without subtitles. This means that subtitles had a positive impact on listening comprehension; even the LSLs could understand the movies with subtitles, although they watch movies seldom, therefore use subtitles seldom. This finding lends support to Charles and Trenkic (2015), who in an experiment of bi-modal input on speech segmentation revealed that the experimental group outperformed their counterparts, and suggested that watching programmes with subtitles might be helpful not only for segmenting the spoken input, but also for a more far-reaching effect on the development of segmentation abilities in a second language.

It seems the LSLs were negatively affected by the abrupt beginnings of the text, their physical and psychological conditions whilst listening, and doing more things than only

listening, whereas the MSLs seemed to be more aware of different accent of the speaker, physical conditions e.g., noise and the existing non-conducive EFL context, which affect their listening. This indicates LSLs' anxiety whilst listening and the MSLs' greater awareness of other affecting factors beyond text and task. Although less frequently mentioned, the LSLs believe that their memory also affects their listening; efficient memory helps GLs to remember what they hear whilst listening (see discussion on memory in Section 7.4.1.1).

Practices for listening development

The groups' slight differences in their ways of developing listening are also congruent with Goh (1998a). However, many of the MSLs reported doing frequent listening practice with whatever materials to enhance their listening skills along with their speaking skills, whereas practising with listening exercises was reported frequently by the LSL group. Amongst others, practising pronunciation was slightly more common amongst the MSLs, and both the groups practised to improve vocabulary for better listening comprehension. It seems that the LSLs did not listen as frequently as their counterparts, and they also focus less on pronunciation whilst listening.

7.4.2.2 Considerable differences in awareness of input useful for developing listening and nature of L2 listening

Their verbal reports reveal a considerable difference between the groups in their knowledge of input useful for developing listening and nature of L2 listening.

Input useful for developing listening

The students reported 10 types of input useful for developing listening, and the findings revealed considerable differences between the LSLs and the MSLs. The MSLs' awareness of different kinds of input was almost twice that of their counterparts. Whereas the

MSLs also could articulate how different types of input are useful, the LSLs hardly articulate the usefulness of them. The MSLs' preference for different types of input like listening to audio, talks/public lectures, documentaries, and talk shows, showed their awareness of more input types and for different purposes, a finding also supported by Goh, (1998a).

Although both groups reported movies and TV series as useful input, the MSLs also found songs and teachers' lectures useful whereas the LSLs thought that listening exercises could be a useful input. The LSLs' awareness of a limited input types may restrict them from trying other options, which might be of interest and useful for developing their listening. Although frequently reported by the LSLs, they could give reason behind their choice of listening exercise as a useful input in a less articulated manner, on the other hand, although only very few of the MSLs reported their preference for listening exercises but they could also reason out that they created a sense of competition and a chance to self-assessment for them. Again, their purpose for listening was different; whilst the LSLs seemed to listen because their teacher suggested it and they needed to practise listening to obtain good grades, the MSLs often listen for entertainment as well as to listen better.

Nature of L2 listening

It seems that the students are not very aware of the nature of L2 listening; Goh (1998a) also revealed the similar finding that students were not able to articulate these abstract ideas. However, listening as an integrative and active skill was frequently reported by the MSLs. This makes a striking contrast between the groups. Whereas the MSLs' awareness of listening as an active skill as well an integrative skill helps them to approach the skill accordingly, the LSLs being less aware of listening as an integrative skill cannot perceive how important the skill is to facilitate learning of other skills. Moreover, they are less aware that listening is an active skill and requires active participation to process it.

7.4.3 Striking Differences in Strategy Knowledge

Strategy knowledge comprises learners' knowledge of strategies assisting listening comprehension, strategies assisting in developing listening, and strategies that do not always work. In each of these subcategories, the students report all the three categories of strategies: metacognitive, cognitive, and socio-affective strategies. However, a new strategy, 'listening by repeating' emerged from the interview data, and which was grouped under cognitive strategies. In each of the subcategories of strategy knowledge, the MSLs show considerably greater awareness; strategies assisting in developing listening alone mark a striking difference between the two listening ability groups, and the greater difference lies in their awareness of strategies in metacognitive category.

7.4.3.1 Strategies assisting listening comprehension

The MSLs show greater awareness of strategies assisting listening comprehension, particularly awareness of metacognitive strategies is much higher. Amongst the metacognitive strategies, whereas the MSLs were more aware of self-management, directed attention, planning and selective attention strategies, the LSLs frequently reported on directed attention only. Frequent use of directed attention amongst the groups and selective attention amongst the MSLs is also revealed by Goh (1998a). Selective attention and directed attention as planning in Goh (2005), Vandergrift (2002), and as attentional strategies in Graham (1997) seem to be particularly useful for L2 listening. Frequent use of self-management and planning (advance organiser) also supports Vandergrift (2002). However, although both groups reported frequently on directed attention, there lies a difference between the groups' use of it. The LSL group often reported that despite their trying to redirect their attention and concentrating hard, they lost concentration time and again; this happens when comprehension breaks down. The same was revealed by Goh (1998a), that the 'tactic' of concentrating hard

does not work well for low ability groups maybe because of their insufficient linguistic proficiency. Amongst the cognitive strategies, both groups seem to be much aware of inferencing, elaboration, and listening by repeating as useful strategies. Both of the groups' high frequency of mentions of inferencing is also found in Goh (1998a), and Goh and Taib (2006). The LSLs' more frequent use of the inferencing strategy, although mostly ineffectively, is also apparent from their think aloud protocols data.

These learners seem to reflect less on socio-affective strategies and the possible reason is the unidirectional nature of listening which restricts facilitation of the use of socio-affective strategies (see Goh, 1998a; Goh & Taib, 2006). This finding supports, who also reported the reason as being one way, unidirectional listening. However, cooperation was reported on frequently by the LSL group, in the sense that when they fail to understand or miss something they tend to ask their peers next to them. Conversely, asking for clarification was frequently reported on by the MSL group, as they ask their teachers for clarification of any confusion. Although less frequently, summarisation and self-encouragement were reported on only by the MSL group, whereas reverse question mapping, repetition, and translation were reported on by only the LSLs. This shows the difference between the groups; whilst the MSLs were keen to employ metacognitive strategies and top-down processing, the LSLs revealed their preferences for bottom-up processing.

7.4.3.2 Strategies assisting listening development

The MSLs were much more aware of the strategies that help them develop their listening skills; this finding lends support to Goh (1998a). They are more than three times aware than their counterparts of how to develop listening. The MSLs also reported more strategy items used for developing listening than their counterparts.

The findings reveal that two metacognitive strategies - self-management and self-monitoring - and one cognitive strategy - elaboration - are frequently reported on by the MSLs. Whereas the MSLs also tried to encourage themselves by employing affective strategies, the LSLs seemed to be less aware of these as they reveal no use of such strategies.

7.4.3.3 Strategies that do not work always

The students also show their awareness of some strategies that do not always work in certain situations. Inferencing and elaboration are commonly reported on by the groups as not always working. The limitations of inferencing and elaboration are also reported by Goh (1998a). It seems these strategies by definition can have such limitations as not always being accurate. The possible reason can be not being judicious or capitalising on limited information decoded which can be due to limited automatic processing of the text. Whereas the LSLs reveal that reverse question mapping fails to assist in comprehension, the MSLs are aware that selective attention, planning, and resourcing too sometimes do not work for them. Although less frequently mentioned, the MSLs seem to be more aware of more types of strategies that do not work always, as well as when and why, therefore, they can use those strategies carefully and alternate them if required. The MSLs thus show their awareness of the limitations of strategies in both metacognitive and cognitive categories, whilst Goh (1998a) reveals limitations of cognitive strategies only.

7.5 Summary of the key findings

The overall findings reveal that there is a link between metacognition and listening comprehension. Whilst exploring this link, the study further suggests a potential role of linguistic knowledge that might influence the link.

7.5.1 Link between metacognition and listening comprehension

Based on the overall findings it can be argued that there lies a positive link between learners' metacognition and EFL listening comprehension, although the direction of the link cannot be identified in a correlational study. There is a significantly positive relationship between (online) strategy use, particularly metacognitive strategies and listening comprehension, and the groups differ significantly and considerably. The findings of the task-based, on-line strategy use are more convincing than the findings of off-line strategy use on the grounds that: a) task-based, on-line strategy use reflect listeners' actual strategy use so far whilst performing a listening task; b) triangulation of content and thematic analyses of their strategy use reveals significant and in-depth group differences in their strategic repertoire, and orchestration and coordination of strategy deployment; and c) the findings of task-based, on-line strategy use are supported by their strategy knowledge, as revealed in the triangulation of all the strategic repertoire elicited via three strategy data collection methods (see Section 7.6 below). Their MK about L2 listening also show considerable group differences and thus indicates a link between MK and listening comprehension. Putting them altogether, it is claimed that this study has explored L2 listeners' metacognition holistically and found a positive link between metacognition and EFL listening, and thus filled the broader research gap in existing literature.

The positive link between metacognition and listening comprehension may lend support to the existing empirical studies that found a positive link between metacognition and listening performance (Altuweirish, 2013; Graham & Macaro, 2008; Thompson & Rubin, 1996). However, unlike those studies, this correlational study fails to claim the direction that metacognition has impact on listening comprehension. Moreover, this study has the limitation of not measuring two listening ability groups' linguistic knowledge (see the section below).

Their verbal reports in both think aloud protocols and interview indicate that linguistic knowledge can influence their metacognitive behaviour. Goh (1998a) also found that the LSLs' use of strategies is restricted by their limited linguistic knowledge.

7.5.2 Linguistic knowledge as a potential variable influencing metacognition

Insight into students' online-strategy use in Chapter 5 and their metacognitive knowledge in Chapter 6 offers an in-depth understanding of the trajectories involved in metacognition in EFL listening among EFL learners in Bangladesh. Although the study reveals a positive link between metacognition and listening comprehension, there might be a third variable influencing this relationship. The limitation of this study is not measuring and then controlling the groups' linguistic knowledge. There is a possibility that the MSLs are in an advantageous position because of their greater linguistic knowledge whilst the LSLs' listening performance is constrained by their insufficient linguistic knowledge, as indicated in their verbal data. Lack of threshold level of linguistic knowledge may explain the LSL' less and ineffective use of some strategies (see Field, 2008a; Renandya, 2012).

As seen in Chapter 5, the MSLs seem to be more able to access and recognise more words perhaps due to their larger vocabulary size or better segmentation abilities which facilitated their frequent and effective use of the strategies, whereas the LSLs' use of strategies was limited by their insufficient linguistic knowledge or automaticity. The MSLs seem to have more automaticity in processing the incoming text in real time. This provides, first with an attentional space to think beyond the word level and use of strategies. The LSLs' being more occupied with cognitive strategies seem to block their attention for higher-order strategies i.e., metacognitive strategies. Second, some strategies are available and effective once a certain level of input is decoded to be capitalised on. This also lends support to Nassaji's (2006) finding of the relationship between vocabulary and strategy use. In such

situation, elaboration and monitoring strategies might not be readily available, or inferencing and elaboration not effective when based on an insufficient linguistic base. As such, the LSLs seem to be more prone to local level processing and seldom attend to global understanding and executing higher-order strategies, and since they can hardly rely on their information decoded, they use inferencing frequently but ineffectively as capitalised on insufficient textual resources. This consequently leads to building an incorrect conceptual framework which would otherwise assist in processing the next part of the text.

Students' verbal reports on their metacognitive knowledge also reveal some linguistic differences between the groups. The LSLs seem to be more affected by their limited vocabulary knowledge and segmentation abilities. According to some of the LSLs, whilst the MSLs recognise almost all the words, they cannot recognise even 50% of the words. Thus incomprehension of the text, due to insufficient information decoded, leads to frequent breakdown in the LSLs' concentration and consequently losing track. The LSLs thus report more problems with perception.

Having said this, the MSLs, however, show more strategy knowledge and awareness of motivational factors along with linguistic knowledge. Therefore, not only their greater linguistic knowledge but also their greater awareness of different types of strategies and their effectiveness can also explain their better use of strategies. Moreover, their motivation and exposure to learn to listen is another facilitating factor. Both the groups perceive that listeners' linguistic knowledge e.g., vocabulary, pronunciation, prosodic features along with their strategy knowledge is an important factor to be a GL.

Not measuring groups' linguistic proficiency is an important limitation of this study. Whilst comparing two listening ability groups in their metacognition, the data revealed that the groups might be different linguistically as well. As such, their linguistic knowledge might

have an effect on their metacognitive behaviour, and metacognitive knowledge itself endorses linguistic knowledge as a factor in becoming a good listener. Therefore, a GL is both a strategic and metacognitively knowledgeable listener i.e., a listener with greater metacognitive knowledge including linguistic knowledge might be able to put metacognition in action i.e., use strategies more effectively. Studies also reveal a positive link between linguistic knowledge and listening comprehension (e.g., Bonk, 2000; Mecartty, 2000; Staehr, 2009) and linguistic knowledge e.g., vocabulary and metacognition e.g., strategy use (e.g., Nassaji (2006), and metacognition and listening comprehension (e.g., Goh, 2002; Graham & Macro, 2008; O'Malley et.al., 1989; Vandergrift, 2003b; Vandergrift et. al., 2006). Finally, to benefit from strategies a threshold level of linguistic knowledge is pre-requisite. Graham, Santos & Vanderplank (2010) also echo that listeners can overcome a weaker linguistic base by deploying strategies e.g., inferencing strategy but a certain threshold of linguistic recognition is needed for the strategy to be effective.

7.6 Triangulation of Strategies Elicited via Three Different Methods

Students' strategic repertoire - strategy use whilst offline and on-line, and strategy knowledge - was elicited via three different data collection tools: questionnaire, think aloud protocol, and interview, in two phases of the study. Triangulation of three sets of findings from three different tools reveals significant and considerable differences between the two listening ability groups in their strategy repertoire, and implies that strategy knowledge is positively linked to strategy use. This triangulation further sheds light on the suitability and sensitivity of certain types of strategy data collection tools.

7.6.1 LSLs' and MSLs' overall strategic repertoire as revealed by three different tools

This section triangulates strategy data elicited via three different elicitation tools under three conditions, and highlights striking differences between the two listening ability groups in their strategic repertoire. Triangulation reveals mixed findings. Triangulation of off-line, perceived strategy use and task-based, on-line strategy use shows anomaly in strategy use among tertiary EFL learners in Bangladesh. Perceived strategy use reveals no correlation with the learners' listening comprehension, except in the case of a few individual strategies. In contrast, task-based, on-line strategy use reveals significant differences between the groups and a significant positive correlation with listening comprehension, in the use of metacognitive strategies and a number of individual strategies. Triangulation of strategy use and strategy knowledge (see Appendix 7A) reveals a similar pattern in both task-based, on-line strategy use and strategy knowledge between the groups; the MSLs reported more strategy use and strategy knowledge, particularly metacognitive strategies. The triangulation, therefore, indicates a link between strategy knowledge and strategy use. This supports Zhang and Goh (2006), who argue that learners who have good strategy knowledge are more likely to use those strategies. Therefore, it is argued that the findings of perceived strategy use collected via questionnaire may not be a good predictor of strategy use amongst these learners (see Section 7.5.2 below).

7.6.2 Suitability and sensitivity of strategy data collection tools

Triangulation of strategy data, as above, reveals that verbal data are more reliable; therefore, both think aloud protocol and interview are more sensitive tools than a questionnaire for tapping into listeners' strategies. Questionnaire data may not be a good

predictor of strategy use amongst these learners due to its nature as a data collection tool, particularly when collecting strategy data off-line. Again, between two verbal data collection tools, the think aloud technique reveals the actual use of strategies to the best possible extent, since it uncovers the mental processes when learners whilst performing listening tasks solve problems through strategic processing and arriving at the answers. Whilst a think aloud protocol tries to capture actual strategy use in introspection, an interview elicits strategy knowledge in retrospection. Therefore, it is argued that the think aloud technique is the most sensitive strategy data collection method, which captures students' actual strategic processing at its best. To date, the think aloud technique is the best strategy elicitation method for gaining insights into the mental processes of on-line strategy use (Vandergrift, 2003b), provided care is taken in its implementation and analysis (Graham et al., 2008). Veenman (2005) also argued that on-line methods appear to be more predictive of learning performance. In contrast, the validity of self-report data via questionnaire is often questioned on the grounds that they might be influenced by a tendency towards a favourable self-representation or even by a complete lack of awareness of habitually employed listening strategies (Imhof, 1998). As such, researchers recommend a mixed-method approach to triangulate data collected via different methods – questionnaire, interview, and think-aloud protocol (Imhof, 1998).

In this study, a mixed methods approach to strategy use was necessary. Whilst a questionnaire was necessary to elicit data from a large cohort of participants, a think aloud protocol was employed to further tap into task-based, on-line strategy use of a subsample of participants who represent the larger group. And, interview data resolves the anomaly of the findings of the above two methods. Altogether, findings of on-line, task-based strategy use elicited via think aloud data were more reliable and thus demonstrated the suitability of think aloud technique as a more sensitive tool in tapping into listeners' actual strategy use so far.

7.7 Towards a Model of a 'Good' Listener

The aim of this section is to flesh out a tentative model of a GL. Based on the MSLs' metacognition in L2 listening, i.e., their strategy use and MK, and both MSLs' and LSLs' GL knowledge (i.e., their perceptions of what makes a GL), a tentative model of a GL can be proposed from this study. To this end, this section inductively proceeds towards a model of a GL, which includes a GL's strategy use (triangulation of the MSLs' off-line and on-line strategy use in Section 7.7.1), and a GL's MK (triangulation of the MSLs' MK,[11] and both the MSLs' and the LSLs' GL knowledge in Section 7.7.2). Triangulation of a GL's knowledge of strategies (metacognitive knowledge) and use of strategies (metacognition in action) is in Section 7.7.3. Finally, a holistic metacognitive model of a GL emerges in Section 7.7.4, which includes a GL's both metacognitive knowledge and strategy use, two principal and amenable components of metacognition (Vandergrift & Goh, 2012).

7.7.1. A GL's Strategy Use

As said, a GL's strategy use is reflected in the MSLs' use of strategies; therefore, triangulation of MSLs' perceived off-line strategy use and their task-based, on-line strategy use - types and frequency and strategy orchestration – indicates a GL's strategy use.

Triangulation of perceived off-line and task-based, on-line strategy use is presented in Figure 7.1 below. As revealed, significantly higher use of metacognitive strategies and a number of individual strategies – monitoring, double-check monitoring, (metacognitive strategies) and elaboration, questioning elaboration, summarisation (cognitive strategies) are the strategic repertoire of a GL.

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[11] In this case, MSLs' MK excludes MSLs' GL knowledge from person knowledge to see if there is any correspondence between MSLs' MK with both groups' GL knowledge.
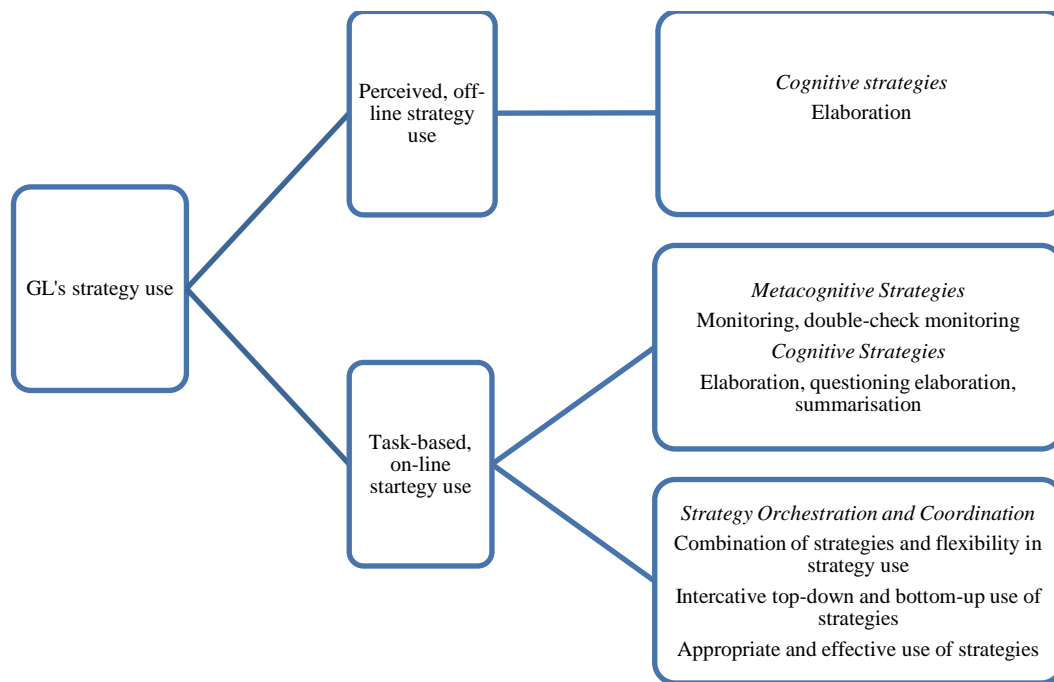
Figure 7.1 A GL's strategy use

Alongside frequent use of these strategies, a GL exhibits judicious and sophisticated use of strategies, in an orchestrated and coordinated manner, as discussed in the thematic analysis section in Chapter 5. They frequently combine both metacognitive and cognitive strategies and show flexibility in moving to another strategy if a previous one does not work. They use strategies interactively by employing both top-down and bottom-up strategies to approach a single problem at hand. They also deploy strategies effectively and appropriately, unlike LSLs' wild guessing without self-questioning or building a conceptual framework.

7.7.2 A GL's Metacognitive Knowledge

This section purports to delineate a GL's MK by triangulating and synthesising MSLs' MK with both MSLs' and LSLs' GL knowledge as interview data revealed. To this end, MSLs' frequently reported aspects associated with their person knowledge (listening self knowledge only, not GL knowledge), task knowledge, and strategy knowledge are

corroborated and synthesised with aspects associated with GL knowledge reported by both the MSLs and LSLs (see Appendix 7B).

That a GL feels motivated to listen in English and is more exposed to listening in English through various media is reflected in MSLs' self-motivation or that from friends and family, and their exposure to listening to English from an early stage in life at home. A GL possess good linguistic knowledge such as good knowledge of vocabulary, pronunciation and accents, and their understanding of prosodic features. Many of the GL strategies in GL knowledge correspond to the MSLs' strategy knowledge; however, inferencing in GL knowledge appear to be an ineffective strategy as this shows negative correlation with performance.

There are some other GL attributes, reported by the students in GL knowledge, which may not be directly corroborated by GLs' MK: GL's ability to understand the meaning quickly; GL's good sensory perception, and good interpretation skills. A GL also has the opportunity to check comprehension and improvement, as perceived by a LSL. That a GL possesses an effective memory is mostly believed by LSLs (3 LSLs) and by a MSL as well. These are the factors they believe affect listening positively and GLs have these attributes.

7.7.3 Triangulation of GL's Strategy Use and Strategy Knowledge

There is a link between a GL's strategy use and strategy knowledge, as a GL's strategy use in Section 7.7.1 is mostly corroborated by a GL's strategy knowledge in Section 7.7.2. MSLs' greater use of strategies, particularly metacognitive strategies, corroborates their more strategy knowledge, particularly metacognitive ones. Many of the individual strategies also corroborate each other. Table 7.1 presents the triangulation of a GL's use

(MSLs' use of strategies, only significant ones) and knowledge (MSLs' frequently[12] reported

strategies and both groups' GL strategies under GL knowledge) of individual strategies.

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[12] As mentioned in Chapters 6, 'frequently' here means reported by at least five students from a group.

Table 7.1

Relationship between a GL's strategy knowledge and strategy use

Strategy Categories	Individual Strategies	**GL's Strategy Use**		**GL's Strategy Knowledge**		
		MSLs' Perceived strategy use	MSLs' On-line strategy use	MSLs' Strategy knowledge	GL Strategies by MSLs	GL Strategies by LSLs
Metacognitive	Directed Attention			Y	Y	Y
	Planning			Y	Y	Y
	Self-management			Y	Y	Y
	Selective Attention			Y	Y	
	Monitoring (double check monitoring)		Y	Y	Y	
Cognitive	Elaboration (questioning elaboration)	Y	Y	Y	Y	Y
	Inferencing			Y	Y	Y
	Summarisation		Y		Y	
	Substitution					Y
	Listening by repeating			Y		
	Note taking			Y		
	Asking for clarification			Y		

Note: Y refers to 'yes'

Strategies revealed in GL's strategy use all corroborate GL's strategy knowledge. They are monitoring and double-check monitoring, elaboration and questioning elaboration, summarisation. However, GL's strategy knowledge of planning, directed attention, selective

attention are also significant but at p<.05. Therefore, there are chances for them to be effective strategies. MSLs' strategy knowledge includes some other strategies, such as listening by repeating, and asking for clarification, which did not reach significance in the strategy use data analysis. Therefore, these strategies seem to constitute GL's strategy knowledge.

Although the inferencing, substitution, note taking, and self-management strategies were reported as GL strategies by either of the groups, they are negatively correlated with listening comprehension in off-line or online strategy use (inferencing at p<.01 and others at p<.05); therefore, they might not be effective strategies or used frequently but ineffectively by the LSLs. From the LSLs' verbal reports it is obvious that when LSLs fail to understand or miss something, they tend to guess and to decide to put in any word(s) in the belief that a synonym is acceptable. Therefore, it seems that they combine two strategies of inferencing and substitution, but that trying to understand mostly based on a wild guess or on inappropriate prior knowledge or experience.

The findings of inferencing and substitution in existing literature are mixed (O'Malley et al., 1989; Smidt & Hegelhimer, 2004; Park, 2010). Whilst O'Malley et al. (1989) found inferencing as an effective strategy, Park (2010) found guessing an ineffective strategy unless it is employed with interactive top-down and bottom-up processing of the text. Cross (2009) justified his non-significant finding on the basis that his Japanese participants were culturally fond of bottom-up processing. Therefore, interactive top-down and bottom-up processing can be a predictor of better performance. In their intervention study, Graham and Macaro (2008) carefully selected strategy clusters from both top-down and bottom-up strategies and found a connection between strategy use and listening outcomes. However, interactive processing often might not happen among these LSLs in an EFL context of Bangladesh, who seem to

suffer from insufficient linguistic knowledge leading to ineffective use of some strategies e.g., inferencing and interactive processing based on e.g., limited vocabulary.

7.7.4 The Model

A tentative model of a GL thus emerged from triangulation and synthesis of the MSLs' MK and strategy use, and both MSLs' and LSLs' GL knowledge (see Figure 7.2 below). The emerged model captures a GL's metacognition in EFL listening–metacognitive knowledge and strategy use. On the one hand, a GL possesses considerably more MK, on the other hand, a GL tends to use more metacognitive strategies and a number of individual strategies, in a sophisticatedly orchestrated manner. However, the model emerging from a correlation study cannot be claimed as an outcome of the impact of metacognition on listening comprehension, rather what a GL looks like. As postulated by Nation (1993), there is a pattern of development- initially learners' skill in use depends on the size of their recognition vocabulary; once it is large enough, the direction of the relationship changes as large vocabulary allows skilful language use. GLs' seemingly larger linguistic knowledge/vocabulary may facilitate greater metacognition which then may explain their better listening comprehension; therefore, this may suggest that once the LSLs have a certain amount of linguistic knowledge, they can benefit from strategy use. However, MK itself includes awareness of the importance of linguistic knowledge. This model is, however, a descriptive model and can be seen in the context of the continuum of listening development. It is a picture of development; it offers insights into how metacognition develops with increase in listening proficiency or vice versa.

A GL is aware of what makes a GL and herself as a listener. A GL is aware of good linguistic knowledge as a first step in better listening, as revealed by both listening ability groups. She possesses good vocabulary, knowledge of pronunciation and prosodic features

which facilitate the processing of the incoming text. She also possesses a good memory which might be useful for storing a longer incoming text (in short term memory) and schemata (in long term memory). Moreover, she is able to process the listening text quickly and grasp main ideas. A GL is also more motivated and strategic in listening, as discussed later on in this section in corroboration with motivation and exposure in listening self knowledge and strategies in strategy knowledge.

A GL is more aware of her listening self. She knows better the cognitive processes involved in listening e.g., global listening. She is also aware that a GL is goal oriented and being self-motivated is exposed to English language and culture (on screen) and persistent in her endeavours of listening to spoken text consistently. A GL's awareness of global listening corresponds to their more top-down strategies. A GL is more motivated and more exposed to listening in English, which also supports Goh (1998a). A link between motivation and metacognitive awareness is supported by Vandergrift (2005).

A GL is aware of various different types of comprehension problems along with the needs to overcome problems and difficulties, and possesses a positive self-concept. A GL's positive self-concept and high self-efficacy are often cited as a positive factor affecting listening comprehension in existing literature (e.g., Goh, 1998a; Graham, 2011; Graham & Macro, 2008; Wolvin & Coakely, 1996; and Zimmerman, 2000).

The GLs' greater awareness of task knowledge supports Goh (1998a). They show greater awareness of different types of input and are exposed to them. They are also more aware about nature of L2 listening that listening is an active skill and an integrative skill and thus approach it accordingly. They are more aware of the text, speaker and environment, and of the facilitating factors. Along with practice in vocabulary, GLs show awareness of practising pronunciation and they also listen frequently and persistently.

A GL is strikingly more aware of listening strategies, particularly of metacognitive strategies, which may support their strategy use. Along with greater awareness of strategies assisting listening comprehension, they show considerably greater awareness of strategies assisting listening development. A GL is also more aware of a number of strategies that do not work always e.g., planning, selective attention and inferencing.

Besides greater awareness of metacognitive knowledge, a GL exhibits more and better action of metacognition by employing frequent metacognitive strategies and a number of individual strategies – monitoring, double-check monitoring (metacognitive strategies), and elaboration, questioning elaboration, and summarisation (cognitive strategies). Moreover, the sophisticated and judicious ways strategies are orchestrated and coordinated makes her a GL: combination of different types of strategies and flexibility of strategy use; interactive top-down and bottom use of strategies, appropriate and effective use of strategies.

A GL's better use of metacognitive strategies is congruent with both O'Malley et al. (1989) and Vandergrift (2003b). The GL's frequent use of metacognitive strategies in general and use of (comprehension) monitoring, and questioning elaboration are also exhibited by the model of the skilled listener in Vandergrift (2003b). Moreover, a GL's deployment of strategies in an orchestrated and coordinated manner, by combining different metacognitive and cognitive, top-down and bottom-up strategies, is also congruent with Vandergrift's (2003b) skilled listener. A GL's monitoring their comprehension lends support to GLLs' strategic repertoire in Rubin (1975). A GLs' use of monitoring and elaboration strategies and use of interactive top-down and bottom-up strategies also corroborates O'Malley et.al. (1989).
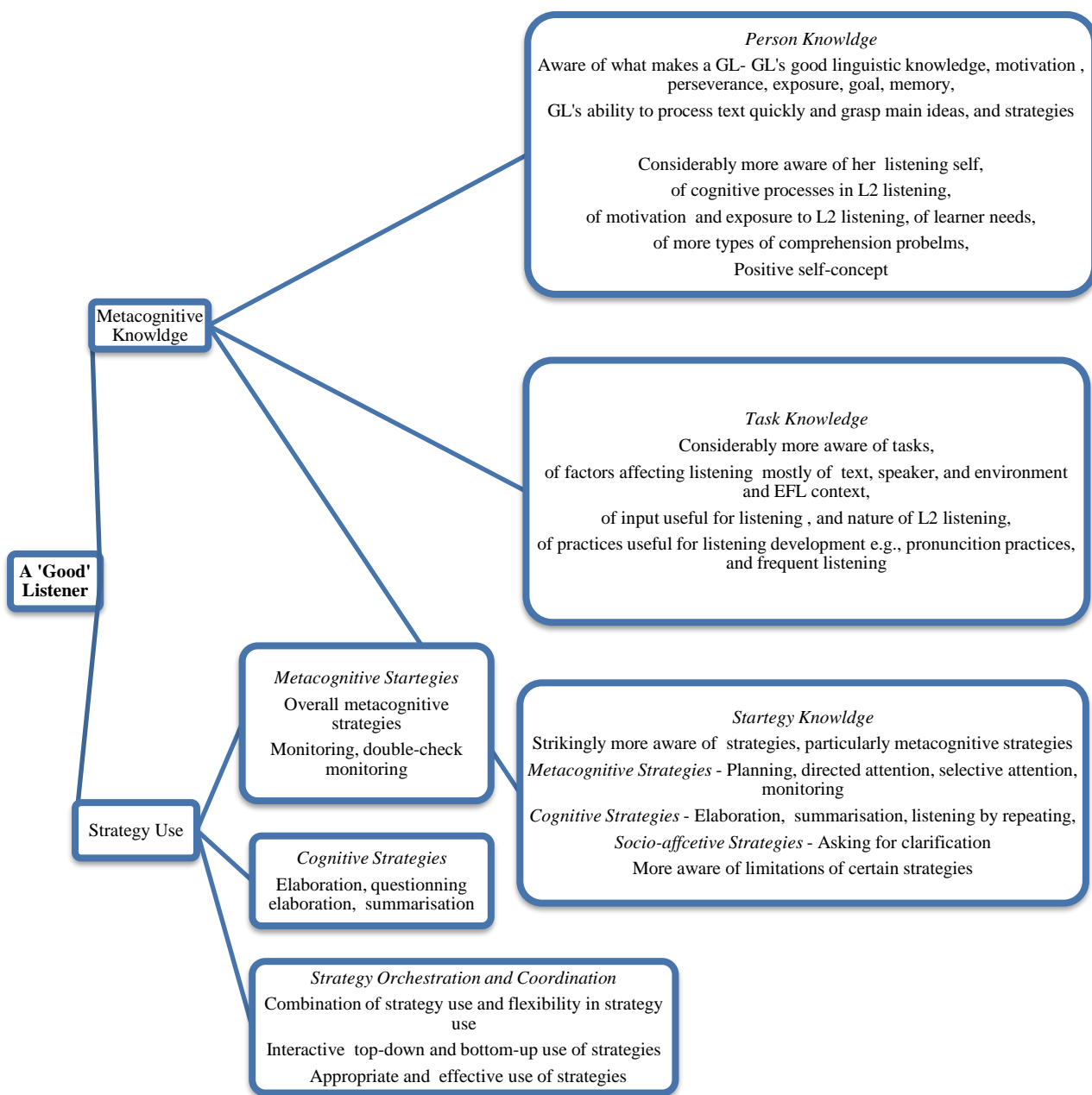
Figure 7.2 A tentative model of a 'good' listener

A GL's greater awareness of strategies corresponds to their frequent use of strategies,

particularly metacognitive strategies; the link is also supported by Zhang and Goh (2006). As

in Vogely (1995), good listeners' effective use of comprehension strategies such as planning,

elaborating, inferencing is also supported by the present study. The GL's strategy knowledge

of planning, directed attention, selective attention, elaboration, and asking for clarification is also in congruence with Imhof's (1998) good listener strategies. Imhof's (1998) self-related strategies such as attention regulation, active interest building, and gaining control of motivational state by defining an intention for selection are also supported by a GL's MK the present study. This study reveals further that listening by repeating is an effective strategy; a new strategy emerged from students' interview data. This is defined as a cognitive strategy as it corresponds to the 'practising' strategy under the cognitive category in Oxford's (1990) study.

How the GL Model can be used

Given the threshold level of linguistic knowledge in possession, both the LSLs and the MSLs can benefit from this model of a GL. The model can serve as a checklist in the context of the continuum of development. And, any intervention in metacognition needs to be carefully designed being mindful of the linguistic and listening proficiency of learners. However, the model does not provide an inexhaustive list. Moreover, it is limited to academic and unidirectional listening and an 'input poor' EFL context. This metacognitive model of a GL advocates for self-regulation and autonomy together with peer collaboration.

How the LSLs could benefit from this model

   a. **To address comprehension problems**

The LSLs frequently reported problems in all the three phases of comprehension problems, particularly in perception problems. Their degree of cognitive constraints even in same problems is also different from that of the MSLs. Here they can be aware of the GLs' processing and managing the incoming text whilst dealing with these problems. It is, however, not just being aware of feeling frustrated with some particular problems, for

example not being able to concentrate, not recognising the words, etc.; they need to be aware of their needs in order to overcome those.

Looking at the LSLs' comprehension problems, particularly at the perception level such as word recognition, concentration break, or anxiety about the listening task, these may stem partially from linguistic insufficiency and partially from lack of perception skills caused by vocabulary, pronunciation, speed, etc. The LSLs seemed to be more affected by the perception problems. They seem to be not able to process the text quickly i.e., lack enough automaticity. Often they faced problems with chunking by putting boundaries in the stream of speech, sometimes they failed to recognise even the known words due to unfamiliar spoken text as they did not develop a grapheme- phoneme correspondence. To address these problems, their bottom up skills can be enhanced by approaching the text globally, employing different segmentation strategies by being aware of cross-linguistic differences as well as similarities and metacognitive strategies by planning, managing and monitoring their comprehension along with enriching their vocabulary size and more exposure to spoken text.

Along with enhancing linguistic knowledge of vocabulary and grammar, the LSLs could focus on other linguistic features or cues e.g., prosodic features, which are perceived as important linguistic features by the GLs. The LSLs can be aware of stress and intonation pattern of spoken English by employing a remedial approach and strong syllable strategy (see Field, 2003; Cutler, 1990) by putting boundary on the pauses in natural speech and focusing on stressed syllables which often mark the beginning of a new word. They can frequently listen and expose themselves to spoken English, as the GLs do. However, repeated practice to train the ear and recognising words may sometimes cause loss in motivation (Field, 2008a) as the students in Bangladesh generally seem to be less motivated and frustrated. Among such listeners who are usually less motivated and have negative self-concept, some top-down, strategic approach first would promote their motivation and then activities with a more

bottom-up focus could be done (Goh, 2008), as students need to be strategic and systematic to benefit from repeated practice.

GLs' use of metacognitive strategies and interactive top-down and bottom-up use of strategies may help the LSLs. Use of metacognitive strategies - directed attention coupled with selective attention and continuously monitoring their comprehension may help LSLs face their concentration problems. Processing the text at a global level by giving selective attention may help them by reducing the pressure of identifying each and every word and thus alleviate their anxiety, and continuously monitoring their comprehension may also keep them attentive. Use of directed attention coupled with monitoring is also suggested by Goh (2000). The LSLs' problems with word recognition could also be compensated with GLs' interactive use of top-down (e.g., elaboration) and bottom- up strategies (e.g., selective attention). GLs lesser use of the translation strategy, and approaching the text globally may help LSLs may refrain them with some attentional room for using top-down strategies. Their use of inferencing could be effective when used with other strategies to monitor their comprehension by using elaboration - between parts elaboration as well as questioning elaboration - and monitoring strategies e.g., comprehension monitoring, double check monitoring; the same is suggested by O'Malley et al. (1989). The LSLs tend to use top-down and bottom-up strategies from a selected range of strategies only (also seen Murphy, 1985), e.g., translation and inferencing; therefore, they can be aware of other types of strategies and their potential, as exhibited in GLs' greater awareness of strategy knowledge.

With regards to parsing and utilisation problems, about 50% of the LSLs think that either they forget almost all they hear (a parsing problem), or think that although they can hear many of the spoken words, they are unable to understand the overall meaning of the text or part of it (a utilisation problem). The reason for the former is that LSLs often fail to use elaboration appropriately by activating appropriate schema e.g., prior knowledge and

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checking and verifying with co-text to parse the perceived words into the short-term memory, the working memory, and then sending them to the long-term memory. They may also not know how to suppress irrelevant information to make gist (Harley, 2008) and any words they happen to hear seem to be key words to them (see Graham, 2006). Since they seem not to elaborate based on parts in the text and find a gist, the LSLs fail to create a, "big picture" (Goh, 2000) or a "conceptual framework" (Vandergrift, 2003b), which might otherwise act as a sounding board. The parsing phase requires interaction between bottom-up and top-down processing. GLs frequently use elaboration- questioning and creative elaboration and thus continue to create a conceptual framework by checking and verifying their previous as well as current comprehension in a dialogic manner within the self. However, LSLs' inability to parse all they hear and send them to their long-term memory creates a "cognitive load" (Anderson, 2010) in their short-term memory; memory as a factor affecting listening. This also causes the later problem of not getting the overall or intended meaning of the text, even after hearing many of the words spoken, a problem in the utilisation phase. However, their use of inferencing and prior knowledge become ineffective due to some possible reasons: their inferencing is based on limited words to infer a proper sense (Graham, 2006; Goh, 2000; Vandergrift, 2003b); they have limited prior information or prior knowledge is not systematically stored in the long-term memory or it is not activated strategically (Rabinowitz & Chi, 1987).

b. To address negativity

LSLs possess a negative listening self-concept and they often blame themselves or external factors, for example vocabulary, pronunciation, speed, or inefficient memory, for their poor listening abilities; a similar view is shared by Goh (2000). They often feel frustrated that their level is not improving, even after practising/taking part in listening exercises. This leads to their low motivation and self-efficacy. Out of frustration a number of

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them even consider giving up practising this component, and think of compensating the poor grades in listening with good grades in other modules. If their confidence could be boosted and motivation enhanced, there would be a chance to practise listening frequently, in different ways with different input types for better listening experience.

Whereas LSLs are more concerned with negative and external factors, GLs show much awareness of positive factors such as motivation, exposure to listening in English, and use of strategies. They reveal that their own personality acts as an obstacle in developing listening. The LSLs' low self-esteem coupled with frustration and fear of the skill restrains them from practising the skill. Their beliefs with regards to the skill are their own "presumed shortcomings," as they believe that the listening processes are uncontrollable (Graham, 2006) and Graham and Macaro (2008) also found this prevalent amongst listeners with lower levels of self-efficacy and motivation. This indicates that the ingrained presuppositions of negativity need to be deconstructed. There is empirical evidence that learners' self-efficacy and motivation can be improved by strategy intervention (Chamot, Barnhart, El-Dinary, & Robbins, 1996; Graham & Macaro, 2008) and by intervention in metacognitive awareness (Altuwairesh, 2013; Goh & Taib, 2006). Therefore, learners can be the agent of their own learning; they can control their learning by being aware of facilitating factors, by using metacognitive strategies to boost their sense of agency (Paris & Winograd, 1990) or self-efficacy beliefs (Bandura, 1995) or positive self-concept (Wolvin & Coakely, 1996). More exposure to listening through more practice and frequent listening will help them only when they are doing it with interest and motivation, and when they know the purpose and requirements of the task and approach the task accordingly.

c. To raise greater awareness of the listening task

GLs are considerably more aware of the listening task, especially the nature and demands of the task. If LSLs could be aware of the demands and goals of listening task at hand, they might benefit.

The LSLs often seem to be aware of factors that negatively affect their listening and they are also not aware of a diverse kind of input types. It seems that they are often talking about the negative factors associated with task and listeners themselves, overlooking other factors involved such as speaker, text, and environment and the facilitating factors e.g., motivation. If they knew how all these factors interact whilst listening, they would be able to concentrate on other factors as well. Their lack of awareness of diverse types of input may inhibit the development of their listening and make their experience monotonous. It seems that they usually do listening exercises to develop listening, often for good grades, resulting in a lack of motivation to listen. Conversely, GLs try different types of input such as English movies, TV series, songs, and different lectures of interest. They are also aware of the usefulness of these types of input for developing different listening sub-skills. They listen frequently to whatever is of interest to them and they also listen by repeating; therefore they do persevere.

GLs are more aware of the nature of L2 listening. LSLs are aware that the listening skill is different from other skills and from listening in an L1; however, they lack the awareness that listening is an active skill, which requires active participation. In addition, GLs perceive listening as an integrative skill. Thus, if LSLs perceived the key role of listening as an integrative skill, they would be more motivated to learn to listen in order to learn the language (Vandergrift, 2004). An understanding of the nature of listening also permits teachers to instruct weaker listeners in routines appropriate to the target language, and thus to ensure that exposure to L2 recordings offer an opportunity rather than a threat (Field, 2008,

p. 80). Buck (1995) suggests that when teachers better understand the nature of listening comprehension they can better provide optimum listening practice for their learners.

d. To raise greater awareness of strategies

There is empirical evidence of the link between strategy knowledge and strategy use (e.g., Zhang & Goh, 2006). GLs' greater awareness of strategies and their frequent use of different types of strategy also lend support to the link; moreover, this study reveals a significant positive correlation between metacognitive strategy use and listening comprehension. Therefore, together they indicate a potential role of strategies in listening. Given strategy use has the potential to enhance motivation, self-efficacy, and listening performance (e.g., Graham & Macaro, 2008; Goh and Taib, 2006), the LSLs could be made aware of the effective strategies and effective ways of their deployment by the GLs. The LSLs need to be aware of not only strategies whilst listening, but also strategies that help them develop their listening skills, and also the limitations of some strategies.

GLs' use of frequent metacognitive strategies could be useful for LSLs for self-control, self-monitoring, and self-regulation. They need to plan for the listening task; select judiciously what to focus on, manage themselves for maximum output, and direct their attention continuously whilst listening. Whilst listening, they need to monitor their comprehension and performance using different linguistic and extra-linguistic clues, evaluate their ability to perform the task as well as upon completion reflect on the performance it. These strategies have the potential to self-regulate and self-control them as listeners. Therefore, the LSLs can use these strategies to monitor and manage themselves whilst processing the incoming text. Moreover, the LSLs need to be aware of using strategies in an orchestrated and coordinated manner by combining different metacognitive and cognitive

strategies with flexibility, use both top-down and bottom-up strategies interactively, and use strategies appropriately and effectively.

There is no doubt that a threshold level of linguistic knowledge is prerequisite for other facilitating factors to be effective for better listening, although it is not known what this threshold level is. However, for the listeners who have less motivation, being exposed to listening text frequently only might not work as expected. They need to be provided with initial training with basic techniques i.e., the strategies to 'drive a car' (Field, 2008a). Therefore, repeated practice and exposure itself cannot guarantee better listening; rather a host of dynamic issues are involved that act interactively for better listening, for example motivation and perseverance, use of strategies, self-efficacy, being aware of the cognitive processes and nature of L2 listening, listening task goals and purposes, along with sufficient linguistic knowledge and segmentation skills.

How the MSLs could benefit from this model

Since the model is the reflection of 15 MSLs' metacognitive behaviour, and 30 MSLs' and LSLs' perceptions of what makes a GL, MSLs could also benefit from it. Together they represent 388 participants. Therefore, a MSL could benefit from the collective knowledge and behaviour of MSLs, as well as the collective knowledge of GLs. They could use the model as a checklist to judge themselves against and to act accordingly. As seen in their problems during listening, MSLs also show some similar kinds of problems in all three phases of comprehension; for example, forgetting what they have heard already. This means they also have limited short-term memory, regardless of their listening proficiency (see Call, 1985). Moreover, MSLs reported more types of perception problems, which could be alleviated through effective listening strategies.

7.8 Conclusion

This chapter discussed the main findings of the study on metacognition and listening comprehension by interpreting the findings and locating them in existing literature. By presenting the triangulation and synthesis of the findings, this chapter showed a link between metacognition and listening comprehension, and the significant differences between the two listening ability groups. The chapter further revealed the potential role of linguistic knowledge behind the relationship and the differences between the LSLs and MSLs. Furthermore, based on the MSLs' metacognitive behaviour and both groups' perceptions of a GL, a tentative model of a GL from a holistic metacognitive perspective was presented. Exploration of listeners' metacognition in an EFL and proposing a tentative model of a GL from a holistic metacognitive perspective are important original contributions to existing L2 metacognition literature. Triangulating strategies elicited via three different methods, this chapter provided the evidence that a think aloud protocol is the most sensitive strategy data collection tool; this is a methodological contribution that the study makes. Based on these discussions, the next chapter, Chapter 8 concludes the thesis by highlighting the original contributions, acknowledging the limitations, and discussing the implications of the study followed by directions for future research.

Chapter 8 Conclusion

8.1 Introduction

This study set out to explore learners' metacognition in L2 listening in an EFL context. Reviewing existing research on metacognitive awareness in L2 listening reveals a broader research gap, in that a very limited number of studies have explored L2 listeners' metacognition holistically by looking into both metacognitive knowledge and strategy use together (see Vandergrift & Goh, 2012). It is argued that an insight into listeners' metacognition both in terms of their strategy use and their MK about L2 listening is necessary to approach listening holistically. Together they can provide an insight into learning to listen and inform the teaching of L2 listening. Learners have their definite knowledge and beliefs about learning (Wenden, 1991, 1998), and it is often the case that what learners do is a reflection of what they believe. Learners' beliefs and actions are amenable (Vandergrift & Goh, 2012); therefore, if their MK and strategy use can be tapped into, they could inform the learning and teaching of L2 listening. Hence the present study set out to explore tertiary-level EFL learners' strategy use and MK, an insight into which could inform the teaching and learning of L2 listening, which is both learner-centred and process-oriented. To understand this phenomenon, the following research questions were proposed:

- RQ1. Is there any relationship between tertiary-level EFL learners' perceived strategy use and their listening comprehension in the context of Bangladesh?

- RQ2. Are there any differences between less successful listeners and more successful listeners in their task-based, on-line listening strategy use?

- RQ3. What perceptions do the less successful listeners and more successful listeners have of EFL listening?

8.2 Key Findings

Three key findings are provided in the study from answering the three RQS. A tentative model of a GL is then fleshed out from triangulation of the MSLs' strategy use and MK, and the two listening ability groups' GL knowledge. In addition, the study reveals the sensitivity of strategy data collection tools from the triangulation of strategies elicited via three different data collection tools.

Analyses of data in Phase I and II of the study revealed three major findings addressing the three RQs:

1. There was no significant relationship between learners' perceived strategy use and listening comprehension, except amongst a few individual strategies.

2. There were significant group differences in their task-based, on-line strategy use; the MSL group showed significantly higher use of metacognitive strategies and a number of individual strategies. Qualitative analysis of the protocols also reinforced the differences and also revealed some in-depth differences.

3. There were considerable differences in their perceptions of EFL listening between the two listening ability groups; the MSLs showed a considerably higher degree of metacognitive knowledge about EFL listening.

Together, the findings reveal a positive link between metacognition and EFL listening comprehension; a significantly positive link between strategy use and listening comprehension and a considerable positive link between metacognitive knowledge and listening comprehension. However, the study uncovers a potential role of linguistic knowledge which might influence the link; hence the study limits the interpretation of the findings.

The study further revealed two important findings:

a. One of the main strengths of this study was its use of three different strategy data collection tools and its argument for think aloud protocols as the most sensitive and suitable strategy data collection tool. Triangulation of strategies collected via three data collection methods uncovered that think aloud data and interview data were, to a great extent, in congruence; however, the questionnaire data failed to corroborate those collected via the think aloud protocols and the interviews. It is, therefore, argued that both think aloud protocols and interviews are more sensitive tools than questionnaires for tapping into learners' strategies. Again, between the think aloud protocols and the interviews, the think aloud protocols tapped into the mental processes online whilst the learners were performing the listening task and revealing their thought processes to reach comprehension. A think aloud protocol tries to capture actual strategic behaviour in introspection, in contrast to how an interview taps into it using retrospection. It can, therefore, be argued that a think aloud protocol is the most sensitive strategy data collection tool.

b. This study claims that it has developed a tentative model of a GL based on a holistic metacognitive approach. The model was developed from the triangulation of the MSLs' metacognitive behaviour in terms of strategy use and metacognitive knowledge, and from the perceptions of a GL of all the participants. The model, developed from a holistic metacognitive perspective, exhibits both of the principal components of metacognition - strategy use and metacognitive knowledge - and which are amenable (Vandergrift & Goh, 2012). In terms of strategy use, a GL seems to use metacognitive strategies more frequently, and the individual strategies of monitoring, double-check monitoring, elaboration, questioning elaboration and summarisation, and less frequently translation as well as inferencing strategies.

Moreover, the way strategies are orchestrated and coordinated makes a GL. GLs combine strategies frequently and show flexibility; they use interactive top-down and bottom-up strategies to process the text and to reach for meaning, and they use strategies effectively and appropriately, i.e., without guessing wildly they elaborate on the incoming information based on other available information from prior knowledge, context etc., and continuously question and verify their comprehension. In terms of metacognitive knowledge, a GL shows: strikingly greater awareness of strategy knowledge, especially strategies for developing listening and of metacognitive strategies; considerably greater awareness of task knowledge, especially input useful for listening and the nature of L2 listening; greater awareness of certain aspects of person knowledge, such as motivation and exposure to L2 listening, and the cognitive processes involved in listening; and more importantly, shows a positive self-concept and high self-efficacy. As developed, this metacognitive model of a GL can be used as a checklist by the learners and teachers in the context of the continuum of listening development.

8.3 Contributions of this Study

This study makes several contributions to theory, knowledge about good listeners, methodology, and learning context. These contributions are described below.

Theoretical contribution

This study has made a contribution in terms of learning to listen. In order to have total understanding of learning to listen in an L2, a holistic approach to metacognition is necessary. That is, learning to listen encompasses both metacognitive knowledge and strategy use in metacognition. Awareness of one of these will produce only partial understanding of metacognition in L2 listening. A considerable amount of research has been done on listening

strategy use in different SL/FL contexts with different ages and levels with different data collection tools. On the other hand, a number of studies have explored metacognitive awareness of the person, task and strategies involved via a MALQ, interview or listening diary. Both lines of research have provided valuable in-sights into L2 listening. However, these studies have only partially explored the phenomenon of the role metacognition in L2 listening. Therefore, a holistic understanding of learning to listen has not been developed with evidence from a particular group of listeners. This present study fills this gap and adds knowledge to L2 metacognition research; metacognition informs the listening process holistically when listeners are aware of the trajectories involved in the listening process and they take action, for example by employing strategies. The study further sheds light on the potential role of linguistic knowledge which might also accelerate metacognition.

Development of a 'good' listener model

Numerous research studies on strategies have emphasised GL strategies by exploring successful/ effective/ skilled listeners' strategy use (e.g., Graham et al., 2008; O'Malley et. al., 1989; Vandergrift, 2003), and a number of research studies on metacognitive awareness have revealed what makes a GL, by exploring successful/effective/skilled listeners' strategy knowledge (e.g., Imhof, 1998; Vogely, 1995). Thus, the studies have proposed a model of a GL (skilled/ successful/ effective listener) based on either their strategy use or strategy knowledge from a partial metacognitive perspective. It seems that only Goh, (1998) investigated high-ability listeners from both the perspective of metacognitive knowledge and strategy use, although by strategy use Goh meant metacognitive strategies. However, Goh did not attempt to synthesise high-ability listeners' metacognitive knowledge and metacognitive strategy use to present what a high-ability listener looks like. My study, however, further looked into a subsample of participants' perceptions of what makes a GL. Therefore, triangulating the MSLs' strategy use and MK, and the students' perception of a GL, this

study developed a model of a GL from a holistic metacognitive perspective using different sources (see Section 8.2 for the model itself). Although this model needs to be interpreted in the context of the development of listening comprehension, the model has important pedagogical implications (see Section 8.5.2).

Methodological contribution

This study also makes a methodological contribution. A think aloud protocol seems to be the most sensitive strategy data collection tool, whilst questionnaire data may have some limitations. Triangulation of strategies collected via three data collection methods uncovered that think aloud data and interview data were, to a great extent, in congruence; however, the questionnaire data failed to corroborate those collected via think aloud protocol and interview. The study revealed that both a think aloud protocol and an interview are more sensitive tools than a questionnaire for tapping into learners' strategies and between the first two, the think aloud protocol attempts to tap into mental processes online whilst learners are performing a listening task and reveals their thought processes whilst they are solving the problems. When think aloud tries to capture in introspection, task-based, actual strategies used online, an interview elicits strategy use in retrospection. Therefore, a think aloud protocol is the most sensitive strategy data collection tool, which captures the actual picture of strategy use so far. Employing three different data collection tools to understand a single phenomenon boosts the rigour of the study.

Exploration of a novel EFL context

The EFL context this study explored is a novel context in the area of metacognition in L2 listening research. As discussed in Chapter 1, Bangladesh is a monolingual country where other languages enjoy less importance; moreover, unlike other EFL contexts, for example in Asia, the EFL context in Bangladesh is an "input-poor" context, which provides very limited exposure to listening in English; i.e., the use of English is predominantly in academic

situations. To date, very few studies have investigated EFL listening in the Bangladeshi context; none seem to have included tertiary-level learners at public universities in Bangladesh.

8.4 Limitations of the Study

I acknowledge that my study has some limitations, mostly concerning methodology. These are outlined below:

a) One of the main limitations of the study is not measuring students' linguistic proficiency along with listening proficiency. Therefore, although the study revealed a significant, positive relationship between metacognition and listening comprehension, a claim cannot be made that the differences between the groups were only in metacognition; rather, linguistic proficiency might have been another variable. Although both the LSLs and the MSLs had to secure their university placements with good grades in English in university admission tests combining their previous grades in English (basically in terms of knowledge of vocabulary and grammar), many of the LSLs' verbal reports reveal that their use of some strategies and listening performance was restricted by their limited linguistic knowledge.

b) Given the nature of PhD research, the study was bound by time and by having a solo researcher. Due to such constraints, the sample size chosen for Phase II was relatively small (30 participants including 15 successful listeners and 15 less successful listeners); however, this sample size seemed to be sufficient to represent the larger group of participants, as well as to allow for the statistical tests needed for the study.

c) Whilst collecting the listening test data along with the questionnaire data from intact classes at the target universities, the class size of two of the classes was big (70-80 students). This might raise validity issues regarding the listening test, since the sound

quality may not have given equal opportunity to all the participants. To minimise this, great care was taken to ensure good sound quality by using several sound boxes in different areas of the classroom and was confirmed by asking the students.

d) Think aloud protocols to elicit data cannot grasp all from a learner's inner thinking process because of the disruptive nature of thinking aloud; the pauses during listening might have interrupted the flow of listening to and processing the text. A number of authors have also debated the pros and cons of using the think aloud technique for the discovery of a learner's decision-making processes (Cohen, 1984; Ericsson & Simon, 1993). However, despite such problems with the think aloud technique, it is now widely agreed that the think aloud technique is the most direct and therefore best tool available to examine on-going processes when learning happens (Gu, 2014). Attempt was to minimize some shortcomings by training and prompting.

e) In the think aloud data collection procedures, due to time constraints it was not possible to provide more time for the participants to practise after the training was offered the week before. The main think aloud session began only the next day. However, the participants were not asked to participate in the main think aloud session until they felt they were ready to think aloud after practice in the warm up session.

f) The findings might not be generalisable beyond tertiary-level EFL learners of undergraduate programmes majoring in English at public universities in Bangladesh; learners at private universities and national universities might produce different results.

g) Again, given the scope of PhD research, it was not possible to look further into the data analysis; for example the think aloud data could have produced further insights into learners' MK e.g., listening problems.

8.5 Implications of the Study

Despite the above-mentioned limitations (in Section 8.4), the findings of this study make theoretical, methodological, and contextual contributions to the field of L2 listening and metacognition (as discussed in Section 8.3). Theoretically, insights into learning to listen from a holistic metacognitive perspective are provided by this study, and a holistic model of a GL is proposed. Methodologically, this study was a rigorous investigation into listeners' strategic repertoire, employing the three different tools of questionnaire, think aloud protocols, and interviews, and the triangulation of findings revealed that the think aloud technique was a more sensitive tool for tapping into listeners' mental processes and strategic processing. As such, there are a number of implications of the study for learners and teachers, educators and policy makers, and researchers. These implications are detailed below.

8.5.1 Pedagogical Implications

An insight into listeners' metacognition can inform teaching among different listening ability groups and approaching listening holistically. This integrated, holistic approach advocates teaching listening by raising students' metacognitive awareness of L2 listening and teaching listening strategy use, taking students' linguistic knowledge into consideration. Together, these insights could inform learning to listen. Both learners and teachers could benefit from the insights gained from this study. Learners could be more aware of how different processes are involved in listening and how to approach the listening task. Teachers could know about all these different processes and how learning takes place as revealed by both the MSLs and the LSLs and being informed they could help their students by being mindful of their learners' needs. The model of a GL advocates both peer collaboration as well as self-regulation and learner autonomy. The proposed model of a GL can be used as a checklist by both learners and teachers and this checklist can also provide with ideas for

intervention in metacognition and listening comprehension. However, it is assumed that a threshold level of linguistic knowledge is needed in order to benefit from this model (as elaborated in Sections 7.5.2 and 7.7.4).

Since there is a significant relationship between metacognition and L2 listening, educators and policy makers can also think of incorporating metacognitive awareness-raising lessons and strategy instruction along with practice in segmentation skills and linguistic knowledge in the curriculum for the listening component, which advocates a process-oriented and learner-centred curriculum.

8.5.2 Research Implications

Triangulation of strategy data revealed that the think aloud technique was the most sensitive tool to tap into the complex mental processes of listening comprehension and strategic processing. Therefore, it is advocated that think aloud protocols be used to tap into listeners' strategy use (as elaborated in Section 7.6.2). However, a mixed-methods approach to strategy research is deemed important to minimise the pitfalls of any single method design.

8.6 Directions for Future Research

This study investigated tertiary EFL learners' metacognition in L2 listening; their listening strategy use and their MK about EFL listening. In so doing, the study bridged some gaps in the L2 metacognition literature. However, whilst conducting the investigation, many other issues were found that await further investigation. Below are some suggested directions for future research on metacognition in L2 listening.

- First of all, more research is needed that controls the confounding variable of linguistic proficiency to be able to make a strong claim regarding the relationship

between metacognition and listening comprehension. By controlling the linguistic variable, this study can be replicated in different contexts, with different learners.

- Future researchers could carry out in-depth investigations of metacognition in L2 listening by exploring a bigger sample size than 30, using more instruments to further triangulate students' MK data.

- The significant link between listeners' metacognition and listening comprehension in this study calls for more intervention studies in metacognition – both strategy use and metacognitive knowledge to be able to make a strong claim that metacognition improves listening. The present study, in this case, can suggest what can be intervened, particularly in the EFL context of Bangladesh.

- Other researchers may wish to understand the relationship between students' perceptions and teachers' perceptions of L2 listening, as well as of a GL, to see if there is any gap between learning and teaching.

- Future studies could explore tertiary EFL listeners at public, private and national universities to capture a bigger picture of English higher education in Bangladesh.

8.7 A Last Word

Based on the findings of this study, it can be argued that there is a positive link between metacognition and listening comprehension, which supports existing studies e.g., Vandergrift et al. (2006), Goh and Hu (2014). More intervention studies (e.g., Graham & Macaro, 2008; Vandegrift & Tafaghotdari, 2010) can provide evidence of metacognition's influence on listening. Learners need to learn to listen and metacognition can be helpful for better control of learning to listen (Vandergrift & Goh, 2012). Metacognition - strategies and metacognitive knowledge - is amenable to change (Vandergrift & Goh, 2012), and raising metacognitive awareness amongst learners can facilitate the learning process through

enhancing motivation, self-efficacy, self-regulation and learner autonomy (Graham & Macaro, 2008; Oxford, 2011; Vandergrift, 2005; Wenden, 1998). Alongside teaching of linguistic knowledge and segmentation skills, metacognitive instruction can be introduced into listening curriculum. To address Renandya (2012), teaching anything and everything is demanding and teaching metacognition can be as problematic as teaching vocabulary and grammar (Cohen & Macaro, 2007). And, teaching strategies is not a replacement for teaching components like practising listening or vocabulary, rather strategy instruction is one way of teaching listening for better listening experience (Graham, 2017). However, to benefit from metacognitive instruction, a threshold level of linguistic proficiency is needed (Field, 2008a; Graham, Santos & Vanderplank, 2010; Renandya, 2012). Although many of the strategies are common language learning strategies in L1 and L2, they need to be triggered and some other strategies specific to L2 listening need to be practised along with practices in linguistic knowledge and segmentation (Field, 2008a). Deliberate practice of listening will work best when listeners are equipped with how to listen, hence they need to be provided with initial training in the basic techniques of metacognition to 'drive a car' (Field, 2008a). Above all, the metacognitive approach can help the learners to reflect on, set goals, and act accordingly (Goh, 2010; Vandergrift, 2007; Vandergrift & Goh, 2012).

Appendices

Appendices for Chapter 3

Appendix 3A: EFL Listening Strategy Questionnaire

(Researcher's Copy)

(Note: Students' copy does not include columns on strategy category and sub-category)

Roll No/Student ID of the participant:

Name of the University:

Contact No:

Instructions: We just want to know about the way you listen in English. There are no wrong answers of the items. And, this will not affect your academic grades at all. You are asked to be frank and free to answer the "Questionnaire" honestly for the purpose of a research work. Please respond to *all* the items below. Read the statement first, and then choose an answer for each statement by circling any *one* of the numbers next to the statement. You will answer according to your experience of your English listening both audio and video in general. Your answer can be one of the five responses ranging from 1 to 5, where

 1=Never or almost never true of me

2= Usually not true of me

3= Sometimes true of me

4= Usually true of me

5= Always or almost always true of me

Example: Statement- I try to concentrate on the key words of the speech. Answer __4__

Please circle the number that matches you.

No	Strategy Category	Strategy Sub-category	Strategy Item	1=Never or almost never true of me	2= Usually not true of me	3= Sometimes true of me	4 = Usually true of me	5= Always or almost always true of me
1	Metacognitive Strategy	Planning	Before listening I concentrate on the instructions about what I have to do.	1	2	3	4	5
2		Planning	I try to think ahead what may come next.	1	2	3	4	5
3		Directed Attention	I listen the recording very attentively.	1	2	3	4	5
4		Directed Attention	I concentrate on the listening tasks to be completed.	1	2	3	4	5
5		Selective attention	I listen for the key words.	1	2	3	4	5
6		Selective Attention	Whilst listening I try to understand the setting, the speakers in the conversation, their relationship.	1	2	3	4	5
7		Self-management	I put everything aside and concentrate on what s/he is saying.	1	2	3	4	5
8		Self-monitoring (Comprehension monitoring)	What I listen I translate in my own language and see if it sounds right. .	1	2	3	4	5
9		Self-monitoring (Comprehension monitoring)	Whilst listening I just try to put everything together, as understanding one thing may help understand another.	1	2	3	4	5

10		Self-monitoring (Auditory monitoring)	I use the sound of one word to relate to other words I know.	1	2	3	4	5
11		Self-monitoring (Double-check monitoring)	If I don't understand anything I think I might catch it at the end and then I'd go back. .	1	2	3	4	5
12		Self-evaluation (Ability evaluation)	I check with myself whether I am able to perform the task.	1	2	3	4	5
13		Self-evaluation (Performance evaluation)	After completing a task I check whether my listening comprehension is right.	1	2	3	4	5
14		Self-evaluation (Strategy evaluation)	I check whether the technique or strategy I used to complete a task is right.	1	2	3	4	5
15		Problem Identification	I try to identify the problem that hinders my understanding of the listening or the task.	1	2	3	4	5
16	Cognitive Strategy	Inferencing (Linguistic inferencing)	I use other words in the nearby sentences to understand an unfamiliar or missing word.	1	2	3	4	5
17		Inferencing (Linguistic inferencing)	I try to guess from the context to understand an unfamiliar or missing word.	1	2	3	4	5
18		Inferencing (Paralinguistic inferencing)	I try to understand the stress and intonation pattern of the speech to understand the meaning of what is said.	1	2	3	4	5
19		Inferencing (Kinesic inferencing)	I try to read the speaker's body language- facial expression, hand gestures to understand what is said.	1	2	3	4	5
20		Inferencing (Extralinguistic inferencing)	I try to understand the listening from the background sound or music.	1	2	3	4	5
21		Elaboration (Personal elaboration)	I relate my personal experience of world knowledge to guess at the	1	2	3	4	5

			meaning of the listening text.					
22		Elaboration (Academic elaboration)	I relate the word or the topic of the listening to a word or topic I have studied before.	1	2	3	4	5
23		Elaboration (Creative elaboration)	I try to make a story line of the text whilst listening.	1	2	3	4	5
24		Elaboration (Imagery)	I use mental picture of what I listen or pictures or visuals presented on screen to represent and then elaborate the meaning of the recording.	1	2	3	4	5
25		Summarizat ion	I make a mental or written summary of what I listen.	1	2	3	4	5
26		Translation	Whilst listening I translate into Bangla almost all words I listen.	1	2	3	4	5
27		Transfer	I try to relate unknown words to similar words in Bangla or other languages I know, to find out meaning.	1	2	3	4	5
28		Repetition	Whilst listening I speak out the word(s) silently.	1	2	3	4	5
29		Resourcing	I look up unknown word (s) in the dictionary or glossary.	1	2	3	4	5
30		Grouping	I make a list of the similar (sounding) words mentally or in written.	1	2	3	4	5
31		Note- taking	I write down the word (s) or key points to use and create meaning later.	1	2	3	4	5
32		Deduction/ Induction	I use my knowledge of English grammar rules, e.g what parts of speech or tense is that, to understand the meaning of that part of listening.	1	2	3	4	5
33		Substitution	I substitute words by other word(s), then translate and see if it sounds right.	1	2	3	4	5
34	Socio- affective Strategy	Questioning for clarification	I ask the teacher if I face any problem to comprehend the text.	1	2	3	4	5
35		Questioning for clarification	I ask for repeating the recording, words or sentences.	1	2	3	4	5
36		Cooperatio	I ask my friend, my peer, or	1	2	3	4	5

		n	someone who knows the word or the recording I don't know.					
37		Lowering anxiety	If I feel anxious I think of something funny or interesting to calm me down.	1	2	3	4	5
38		Lowering anxiety	I take deep breaths before or whilst listening to lower my anxiety or nervousness.	1	2	3	4	5
39		Self-encouragement	I console myself that like me everyone else is probably having some kind of problems.	1	2	3	4	5
40		Self-encouragement	I declare rewards e.g. going out or taking rest for myself if I complete the listening tasks.	1	2	3	4	5

Thanks for your cooperation!

Question Paper and Answer Sheet

Roll No/Student ID of the participant:

Name of the University:

Contact No:

In the listening test, you will hear two recordings in two sections, and you have to answer questions on them. Each section has 10 questions. You have time to read the instructions, questions and check your work. All recordings will be played only once. When you are listening you have to answer at the same time on this question paper.

Section 1 Questions 1 – 10

You will hear two students discussing their new term at the university.
First you have some time to look at questions 1 – 5.

Complete the table below.
Write **NO MORE THAN THREE WORDS** for each answer.

	John	**Jane**
Day of Arrival	Thursday	**(1)** _____
Subjects Studying	Economics maths French	**(2)** _____ history music
Monday's 9am lecture	French	History
Monday's 2pm lecture	Maths	**(3)** _____
Wednesday afternoon sport Selected	**(4)** _____	Volleyball

Location of Sport   sports hall   **(5)** _____

Now you have some time to look at questions 6-10.

Questions 6 - 9

Write **NO MORE THAN THREE WORDS OR A NUMBER** for each answer.

6 Students can choose from how many essay titles for their first assignment?

_____

7 Where did John travel during the summer?

_____

8 What is the word limit for the essays?

_____

9 When must the first essay be handed in by?

_____

Question 10

Circle the correct letter **A - C**.

10 Where will John and Jane meet up later that day?

A the economics course office

B the economics common room

C the campus cafeteria

Section 2 Questions 11 - 20

You will hear part of earth science's lecture.
You have some time to look at questions 11-20

Answer the questions

Questions 11 – 13

Choose the correct letters A - C.

11 The Pacific is more prone to tsunami because...

A it has many faults.
B its faults undergo subduction.
C its tectonic plates are bigger than elswhere.

12 The biggest tsunami are usually created by...

A undersea volcanic eruptions.
B undersea earthquakes.
C undersea landslides.

13 Tsunami are difficult to detect in deep water because of...

A their wavelength.
B their high speed.
C their wave rate.

Questions 14 and 15

Write NO MORE THAN THREE WORDS for each answer.

List the two ways which the National Oceanic and Atmospheric Administration has set up to detect tsunami.

14 _____

15 _____

Questions 16 - 20

Complete the notes below.
Write NO MORE THAN THREE WORDS OR A NUMBER for each answer.

TSUNAMI EXAMPLES

When Happened	Cause	Deaths Caused	Wave Height
1992	(16) _____	None	3 feet

1992	Underwater earthquake	None	(17) _____
1998	(18) _____	1200	23 feet
1998	Underwater volcanic eruption	3000	40 feet
1896	Underwater earthquake	(19) _____	35 feet
8000 years ago	Underwater Landslide	(20) _____	30 feet

Thanks for your cooperation!

Appendix 3C: Informed Consent Form for the Chair of the Department

PhD Student

Department of Education

University of York

York, YO10 5DD

Email: ta647@york.ac.uk

Informed consent from the Chair

Title/Area of PhD Study: Metacognition in EFL Listening
Researcher: Tasnima Aktar, PhD Student, University of York.

The aim of this study is to explore EFL learners' metacognition in L2 listening, specifically, the relationship, if any, between their reported use of listening strategies and listening performance in a test, (a subsample of) students' use of listening strategies whilst performing a particular listening task, and their perceptions of a good listener in the EFL context of public universities in Bangladesh.

I am here providing information regarding the research project in written here for your kind consideration. The research project will include a questionnaire survey exploring the students' choice and use of listening strategies and a listening test, and if needed think-aloud protocols followed by an interview with your students of first year.

The name of the institution and the participants' names will not be disclosed in any reports of this research, therefore there is no way to identify the institution and the students. All the identifiable names will be removed from the identifiable format within two months after data collection will be completed.

The data collected from this research project will be used for research purposes only. Only the researcher and her supervisor will have the access to the data provided. Participants will have the scope to withdraw their data if they wish, within two weeks of providing data by sending email to the researcher.

Students' participation is voluntary and confidential, and they will be free to withdraw at any time. Data collected from them will be stored in a locked cabinet and where possible in a password-protected file.

I do seek your kind consent for your students to take part in this research. Please express your consent by ticking the appropriate column for each item in the table below, then signing and dating the form.
Thank you.

 If you have any questions or concerns about the project, you are always welcome to consult with the following persons:

1. Tasnima Aktar
     Email: ta647@york.ac.uk
2. Emma Marsden
     Chair, Education Ethics Committee
     University of York
     Email: emma.marsden@york.ac.uk

	Yes☑	No☑
I have read the information above and I agree to give consent for my students to participate in the project explained.		
I know and agree that as students are adult their informed consent will be sought in written informed consent forms.		
I have been given a copy of this form.		

Signature_____**Date:** _____

Name_____

Appendix 3D: Informed Consent Forms for Participants for Phase I

PhD Student

Department of Education

University of York

York, YO10 5DD

Email: ta647@york.ac.uk

Informed consent for participation in research

(Questionnaire Survey and Listening Test)

Title/Area of PhD Study: Metacognition in EFL Listening
Researcher: Tasnima Aktar, PhD Student, University of York.

The aim of the questionnaire survey and listening test for this study is to explore the pattern of the students' use of listening strategies and the relationship, if any, between their reported use of listening strategies and listening performance in a test in the context of public universities in Bangladesh.

We would be very grateful if you could help us understand this topic better by answering the questions that follow about your listening strategies, and by performing a listening test so as to identify any correlation between your listening strategy and listening outcome if there is any.

The completion of the questionnaire will take 10-15 minutes, and the listening test 15 to 20 minutes. Your name will be removed from the identifiable format within two months after data collection is completed. Your name will not be disclosed in any reports of this research, therefore there is no way to identify you.

Only the researcher and her supervisor will have the access to the data provided. You can withdraw your data within two weeks of providing data by sending email to the researcher.

Your participation is voluntary, and confidential. You will be free to withdraw at any time. The information provided by you in this questionnaire and your score on listening test will be used for research purposes only, and these will be stored in a locked cabinet during the life of the project, and will not be used in any manner which would allow identification of your individual responses.

If you have any questions or concerns about the project, you are always welcome to consult with the following persons:

1. Tasnima Aktar
     Email: ta647@york.ac.uk
2. Emma Marsden
    Chair, Education Ethics Committee
    University of York
    Email: emma.marsden@york.ac.uk

Please express your consent to take part in this research by signing and dating the form.

Thank you.

Name: …………………………………….   Date: ………………………….

Appendix 3E: Informed Consent Forms for Participants for Phase II

PhD Student

Department of Education

University of York

York, YO10 5DD

Email: ta647@york.ac.uk

Informed consent for participation in research

(Think-aloud protocols and Interview)

Title/Area of PhD Study: Metacognition in EFL Listening
Researcher: Tasnima Aktar, PhD Student, University of York.

The aim of this phase of the study is to explore (a subsample of) students' use of listening strategies whilst performing a particular listening task, and their perceptions of a good listener in the EFL context of public universities in Bangladesh with a view to better understand their strategy use and preference. You have already participated in the first phase of the study stating your choice and use of listening strategies and a listening test. Now, you are asked to take part in this second phase of the study by participating in think-aloud protocols and interview respectively. For think-aloud protocols, you will be talking/thinking aloud what is going on inside your mind whilst you are listening and how you are answering the questions whilst performing the tasks given. After that you will be interviewed on your perception on what makes a 'good' listener.

The Think-aloud protocols including a training session will take about 50 minutes. The interview will last around 30 minutes and will be video/audio recorded. Your name will not be disclosed in any reports of this research, therefore there is no way to identify you. Your name will be removed from the identifiable format within a month. Fragments of your interview recording or transcript may be used in research materials (e.g., presentations, publications) if you give us permission to do so (see below).

Only the researcher and her supervisor will have the access to the data provided. You can withdraw your data within two weeks of providing data by sending email to the researcher.

Your participation is voluntary and confidential, and you will be free to withdraw at any time. The information provided by you in the think-aloud protocols and interview will be used for research purposes only. The recording and subsequent transcript will be stored in password-protected files and encrypted disks during the life of the project.

Please express your consent to take part in this research by ticking the appropriate column for each item in the table below, then signing and dating the form. Thank you.

If you have any questions or concerns about the project, you are always welcome to consult with the following persons:

1. Tasnima Aktar
     Email: ta647@york.ac.uk
2. Emma Marsden
    Chair, Education Ethics Committee
    University of York
    Email: emma.marsden@york.ac.uk

	Yes☑	No☑
I have read the information above and I agree to participate in think-aloud protocols and interview for this project as explained.		
I agree to be video/audio-recorded.		
I agree that extracts of my responses can be used anonymously in research materials.		
I have been given a copy of this form.		

Name_____**Date:** _____

Appendix 3F: Factor Analysis

Principal Component Analysis

Table 3F.1

KMO and Bartlett's Test from Principal Component Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.76
Bartlett's Test of Sphericity	Approx. Chi-Square	2603.38
	Df	780
	Sig.	.000
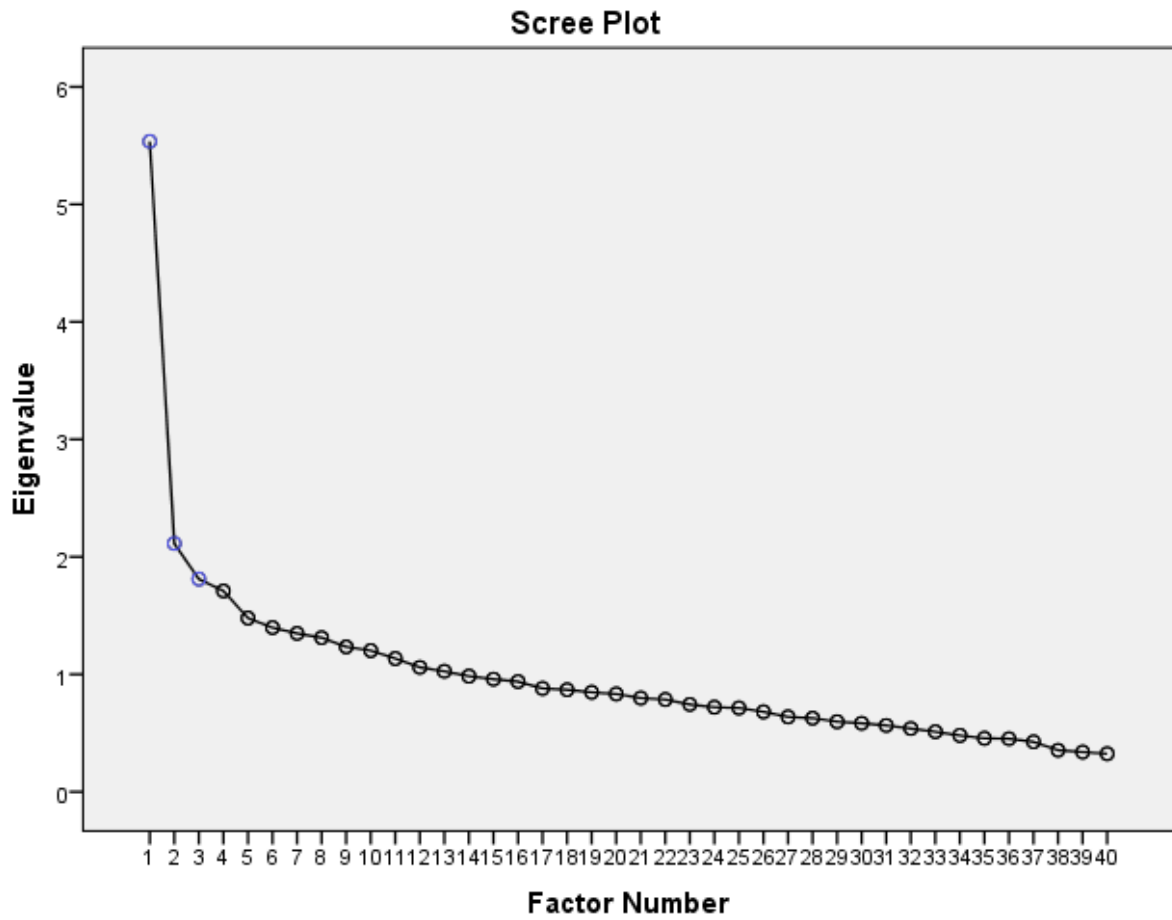
Figure 3F.1 Scree Plot showing three factors retained from Principal Component Analysis

Appendix 3G: Cronbach's Alpha Test Results for the EFLLSQ

Table 3G: Cronbach's Alpha results of EFLLSQ

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.83	.83	40

Appendix 3H: Think Aloud Text and Tasks

Think Aloud Text

(Note: 1***-25*** indicate predefined pauses)

You hear some recordings and you have to answer questions on them. You have time to read the instructions and questions and check your work. All recordings are played only once. Now turn to Section 1.

Section 1. You will hear a tutor and 3 students discussing their work. Pause 1***
First you have some time to look at questions 1 to 7.
(20 second gap) 2***

Now listen carefully and answer questions 1 to 7.

Tutor: Good morning everyone. Well, in today's tutorial we're going to discuss the essays that you have to submit by the end of next week. Some of you will have already started them, which is good and if you haven't, well that's OK but you'll have to get a move on. So, let's begin with you, Simon. What's happening with you?
Simon: Well, I've made a start on it. I've researched the background quite extensively last weekend and **I should get to the writing stage tomorrow** with a bit of luck and I'll get it finished at the weekend. 3***

Tutor: What are you writing about?
Simon: I decided to look at the car manufacturing company, Jaguar, **examine the problems they had with reliability in the 1970s and 80s**, how they dealt with it, and how it affected their marketing and sales strategy 4***

Tutor :That sounds pretty interesting. Any problems with that?
Simon: At the start I had problems getting information from that far back, but after rooting around in the library, I found some magazines which gave me information and also gave me references to find other stuff.
Tutor: It seems now the only problem is keeping to **the 4000 word limi**t. It just seems that I have so much to write about. It seems I'll need 5000 or even 6000 words to be able to cope. 5***

Tutor: Yes, your essay title seems to me to be very wide-ranging. Would you think about cutting out part of it? How about looking at their sales and marketing strategy but only mentioning the problems in the 70s and 80s and not going too far into it?
Simon: That's a good idea. That will make it much easier to handle. By the way, how do you want us to hand in our work? Do you want us to drop in a hard copy to your office?
Tutor: You could do that but **I'd prefer it if you just e-mailed it to me as an attachment.** You've all got my address. If not, give it to the secretary clearly marked that it's for me. 6***

Tutor: Right, Jennifer, how about you?

Jennifer: I've not really got going on it yet but I've decided on a subject. I'll try and do some research during the rest of this week and I should get writing this weekend.

Tutor: OK, what are you writing about then?

Jennifer: I want to look into **how supermarkets use market surveys to develop their products**. 7***

Tutor: Will you have enough time to find out what sort of things that the supermarkets do? You won't have much time for that.

Jennifer: I should be OK. **I've had a look in the stack system in the library and I've found a magazine** that surveyed all the UK major supermarkets and a trade publication that analysed the same things in Canadian supermarkets. 8***

Tutor: **Be careful about using their conclusions too much. The university takes a tough stance on plagiarism**. Make sure you properly list where you get your information from in a bibliography and try and do your own analysis. Get going too as that analysis will take a bit of time.

Jennifer: OK, thanks. 9***

You now have some time to look at questions 8 to 10.
(20 second gap) 10***

Now listen to the rest of the discussion and answer questions.

Tutor: And Melanie. How is your work going?

Melanie: I'm a bit behind I'm afraid. I was sick all last week and weekend with flu. I've got a subject I think but I've not done any work on it yet. **Is there any chance I can get an extension to the submittal date**?

Tutor: The policy of the department is not to give any extensions unless there are extenuating circumstances. **Do you have a doctor's certificate or anyth**ing?

Melanie: **I went to the doctor's but I didn't get a note** as I didn't realise I would need it. The doctor will have a record of me though as I got a prescription. **I'll go back and get one**.

Tutor: Yes, do. If you get one, then there shouldn't be a problem getting an extension. Without it though, you'll be in trouble. 11***

Tutor: What subject are you considering anyway?

Melanie: I thought I'd do an overview of the **UK mortgage interest rate**s and their effect on housing sales trends over the last 10 years. I thought it might be of interest because of the huge increases of house prices over the last decade.

Tutor: Certainly an interesting subject and it should be no great problem getting information as this has been fairly well documented. It's a lot of work again though and you'll really need to get cracking on it even with the extension – if you get one.

Melanie: Well, I've not got much on for the rest of the week and I've set aside the weekend to really get to grips with it.

Tutor: Good. Now, is there anything else? 12***

That is the end of section. You will now have half a minute to check your answers.

(30 second gap) **13*****

Now turn to section 2.
Section 2. You will hear part of a research methods lecture. First you have some time to look at questions 11 to 20.
(20 second gap) **14*****
Now listen carefully and answer questions.

Good afternoon ladies and gentlemen. Welcome to this auxiliary lecture on research methods. This lecture is not aimed specifically at one particular course but is a general lecture that will be relevant to any student who must conduct research into a topic for his or her course. **For most of you, this will be the research that you need to do in order to write your dissertations and theses**. 15***

It has been said that first world societies are no longer industrial societies but information societies. That is, our major problems and tasks no longer mainly centre on the production of goods and services necessary for survival and comfort, but rather require a prompt and accurate flow of information on preferences, needs and behaviour. This is why surveys today are regarded with so much importance. 16***

What, then, is a survey? Today the word survey is used most often to describe a method of gathering information from a sample of individuals. This way, the results can be projected from the sample to the larger population.

An important consideration to take at the start is to decide how large a survey to perform. **The sample size required for a survey partly depends on the statistical quality needed** and the size of the total population of the area in question. Even so, there is no simple rule for sample size that can be used for all surveys. Analysts, though, often find that a moderate sample size is sufficient statistically and operationally. A properly selected sample of only 1,000 individuals can reflect various characteristics of the total population but it is not always needed to sample the entire population for your needs. 17***

I'd like now to look at some of the types of survey available to us and the focus here will be on methods for surveying individuals and companies. Mail, telephone interview, and in-person interview surveys are the most common ways for doing this. The latter can be in offices, homes or on the street. 18***

Mail surveys can be relatively low in cost. A decent response rate though is the major problem. Mail surveys can be most effective when directed at particular groups, such as subscribers to a specialized magazine or members of a professional association. 19***

Telephone interviews are an efficient method of collecting some types of data and are being used increasingly. They lend themselves particularly well to situations where timeliness is a factor and the length of the survey is limited. **For students such as you though, cost will be an issue**. 20***

In-person interviews in a respondent's home or office are good when complex information is to be collected. **It could involve a great deal of travelling around though**. Street interviews could also be useful **as they are easy** but the sampling is not very scientific. 21***

 We also need to the look at the content of our surveys. Surveys can focus on opinions and attitudes or on factual characteristics or behaviour. Many surveys combine types of question. **Questions may be open-ended such as: "Why do you feel that way?" or closed** such as: "Do you approve or disapprove?" 22***

The questionnaire may be very brief -- a few questions, taking five minutes or fewer -- or it can be quite long -- requiring an hour or more of the respondent's time. Also because changes in attitudes or behaviour cannot be reliably ascertained from a single interview, **some surveys employ a "panel design," in which the same respondents are interviewed on two or more occasions**. 23***

There are also certain ethics to be looked at in conducting surveys. Some of you will see that the information that you will compile is of value to companies operating in that particular sector. Therefore you must always bear in mind a few guidelines.
Surveys should be carried out solely to develop statistical information about a subject. They should not be designed to produce predetermined results or as a ruse for marketing and similar activities. The industry standard for all reputable survey organizations is that individual respondents should never be identified in reporting survey findings. **All of the survey's results should be presented in completely anonymous summaries, such as statistical tables and charts**. 24***

That is the end of section. You will now have half a minute to check your answers.
(30 second gap) 25***

Think Aloud Tasks

Section 1 Questions 1 - 10

Questions 1 - 4

Write **NO MORE THAN THREE WORDS OR A NUMBER** for each answer.

1 When will Simon begin writing his essay?
_____

2 According to Simon, what kind of problems did Jaguar have in the 1970s and 80s?

_____

3 What is the word limit for the essay?

_____

4 What is the preferable method for handing in the essay?

_____

Questions 5 - 7

Complete the sentences below.
Write **NO MORE THAN 3 WORDS** for each answer.

5 Jennifer wants to write about how _____ are used by supermarkets.

6 Jennifer found some publications in the library _____ to help her analysis.

7 The tutor warned Jennifer about _____ in her work.

Questions 8 - 10

Complete the tutor's summary notes on Melanie below.
Write **NO MORE THAN THREE WORDS** for each answer.

Notes on Student Essays

Student Melanie needs an (8) _____ as she has been unwell with the flu. She will get a (9) _____ from the doctor. She's going to write about (10) _____ in the UK and their effect on housing trends. She should be on track with the essay by the end of the weekend.

Section 2 Questions 11 - 20

Questions 11 - 13

Complete the sentences below.

Write **NO MORE THAN 3 WORDS** for each answer.

11 The lecture will be useful for any students who are writing

_____

_____.

12 Modernised countries are described by the speaker as now being _____
_____.

13 The size of a sample depends on the _____
required.

Questions 14 - 20

Complete the notes below.
Write **NO MORE THAN THREE WORDS** for each answer.

Types of Survey	Advantages	Disadvantages
Mail	(14) _____	Not good for decent response rate
Telephone	Good for particular groups Good for when time and survey length are limited	(15) _____
In-Person	Good for collecting complex information	Can mean lots of (16) _____
Street Interview	(17) _____	Not scientific sampling

Survey Content

Questions can ask about: opinions and attitudes factual characteristics or behaviour
Questions can be open-ended or (18) _____
Questions can be from 5 mins long to 1 hour +
Survey can be (19) _____ - interviewees
can be questioned on 2 or more occasions

Ethics

Results must not be used commercially
Individuals should not be mentioned
Results should be in (20) _____
ie: statistical tables or charts

Appendix 3I: Semi-structured Interview Schedule

1. **According to you, what makes a 'good' listener?**
   His/her vocabulary? Knowledge of grammar? Understanding pronunciation? Listening time and again? Exercising listening tasks? Using techniques to listening and tactics to solving problems?

2. **How do you try to get to that level?**

   What do you do to be a 'good' listener?

3. **How much do you think you succeed in your try to be a 'good listener'?**

   How do you rate your listening skill compared to a 'good' listener?

4. **What is your favourite listening practice in the classroom?**

   For example, in the classroom, listening and taking notes? Asking teachers for clarification? Solving problems or tasks? Peer-working? Group-discussion? Or something else?

   Why?

5. **What is your favourite listening practice outside classroom?**

   Outside classroom-listening radio/tv programs e.g. talk shows in English? Radio/tv news? Watching English movies? Listening lectures/ speeches? Exercising listening tasks from books in the market? Or something else?

   Why ?

6. **Do you think you need some other practices or something different which could help you be a 'good' listener?**

   Do you think the practices usually done in the classroom or you usually try are enough? Do you think, particularly you need something more or different to practice yourself or in the class? What is that?

7. **Usually what aspects of listening make it difficult to you?**

   Is it vocabulary? grammar? pronunciation? accents? how fast they talk? Getting overall idea of the topic? Or something else?

Which one is the most difficult part among them? Why?

8. How do you try to overcome those/that difficulty?

Can you give any incidence please?

Can you remember another incidence please, may be in a different situation?

9. Can you remember a situation where other people were and how did they solve a listening problem?

Can you remember a situation where you solved the problem but others couldn't or vice versa?

10. Do you think you try all the possible means to solve a problem a 'good' listener would do?

Do you think a 'good' listener would solve this particular problem in a different way?

Appendix 3J: Listening Strategy Taxonomy

No	Strategies (O'Malley and Chamot, 1990; Vandergrift, 1997)	Definitions (Mostly from O'Malley & Chamot, 1990)	Examples (from Vandergrift, 1997 & data from this present study)
Metacognitive Strategies Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned.			
1	1.Planning	Previewing the organizing concept or principle of an anticipated learning task (advance organizer); proposing strategies for handling an upcoming task; generating a plan for the parts, sequence, main ideas, or language functions to be used in handling a task (organizational planning).	I read over what we have to do. I try to think of questions the teacher is going to ask.
2	2.Directed Attention	Deciding in advance to attend in general to a learning task and to ignore irrelevant distractors; maintaining attention during task execution.	I listen really hard.
3	3.Selective Attention	Deciding in advance to attend to specific aspects of language input or situational details that assist in performance of a task; attending to specific aspects of language input during task execution.	I listen to the key words. I establish the speakers in the conversation, their relationship by tone of voice, how they will address each other. This will limit the topics of discussion (in combination with planning, voice inferencing, and elaboration).
4	4.Self-management	Understanding the conditions that help one successfully accomplish language tasks and arranging for the presence of those conditions; controlling one's language performance to	I put everything aside and concentrate on what she is saying.

		maximize use of what is already known.	
	5. Self-monitoring	Checking, verifying, or correcting one's comprehension or performance in the course of a language task.	
5	5a. Comprehension Monitoring	Checking, verifying, or correcting one's understanding, generally at local level.	I translate and see if it sounds right (in combination with translation). I just try to put everything together, understanding one thing leads to understanding another.
6	5b. Production Monitoring	Checking, verifying, or correcting one's language production.	Um…Did I get the answer right? (from data)
7	5c. Auditory Monitoring	Using one's "ear" for the language (how something sounds) to make decisions.	I use my knowledge of Bengali or other known language, primarily sound. I use the sound of words to relate to other words I know.
8	5e. Strategy Monitoring	Tracking use of how well a strategy is working.	Sometimes (I am) losing my concentration, was only thinking if the recording went far when I was reading this question. I need to concentrate even more.(from data)
9	5f. Plan Monitoring	Tracking how well a plan is working.	I thought it would start with talking about email, as I planned; but no, it's talking about telephone first.(from data)
10	5g. Double-check monitoring	Tracking, across the task, previously undertaken acts or possibilities considered.	I might catch it at the end and then I'd go back. Sunny in the morning, that's not making sense…(earlier) it sounded like a cold front, something doesn't make sense to me anymore.
11	6. Problem identification	Explicitly identifying the central point needing resolution in a task or identifying an aspect of the task that hinders its successful completion.	I'm not sure but "partager" and I'm not really sure what that means.
	7. Self-evaluation	Checking the outcome of one's own language performance against an internal measure of completeness and accuracy; checking one's language repertoire, strategy use, or	

		ability to perform the task at hand.	
12	7a. Production Evaluation	Checking one's work when the task is finished.	Mm… got answers for 2 questions, so I missed 8…I need to be serious.(from data)
13	7b. Performance evaluation	Judging one's overall execution of the task.	How close was I? (at end of a think-aloud report)
14	7c. Ability Evaluation	Judging one's ability to perform the task; judging self in relation to materials	I hope I can get most of it, the question types are clearer this time and require short answers. (from data)
15	7d. Strategy Evaluation	Judging one's strategy use when the task is completed.	1 don't concentrate too much to the point of translation of individual words because then you just have a whole lot of words and not how they're strung together into some kind of meaning.

Cognitive Strategies

Cognitive strategies involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task.

	1.Inferencing (Vandergrift, 1997)	Using information within the text or conversational context to guess the meaning of unfamiliar language items associated with a listening task, to predict outcomes or to fill in missing information.	
16	1a. Linguistic Inferencing	Using known words in an utterance to guess the meaning of unknown or missing words.	I use other words in the sentence.
17	1b. Paralinguistic inferencing	Using tone of voice and/or other paralinguistic features, e.g., body language to guess the meaning of unknown or missing words in an utterance.	I guess using tone of voice as a clue
18	1c. Extra-linguistic Inferencing	Using background sounds and visuals, relationships between speakers in an oral text, material in the response sheet, or concrete situational referents to guess the meaning of unknown or missing words.	I was guessing it's taking about something doctor and prescription…um…it's written (in the question paper) something like this.(from data)

19	2. Reverse question mapping (a new strategy, from data)	Identifying words in the listening text and mapping these with respective tasks in the question paper (from data)	In the middle of the conversation, here I heard one word '20th century.' I am thinking of the last word I heard… But later I heard the word 'sheet'…yes this can be the answer, so I am looking for which question is it…(from data)
	3.Elaboration	Relating new information to prior knowledge; relating different parts of new information to each other; making meaningful personal associations to information presented.	
20	3a. Personal elaboration	Making judgments about or reacting personally to the material presented; Referring to prior experience personally.	I think there is some big picnic or a family gathering, sounds like fun, I don't know.
21	3b. World elaboration	Using knowledge gained from experience in the world.	Recognising the names in sports helps you to know what sport they are talking about.
22	3c. Academic elaboration	Using knowledge gained from academic situations.	I try to think of all my background in English.
23	3d. Between parts elaboration	Relating parts of the tasks to each other; Between parts of the listening (audio/video); between listening text and respective part of the task in the question paper. (from data)	(The man) was talking about survey and that the three common ways were mail, telephone, and in person. Then he was telling more…And when I was looking at question he said the fourth one 'street interview'…um is it in-person one, why did he tell this?
24	3e. Questioning Elaboration	Using a combination of questions and world knowledge to brainstorm logical solutions to a task.	Um, he said he started, probably fixing up his apartment, something about his apartment. Probably just moved in, um, because they are fixing it up.
25	3f. Creative elaboration	Making up a story line, or adopting a clever perspective.	Sounded like introducing something, like it says here is something but I can't figure out what it is, it could be like…one of the athletes, like introducing some person or something.
26	3g. Imagery	Using mental or actual pictures or visuals to represent	I make pictures in my mind for words I know, and then I fill in the

		information (coded as a separate category, but viewed as form of elaboration).	picture that's missing in the sequence of pictures in my mind.
27	4.Summarization	Making a mental or written summery of language and information presented in a task.	I remember the key points and run them through my head, 'what happened here and what happened here' and get everything organised in order to answer the questions.
28	5. Translation	Rendering ideas from one language to another in a relatively verbatim manner.	A little voice inside me is translating.
29	6. Transfer	Using knowledge of one language (e.g., cognates) to facilitate listening in another.	I try to relate the words in other languages.
30	7. Repetition	Repeating a chunk of language (a word or phrase) in the course of performing a listening task; to memorise and recall later	I say the word to myself.
31	8. Grouping	Ordering, classifying or labelling material used in a language task based on common attributes; recalling information based on grouping previously done.	I try to relate the words that sound the same.
32	9. Note Taking	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a listening task.	I write down the word.
33	10.Deduction/Induction	Consciously applying learned or self-developed rules to understand the target language.	I use knowledge of the kinds of words such as parts of speech.
34	11. Substitution	Selecting alternative approaches, revised plans, or different words or phrases to accomplish a listening task.	I substitute words, translate and see if it sounds right.

Socio-affective Strategies

Social and affective strategies involve interacting with another person to assist learning or using affective control to assist a learning task.

35	1.Lowering anxiety	Reducing anxiety by using mental techniques that make one feel competent to do the learning task.	I think of something funny to calm me down. I take deep breaths.
36	2.Self-	Providing personal motivation	

	encouragement	through positive self-talk and/or arranging rewards for oneself during a listening activity or upon its completion.	OK…my hunch was right. I tell myself that everyone else is probably having some kind of problem as well.
37	3.Taking emotional temperature	Becoming aware of, and getting in touch with one's emotions whilst listening, in order to avert negative ones and make the most of the positive ones.	OK… I am getting mad 'cause I don't understand.

Appendix 3K: Inventory of Listening Strategy Orchestration

Themes		Examples from LSLs	Examples from MSLs
Combination of strategies and flexibility in strategy use	Metacognitive and cognitive	At first, the recording said that it will be played only once. So I became very careful that I could not hear twice. Then it said, see quickly, 'look at questions'…Now it said to look at questions 1-4, so I am seeing them. (*planning and translation*). (Nazim)	So the problem of telephone survey lies in cost… the disadvantage of telephone survey turn to be the advantage of mail survey. Now I got my concentration back and found it interesting. (*elaboration and directed attention*) (Nahid)
	Metacognitive and metacognitive		Ok, this short passage starts with Melanie and it suggests that she has an infection. So I thought the whole passage is going to deal with diseases and medicine. But suddenly I see (hear) that she is supposed to write something about housing trends. So the topic certainly changes. (*planning and monitoring*) (Nahid)
	Cognitive and cognitive	The man is asking like, if he has any free time, what he does in free time. He (the student) says that he goes to library and maybe goes for shopping in UK supermarket. (*inferencing and elaboration*) (Mahbub)	
Interactive to-down and bottom-up use of strategies		A man came and said 'good morning', and then he asked what was happening there. I could hear a word 'weekend' said by the man. I was trying to understand other words and match these with questions. …Was trying to guess	At first, I was just trying to indicate a time. In doing so I found it was said 'weekend' as last date of submission, and I wrote down as the answer of the question. Then I realised that the question was when Simon would start

		the answer, maybe 'weekend', but I didn't find any answer. Their pronunciation wasn't clear to me (*translation, reverse question mapping, and inferencing*). (Naila)	writing his essay. Then I corrected the answer- 'tomorrow' (*selective attention and monitoring*). (Fara)
Appropriate and effective use of strategies	Planning	Was thinking.. it's said here to read the questions in section 2. So was reading questions 11 to 20, what is written here and what can be the answer (*advance organizer*) (Sultana)	I am thinking that I need to see what are coming. And yes, lecture will be useful for… um… I should understand from the first line (of the question paper) that it is about a lecture. There are several questions regarding… lecture (*Advance organiser*). Then the thing is that I have to be attentive to the advantages and disadvantages of anything; there are two things for each (item) and in each case, one is given and another thing is vacant… (*Organisational planning*). (Hasib)
	Maintaining attention	mm…talking about offices and… actually my concentration got broken and I was seeing outside, so couldn't understand all the words. I could only understand the word 'office', couldn't get any answer.	Actually I was thinking about the previous one that's why I missed this one…Um…Jennifer helps her publication … library. um…heard the word 'magazine' to help her analysis. Publication, library, stacks system, I heard these words. Now if they have talked about library stacks that library has lots of stacks then I would probably use the word 'stack'.
	Monitoring	How much I understood I got it right as I understood 'library', 'supermarket'	So this time I didn't want to do same mistake of failing to identify the question's inquiry. Since

		completely. I was trying to understand against the question made by the speaker 'is she had any free time and what she does in her free time'? I was trying to understand next part matching with this question. (Mahbub)	Jennifer was asked about 'what', and what I need to do, I need to differentiate between the questions -what question is what…And I was trying to keep attention carefully (Hasib)
	Evaluation	Um… got answers for 2 questions, so I missed 8…I need to be serious. (Marzan)	I hope I can get most of it, the questions very specific this time and require short answers. (Simul)
	Inferencing	Maybe the man was asking her what she used to do in her free time. So, she was saying that she went to library and UK supermarket maybe for shopping-I was hearing like this. And I couldn't understand all the words. (Mahbub)	Answer for question 6 has been given. It's said here that Jennifer found some publication in the library…she probably said the publication is about UK supermarkets, and this publication from library helped her. That's it. From this I guess that she got some publication about UK supermarkets and this helped her in her analysis. (Shahim)
	Elaboration	He was telling something about housing, then said 'anything else?' This sounds familiar as our teachers ask it after they finish the class. (Mahbub)	(The man) was talking about survey and that the three common ways were mail, telephone, and in person. Then he was telling more…And when I was looking at question he said the fourth one 'street interview'…um is it in-person one, why did he tell this? (Hasib)
	Summarisation	…it's said very specifically about an essay, how to handle it. Before this, it was saying how to write it, what it is etc. Before that it was saying about those people maybe.	Here a teacher is talking to Simon, Simon is supposed to submit an essay. Most probably, he needs to submit it at the end of next week. So teacher's asking Simon if he has already started

		(*with inferencing*) (Imran)	writing. Simon replied that he did some research …he will start his writing most probably tomorrow. Answer for question 1 is tomorrow.(*with inferencing*) (Zisan)

Appendix 3L: Phases of thematic analysis of metacognitive knowledge

I followed Braun and Clarke's (2006) six steps of thematic analysis, which are described below. However, the analysis requires repeated analyses and is never linear, thus it is a reiterative process requiring moving back and forth for the themes to emerge. The six phases of thematic analysis as proposed by Braun and Clarke (2006) are:

Phase 1: Familiarising myself with the data

I myself collected the learners' data on their perceptions; therefore, I was already familiar with my data. As such, some prior knowledge and some initial analytic interest or thoughts tended to guide me. Collecting data myself and later on transcribing them on my own and the initial reading and rereading of them a number of times, offered me the opportunity to go through a 'repeated reading' of my data, whereby I attempted to look for patterns and to jot down and highlight ideas before the actual coding began. Transcription of data was done verbatim; however, I excluded reporting non-verbal and emotional elements, for example pauses, laughter, etc., since I did not need them for a thematic analysis of MK. Transcribing data verbatim created an opportunity for me to familiarise myself with and come closer to my data.

Phase 2: Generating initial codes

To generate initial codes, I coded the interview transcripts both manually and using NVivo 11 pro. I did the initial coding of my data with 14 interviews (almost 50% of the data; first four then adding six more and then four more interviews), jotted down the potential and interesting codes and made an initial coding scheme for coding all the data, adding and deleting as appropriate. This initial coding was done against Flavell's (1979) typology of MK consisting of person knowledge, task knowledge, and strategy knowledge. After the coding of

the 14 interviews was done and an initial, tentative coding framework was developed, I coded all the transcripts against this initial coding framework using NVivo 11 pro; the latter 16 first and then the former 14. Manual coding was important because I could easily read and reread the transcripts both vertically and horizontally and see multiple transcripts spread in front of me whilst trying to generate the codes (nodes), going back and forth, and changing them as appropriate. Nvivo coding was useful for assembling all the codes on one page with child nodes under parent nodes, and it was more useful to add and delete as necessary, and retrieve excerpts whenever necessary only by clicking on references. Therefore, NVivo coding was more useful for documenting and retrieval purposes, and also for generating mind-maps.

In the initial coding I tried to capture as many interesting factors as I could that I came across; later on I focused as per the pattern I was looking for, to create meaning to understand the phenomenon at hand. Whilst doing the initial coding, first I did it manually with paper and pencil. I made notes next to the text in the left-hand margin, underlying extracts with colourful pens and highlighting them, and putting post-it notes next to the extracts which bore something different but were interesting, beyond the patterns I was looking for within the broad target themes of person knowledge, task knowledge, and strategy knowledge.

Bearing in mind Braun and Clarke's (2006) advice, the ideas that I followed in my coding were: a) to code for as many potential themes/patterns as possible (as long as time permitted) – one never knows what might be interesting later; b) to code extracts of data inclusively – i.e., to keep a little of the surrounding data if relevant, as a common criticism of coding is that the context is lost (Bryman, 2001); and c) to remember that individual extracts of data can be coded in as many different "themes" as they fit into - so an extract can be uncoded, coded once, or coded many times, as relevant. Thus, the process of coding itself was part of the analysis (Miles & Huberman, 1994), as I was *organising* my data into

meaningful groups. However, the themes that started to develop in the next phase were where the interpretative analysis of the data occurred.

Phases 3, 4, 5: Searching for, reviewing and defining sub/themes

As mentioned in phase 2, coded nodes from the data were grouped into the three broad categories of person knowledge, task knowledge, and strategy knowledge in MK; these three categories, in fact, were three major themes for analysing data on MK. However, after coding 14 transcripts, all the nodes had been grouped, classified, and further reviewed in order to search for appropriate subthemes or subcategories or factors within each of the major themes. To do this I mainly followed Goh (1997, 1998a, 1999). However, some data did not fit into Goh's classification, so I classified them as 'learners' needs' as data suited. Moreover, since I looked into listeners' perceptions of a GL as well which is an aspect of PK, and I classified them as 'GL knowledge'. These three phases of searching for, reviewing and defining sub/themes went on iteratively. I needed to review and add and delete when coding all the transcripts was complete in NVivo. Phase 3 involved sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes. At this point I started analysing codes, and considering how different codes might combine to form an overarching theme. In addition, I created a subtheme called 'miscellaneous factors' under GL knowledge to house the codes that did not fit into the main subthemes I initially developed.

Phase 4 involved the refinement of these themes, as some candidate themes were not actually themes, some collapsed into each other, and some other themes needed to be broken down into separate themes. At this stage, I also realised that the subcategory of 'obstacles to listening comprehension' under person knowledge overlapped with factors affecting listening under task knowledge, further speculation helped me to categorise them under task

knowledge since they were more suited as task knowledge because they are external to the listener. Therefore, I merged these obstacles with factors.

To identify the pattern amongst the themes and codes, I used tables and mind maps to envisage the relationship between the different codes. This process involved producing several tables and mind maps to visualise the relationships between the codes and to categorise them under possible sub/themes. Defining and refining means identifying the 'essence' of what each sub/theme is about, and determining what aspect of the data each theme captures. I wrote a detailed analysis for each individual theme. I tried to identify the 'story' that each theme tells and how it fits into the broader overall 'story', in relation to your research question or questions. I tried to ensure there is not too much overlap between them.

Phase 6: Producing the report

Whilst conducting the analysis, I used extracts within an analytic narrative for illustration purposes and for identifying evidence from the data itself. I continually asked exploratory questions to delve into the data, which might reveal group differences in MK, and its possible interpretations to make an *argument* in relation to my research questions. Whilst conducting the thematic analysis, I focused on all emerging themes from the dataset, taking care to document the LSLs' and MSLs' reports separately. After that, I analysed students' MK by comparing the two listening ability groups in terms of their reports on each issue/subtheme under each of the three main themes of MK.

Appendix 3M: Inventory of Metacognitive Knowledge about EFL Listening

Metacognitive Knowledge-Categories	Subcategories	Items		LSL	MSL
Person Knowledge					
1. Good Listener Knowledge	Linguistic factors	Good knowledge of pronunciation and accents		11	9
		Good repertoire of vocabulary		9	7
		Understanding prosodic features		2	5
	Total			22	21
	Motivational factors	Having interest in English language and culture		1	8
		Perseverance		2	5
		Exposure to and interaction with target language and culture		2	5
	Total			5	18
	Strategic factors				
		Metacognitive strategies	Directed attention	10	14
			Planning	1	5
			Self-management	1	3
			Selective attention	0	5

			Self-monitoring	0	1
		Total		12	28
		Cognitive strategies	Elaboration	1	8
			Inferencing	5	3
			Summarization	0	1
			Substitution	2	0
		Total		8	12
	Total			20	40
	Miscellaneous Factors	Frequent listening and more practice		12	8
		Ability to understand meaning quickly		7	2
		Ability to grasp main ideas and intended meaning		0	5
		Effective Memory		3	1
		Good sensory perception		2	2
		Listening with purpose/goal in mind		0	5
		Good interpretation skill		1	2
		Scope to check comprehension		1	0
	Total			26	25
Total				73	104
2. The Listening Self Knowledge	Cognitive processes	Global Listening		0	5
		Think of words and spell them out mentally		0	1
		Translate part or whole in L1		1	0

				1	6
	Motivational factors	Motivated by family, surroundings, and self		1	7
		Perseverance		2	8
		Interest in and exposure to English language and culture		0	5
	Total			3	20
	Self-concept	Self-assessment		15	15
		Perceived improvement		13	9
		Self-efficacy		3	7
	Total			31	31
	Problems during listening	Perceptual processing	Missing next parts or losing track whilst stuck with previous part	6	8
			Cannot keep concentrating	5	3
			Cannot recognize sounds of words known already in written	5	1
			Writing down the answers, taking notes, using subtitle interrupts in listening	7	2
			Missing the starting due to anxiety or unpreparedness	5	1
			Being distracted due to thinking over outside things	1	2

			Cannot chunk streams of speech	1	2
			Losing attention due to concentrating too hard	0	2
			Lose attention to details	0	2
			Break in concentration due to incomprehension	2	0
			Attention fluctuating due to shifts in tones or themes	0	1
			Cannot identify the unfamiliar words pronounced	0	1
			Mistake one word for another similar-sounding one	1	1
		Total		33	26
		Parsing	Forget what is heard already	8	5
			Slow to recall meaning and interpret	2	1
		Total		10	6
		Utilization	Understand individual words, but can't get overall meaning or intended	7	5

			message		
			Cannot employ all strategies prepared or known for the upcoming text due to eg. anxiety and nervousness	3	1
		Total		10	6
	Total			53	38
	Obstacles to listening development	Own personality		10	1
		Social environment		4	6
		Total		14	7
	Learners' Needs	More exposure and practice	Need more exposure and practice continuously and repeatedly	10	8
			Need more outside activities	3	3
			Need more classroom practice	5	2
		Total		18	13
		Practice in specific areas of listening skills	A good repertoire of vocabulary	7	10
			More outside practice on pronunciation and accent	8	10
			More practice with different topics and input	1	5
			Practice with	5	2

			listening exercises		
			More practice with speedy speech	0	3
		Total		21	30
		Practice in metacognition	Practice with someone competent in English or native speaker	5	6
			Seeking opportunities to check comprehension and enhance listening	2	1
			Need to practice not to get stuck	0	3
			To enhance strategic knowledge	2	5
		Total		9	15
		Purpose of listening	Need something educational and routine	0	3
			Need something both educational and recreational	1	3
		Total		1	6
		Access to logistic support and congenial environment		2	0
		Total		2	0
	Total			51	64
Total				153	166
Total				226	270
Task Knowledge					
	Factors affecting				

		listening				
		Text	Speech rate	12	9
			Vocabulary	11	9
			Subtitle and lyric	6	14
			Types of input	6	13
			Visual support	5	7
			Prosodic features	5	5
			Abrupt beginning	5	2
			(Non) Important and interesting topics	0	3
			Text length	0	1
			Discourse Markers	1	0
		Total		51	63
		Speaker	Accent	4	7
			Delivery of speech	0	4
			Speakers' linguistic and communicative competence	1	2
		Total		5	13
		Listener	Pronunciation skills	12	13
			Topic and prior knowledge and experience	7	8

			Physical and psychological states like test or task anxiety, nervousness, fatique etc.	5	1
			Memory	3	1
			Knowledge of grammar	3	0
		Total		30	23
		Task	Understanding questions and the types of question format	3	0
			Pause for interpretation etc during listening	1	1
			Doing two or more tasks at a time	7	2
		Total		11	3
		Environment and EFL context	Physical conditions such as noise, acoustics, timing, and environment etc	2	5
			EFL context	4	6
		Total		6	11
	Total			103	113
	Input useful for listening developm	Movies and TV series (for visuals, subtitles and entertainment)		6	9

		ent			
		Songs (portable and entertaining)		3	8
		Listening exercises (competing, assessing, and for specific listening skills)		6	4
		News (for information, pronunciation and speaking skill)		1	3
		Teachers' lectures (for input and motivation)		3	6
		Talks/public lectures (inspirational and informative)		0	2
		Talk-show (interesting and for presentation skill)		0	2
		Documentaries (good English and informative)		0	2
		Commentary (for entertainment, and pronunciation and speaking skill)		1	1
		Audio (enhances attention)		0	2
	Total			20	39
	Practices for listening development		Practices of pronunciation and different accents	5	8
			Improving vocabulary and grammatical knowledge	5	5

			Frequent listening	1	6
			Practices with listening exercises	5	1
			Practicing prosodic features	1	3
	Total			17	23
	Nature of L2 language listening	Dependence on other language skills		2	2
		Listening as an integrative skill		1	5
		Differences from listening to L1		2	2
		Comparing listening skill in relation to other language skills		2	1
		Similarities with skills acquisition of L1		1	1
		Listening is active; not passive		0	5
	Total			8	16
Total				148	191
Strategy Knowledge					
	Strategies assisting listening comprehension	Metacognitive strategies			
			Self-management	3	11
			Directed attention	5	8
			Planning	2	5
			Selective attention	1	5

			Monitoring	1	3
		Total		12	32
		Cognitive strategies			
			Inferencing	12	9
			Elaboration	11	18
			Listening by repeating	5	12
			Taking notes	3	5
			Resourcing	1	2
			Summarising	0	3
			Reverse question mapping	2	0
			Repetition	1	0
			Translation	1	0
		Total		36	49
		Socio-affective strategies			
			Cooperation	6	4
			Asking for clarification	2	5
			Self-encouragement	0	1
		Total		8	10
	Total			56	92
	Strategies assisting listening development	Metacognitive strategies	Planning	2	3
			Self-management	2	7
			Monitoring	2	5
		Total		6	15

		Cognitive strategies	Elaboration	2	6
			Taking notes	0	2
			Substitution	0	1
		Total		2	9
		Socio-affective strategies	Cooperation	0	1
			Taking emotional temperature	0	2
		Total		0	3
	Total			8	27
	Strategies that do not work always	Metacognitive strategies	Selective attention	0	2
			Planning	0	2
		Total		0	4
		Cognitive strategies	Inferencing	3	3
			Elaboration	1	1
			Reverse question mapping	1	0
			Resourcing	0	1
		Total		5	5
	Total			5	9
Total				69	128
Grand Total				443	589

Appendix 3N: Pilot Study

Introduction

The pilot study showed that overall strategy use among the participants is moderate (M=3.55), and category of metacognitive strategy was of highest use (M=3.68). In case of the use of individual strategies, directed attention (a metacognitive strategy) was used most frequently (M=4.22) and grouping (a cognitive strategy) was least frequently used (M=2.88). Pearson correlations computed between listening comprehension and overall strategy use and use of strategy categories showed no significant correlations. However, correlations computed between listening comprehension and use of individual strategies showed significant positive correlations for planning and substitution strategies and negative correlations for linguistic inferencing and note-taking strategies. A quick look at two participants' think aloud protocols and interview showed considerable differences between the less successful listener and more successful listener.

Research Questions

Research Question 1:

 Is there any relationship between learners' perceived use of listening strategies and their listening comprehension?

Research Question 2:

Are there any differences in task-based listening strategy use between the more successful listeners and the less successful listeners?

Research Question 3:

What perceptions do the more successful listeners and the less successful listeners have of what makes a 'good' listener and of themselves as listeners?

Methods

Participants

54 1st year undergraduate students of Department of English in a public university in Bangladesh took part in a listening test and a listening strategy questionnaire survey in phase I of pilot study. The missing value is cleaned up; as 2 of the participants' had missing values, therefore they were excluded from statistics calculation. And 2 students from out of 52 participants participated in think-aloud protocol and interview in phase II; on the basis of their listening score in listening test of Phase I; the participants were divided into high scorers and low scorers on the basis of their listening scores (listeners scoring below 50% are low scorers, scoring above 50% are high scorers). After that, one student is chosen from 50 low scorers and one from 2 high scorers.

Instruments

Instruments exploited in the pilot study were:

Phase I

    a. Listening Test

    b. EFL Listening Strategy Questionnaire

Phase II

    a. Think Aloud Text and Tasks

    b. Semi-structured Interview Schedule

For the reliability and validity check of the developed Listening Strategy Questionnaire, statistical tests are carried out. A Cronbach's alpha was computed to examine if the 40 items formed reliability scale. The alpha for the 40 items was .84, which indicated that the items performed internal consistency reliability (see table 3M.1 below).

Table 3M.1

Reliability test

Cronbach alpha	Cronbach's Alpha based on standardized items	No. of items
.84	.84	40

Data collection procedure

Phase I

With the consent for data collection from the respective Chair of the department, the researcher contacted with a course teacher of the target participants of the intact class for data collection in phase I first. Then in a pre-arranged date the researcher with the help of the course teacher aimed to collect data from 1st year students. At first students' consent was sought in written consent form. 50 students signed the form. Then they were given a listening test and listening strategy questionnaire respectively. The whole process took about 1 hour.

Phase II

After checking the listening scripts, participants were divided into 2 groups, and 1 participant from each was contacted to attend phase II. They gave their consent to participate, and subsequently they were given training on how to think-aloud. Then, on an individual basis they were interviewed for think aloud protocols and semi-structured interview; there was a warm up session with some practice again for think-aloud and think-aloud was followed by interview. Each of the main think-aloud session and interview session took about half an hour. Data collection sessions of phase II were both audio and video recorded.

Data Analysis

Data from phase I were analysed quantitatively using statistics in SPSS. Data from Phase II were not analysed before main data collection took place; however, to have an overview I did have a look at them. To address research question 1, Pearson Correlation was computed to see relationship, if any, between two variables: learners' perceived use of listening strategies and their listening comprehension. Before that descriptive statistics of the questionnaire and listening test data were performed.

The pilot study showed that overall strategy use among the participants is moderate (M=3.55), and category of metacognitive strategy was of highest use (M=3.68), as seen in table 3M.2 below. In case of the use of individual strategies, directed attention (a metacognitive strategy) was used most frequently (M=4.22) and grouping (a cognitive strategy) was least frequently used (M=2.88).

Table 3M.2

Mean use of overall strategies and strategy categories

	N	Mean	Std. Deviation
Mean_Metacognitive	52	3.68	.41
Mean_Cognitive	52	3.46	.55
Mean_Socioaffective	52	3.51	.56
Mean_Overall	52	3.55	.43
Mean Listening Score	52	3.42	2.14
Valid N (listwise)	52		

Pearson correlations computed between listening comprehension and overall strategy use and use of strategy categories showed no significant correlations, see Table 3M.3. However,

correlations computed between listening comprehension and use of individual strategies showed significant positive correlations for planning and substitution strategies and negative correlations for linguistic inferencing and note-taking strategies (see table 3M.4 below).

Table 3M.3

Correlations between listening score and overall strategies and strategy categories

		Listening scores
Listening Scores	Pearson Correlation	1
	N	52
Mean_Metacognitive	Pearson Correlation	-.10
	Sig. (2-tailed)	.470
	N	52
Mean_Cognitive	Pearson Correlation	.02
	Sig. (2-tailed)	.883
	N	52
Mean_Socioaffective	Pearson Correlation	.14
	Sig. (2-tailed)	.306
	N	52
Mean_Overall	Pearson Correlation	.01
	Sig. (2-tailed)	.953
	N	52

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.001 level (2-tailed)

Table 3M.4

Pearson Correlations of individual strategies reaching significance

		Listening Scores
Listening Scores	Pearson Correlation	1
	N	52
Planning	Pearson Correlation	.31*
	Sig. (2-tailed)	.026
	N	52
Linguistic inferencing	Pearson Correlation	-.34*
	Sig. (2-tailed)	.013
	N	52
Note- taking	Pearson Correlation	-.28*
	Sig. (2-tailed)	.044
	N	52
Substitution	Pearson Correlation	.27*
	Sig. (2-tailed)	.049
	N	52

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.001 level (2-tailed)

Conclusion

Due to small sample size, factor analysis was not considered to run among the data to see any factors. However, these results and findings were not considered to answer the research questions in the main study. The whole pilot study was conducted to mainly trial the data collection instruments and procedures.

Appendices for Chapter 4

Appendix 4A: Mean Use of Individual strategies

Table

Mean of use of individual strategies among all participants, and two groups

Participants		All Participants			Less Successful Listeners			More Successful Listeners	
Strategy-Subcategories	N	Mean	SD	N	Mean	SD	N	Mean	SD
Planning	388	3.86	.77	336	3.85	.80	52	3.91	.51
Directed Attention	388	3.98	.77	336	3.95	.77	52	4.16	.77
Selective Attention	387	3.76	.84	335	3.77	.85	52	3.74	.77
Self-management	387	3.66	1.21	335	3.69	1.19	52	3.46	1.32
Monitoring	388	3.36	.74	336	3.36	.74	52	3.38	.72
Problem Identification	388	3.89	1.09	336	3.89	1.10	52	3.90	1.01
Evaluation	388	3.59	.87	336	3.58	.86	52	3.67	.91
Inferencing	388	3.49	.70	336	3.47	.69	52	3.61	.73
Elaboration	388	3.32	.82	336	3.28	.83	52	3.59	.71
Summarization	387	3.33	1.21	335	3.33	1.20	52	3.29	1.27
Translation	386	3.24	1.40	334	3.33	1.37	52	2.67	1.45
Transfer	388	3.38	1.23	336	3.41	1.20	52	3.19	1.42
Repetition	386	3.16	1.42	334	3.22	1.42	52	2.75	1.38
Resourcing	386	3.52	1.43	334	3.50	1.47	52	3.69	1.08
Grouping	386	2.84	1.244	334	2.88	1.26	52	2.56	1.12
Note Taking	387	3.16	1.25	335	3.19	1.26	52	2.94	1.14
Deduction/Induction	388	3.42	1.31	336	3.45	1.29	52	3.23	1.39
Substitution	386	3.16	1.16	334	3.16	1.172	52	3.12	1.11
Questioning for Clarification	388	3.33	1.14	336	3.30	1.16	52	3.51	.99
Cooperation	387	3.22	1.35	335	3.18	1.36	52	3.46	1.24
Lowering Anxiety	388	3.27	1.01	336	3.28	1.02	52	3.23	.98
Self-encouragement	388	3.43	.95	336	3.45	.92	52	3.30	1.14
Valid N (list-wise)	377			325			52		

Appendix 4B: One-way repeated measures ANOVA

Appendix 4B.1: Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Strategies	Pillai's Trace	.319	90.28[b]	2.00	386.00	.000	.319
	Wilks' Lambda	.681	90.28[b]	2.00	386.00	.000	.319
	Hotelling's Trace	.468	90.28[b]	2.00	386.00	.000	.319
	Roy's Largest Root	.468	90.28[b]	2.00	386.000	.000	.319

a. Design: Intercept
  Within Subjects Design: Strategies
b. Exact statistic

Appendix 4B.2: Pairwise Comparisons

Measure: MEASURE_1

(I) Strategies	(J) Strategies	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	.335[*]	.026	.000	.272	.397
	3	.339[*]	.037	.000	.251	.428
2	1	-.335[*]	.026	.000	-.397	-.272
	3	.005	.034	1.000	-.077	.087
3	1	-.339[*]	.037	.000	-.428	-.251
	2	-.005	.034	1.000	-.087	.077

Based on estimated marginal means
*. The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Bonferroni.

Note: 1=Metacognitive strategies, 2=Cognitive strategies, 3=Socio-affective strategies

Appendix 4C: A mixed between-within subjects ANOVA

Appendix 4C.1: Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Strategies	Pillai's Trace	.191	45.48[b]	2.00	385.00	.000	.191
	Wilks' Lambda	.809	45.48[b]	2.00	385.00	.000	.191
	Hotelling's Trace	.236	45.48[b]	2.00	385.00	.000	.191
	Roy's Largest Root	.236	45.48[b]	2.00	385.00	.000	.191
Strategies * LSLsMSLs ListeningScores	Pillai's Trace	.001	.26[b]	2.00	385.00	.771	.001
	Wilks' Lambda	.999	.26[b]	2.00	385.00	.771	.001
	Hotelling's Trace	.001	.26[b]	2.00	385.00	.771	.001
	Roy's Largest Root	.001	.26[b]	2.00	385.00	.771	

a. Design: Intercept + LSLsMSLsListeningScores

 Within Subjects Design: Strategies

b. Exact statistic

Appendix 4C.2: Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	6434.85	1	6434.85	10002.77	.000	.963
LSLsMSLsListeningSco res	.08	1	.08	.12	.725	.000
Error	248.32	386	.64			

Appendix 4D: Pearson Correlations between listening comprehension and use of individual strategies

Table

Pearson correlations computed between listeners' listening comprehension and perceived use of individual strategies

Correlations

		Listening Test Scores
Planning	Pearson Correlation	.06
	Sig. (2-tailed)	.223
	N	388
Directed Attention	Pearson Correlation	.12*
	Sig. (2-tailed)	.014
	N	388
Selective Attention	Pearson Correlation	-.01
	Sig. (2-tailed)	.777
	N	387
Self-management	Pearson Correlation	-.00
	Sig. (2-tailed)	.992
	N	387
Monitoring	Pearson Correlation	-.01
	Sig. (2-tailed)	.863
	N	388
Problem Identification	Pearson Correlation	-.08
	Sig. (2-tailed)	.095
	N	388
Evaluation	Pearson Correlation	.01
	Sig. (2-tailed)	.801
	N	388

Inferencing	Pearson Correlation	.08
	Sig. (2-tailed)	.128
	N	388
Elaboration	Pearson Correlation	.17**
	Sig. (2-tailed)	.001
	N	388
Summarization	Pearson Correlation	-.01
	Sig. (2-tailed)	.875
	N	387
Translation	Pearson Correlation	-.20**
	Sig. (2-tailed)	.000
	N	386
Transfer	Pearson Correlation	-.07
	Sig. (2-tailed)	.153
	N	388
Repetition	Pearson Correlation	-.13**
	Sig. (2-tailed)	.008
	N	386
Resourcing	Pearson Correlation	.06
	Sig. (2-tailed)	.258
	N	386
Grouping	Pearson Correlation	-.14**
	Sig. (2-tailed)	.006
	N	386
Note Taking	Pearson Correlation	-.13*
	Sig. (2-tailed)	.012
	N	387
Deduction/Induction	Pearson Correlation	-.05
	Sig. (2-tailed)	.352
	N	388

Substitution	Pearson Correlation	-.06
	Sig. (2-tailed)	.248
	N	386
Questioning for Clarification	Pearson Correlation	.07
	Sig. (2-tailed)	.145
	N	388
Cooperation	Pearson Correlation	.07
	Sig. (2-tailed)	.141
	N	387
Lowering Anxiety	Pearson Correlation	-.01
	Sig. (2-tailed)	.823
	N	388
Self-encouragement	Pearson Correlation	-.06
	Sig. (2-tailed)	.200
	N	388

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Appendix 4E: Non-parametric correlations

Appendix 4E.1

Table

Non-parametric correlations computed between all participants' listening comprehension and perceived use of overall strategy use, and of strategy categories

Correlations

			Listening Test Scores
Spearman's rho	Listening Test Scores	Correlation Coefficient	1.00
		Sig. (2-tailed)	.
		N	388
	Mean of Metacognitive, Cognitive and Socio-affective Strategies	Correlation Coefficient	.01
		Sig. (2-tailed)	.799
		N	388
	Mean of Metacognitive and Cognitive Strategies	Correlation Coefficient	-.00
		Sig. (2-tailed)	.935
		N	388
	Mean Metacognitive Strategies	Correlation Coefficient	.01
		Sig. (2-tailed)	.786
		N	388
	Mean Cognitive Strategies	Correlation Coefficient	-.01
		Sig. (2-tailed)	.893
		N	388
	Mean Socio-affective Strategies	Correlation Coefficient	.04
		Sig. (2-tailed)	.470
		N	388

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Appendix 4E.2

Table

Non-parametric correlations computed between all participants' listening comprehension and perceived use of individual strategies

Correlations

			Listening Test Scores
Spearman's rho	Listening Test Scores	Correlation Coefficient	1.00
		Sig. (2-tailed)	.
		N	388
	Planning	Correlation Coefficient	.06
		Sig. (2-tailed)	.230
		N	388
	Directed Attention	Correlation Coefficient	.10*
		Sig. (2-tailed)	.039
		N	388
	Selective Attention	Correlation Coefficient	-.03
		Sig. (2-tailed)	.564
		N	387
	Self-management	Correlation Coefficient	.04
		Sig. (2-tailed)	.437
		N	387
	Monitoring	Correlation Coefficient	-.00
		Sig. (2-tailed)	.954
		N	388
	Problem Identification	Correlation Coefficient	-.14**
		Sig. (2-tailed)	.005
		N	388
	Evaluation	Correlation Coefficient	.01
		Sig. (2-tailed)	.889
		N	388

Inferencing	Correlation Coefficient	.06
	Sig. (2-tailed)	.210
	N	388
Elaboration	Correlation Coefficient	.17**
	Sig. (2-tailed)	.001
	N	388
Summarization	Correlation Coefficient	.00
	Sig. (2-tailed)	.965
	N	387
Translation	Correlation Coefficient	-.17
	Sig. (2-tailed)	.001
	N	386
Transfer	Correlation Coefficient	-.02
	Sig. (2-tailed)	.666
	N	388
Repetition	Correlation Coefficient	-.14*
	Sig. (2-tailed)	.007
	N	386
Resourcing	Correlation Coefficient	.03
	Sig. (2-tailed)	.496
	N	386
Grouping	Correlation Coefficient	-.14**
	Sig. (2-tailed)	.005
	N	386
Note Taking	Correlation Coefficient	-.13**
	Sig. (2-tailed)	.008
	N	387
Deduction/Induction	Correlation Coefficient	-.04
	Sig. (2-tailed)	.484
	N	388

	Substitution	Correlation Coefficient	-.05
		Sig. (2-tailed)	.319
		N	386
	Questioning for Clarification	Correlation Coefficient	.08
		Sig. (2-tailed)	.124
		N	388
	Cooperation	Correlation Coefficient	.06
		Sig. (2-tailed)	.249
		N	387
	Lowering Anxiety	Correlation Coefficient	.03
		Sig. (2-tailed)	.596
		N	388
	Self-encouragement	Correlation Coefficient	-.03
		Sig. (2-tailed)	.516
		N	388

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Appendices for Chapter 5

Appendix 5A: Transcripts of sample think-aloud protocols of a LSL and a MSL

Note: Two samples of protocols, 1 from Piyal (a LSL) and 1 from Nahid (a MSL) from a same university, were presented side by side below. Pl, Nd and Ex refer to Piyal, Nahid, and Experimenter respectively. Their quotes from the passages would be provided within double quotation marks (""), and (…) is for their pause (thinking in silence) whilst reporting.

1. You hear some recordings and you have to answer questions on them. You have time to read the instructions and questions and check your work. All recordings are played only once. Now turn to Section 1.
Section 1. You will hear a tutor and 3 students discussing their work.

Ex: What are you thinking?	Ex: What are you thinking?
Pl: They will discuss about a topic maybe, three students, it is being instructed. I am seeing this and will listen now. It is being instructed that there are questions in section 1, not told yet. I am 'waiting'.	Nd: Ok it's stated in the audio that this conversation will be about a teacher and three students. I am looking at the scripts to identify who these students are and if the names of the students and tutor are given.

2. First you have some time to look at questions 1 to 7.
(20 second gap)

Ex: What are you thinking?	Ex: What are you thinking?
Pl: Since there will be questions from 1 to 7 in section 1, I looked at the questions once. So that it becomes helpful for me to understand what will be being said next, that means to answer.	Nd: I looked at the questions and I decided to focus on the audio that will be played. Especially the parts of the audio related to the questions, I mean information.

3. Now listen carefully and answer questions 1 to 7.
Tutor: Good morning everyone. Well, in today's tutorial we're going to discuss the essays that you have to submit by the end of next week. Some of you will have already started them, which is good and if you haven't, well that's OK but you'll have to get a move on. So, let's begin with you, Simon. What's happening with you?
*Simon: Well, I've made a start on it. I've researched the background quite extensively last weekend and **I should get to the writing stage tomorrow** with a bit of luck and I'll get it finished at the weekend.*

Ex: What are you thinking?	Ex: What is going on inside your head?
Pl: I couldn't hear much. Because there was	Nd: The tutor is talking to Simon, and

noise, sounds outside. He tried it ''last weekend'', to do, didn't start. The answer that will be of question 1, "when will Simon begin writing his essay?" so the answer of this was what he said at the end, the answer was there. So I got that he could end 'sorry' start. Ex: What answer have you got? How did you figure out the answer? Pl: The answer is 'weekend'. I got this answer because he wanted to start last week, he didn't, so will start this 'weekend'. Probably 'weekend'.	Simon…said something about the topic of his essay and what and how he is preparing. I missed out detail I don't know if Simon mentioned the name of the topic, perhaps I missed it. The tutor asked when Simon will begin writing his essay. I don't, am not sure what Simon replied. Mmm… and I was thinking ok I will have to hear what Simon says very carefully from now. Ex: You can think aloud in any language you feel comfortable at. As because this is not a language test. You can even switch between languages. Got any answer? Nd: Ok I am comfortable at English. I didn't find the answer.

4. Tutor: What are you writing about?
*Simon: I decided to look at the car manufacturing company, Jaguar, **examine the problems they had with reliability in the 1970s and 80s**, how they dealt with it, and how it affected their marketing and sales strategy.*

Ex: What are you thinking? Pl: The problem is, doing research on Jaguar, sorry not research, the essay, he will write essay on jaguar. So the problem on it "what kind of problem Jaguar had?" It is on the problem faced in from 1970 to 1980. Ex: Go on. Got any answer? Pl: I didn't answer any.	Ex: What are you thinking? Nd: I found out the question, the 2nd question of … I know that Simon dealt with car manufacturing company Jaguar. And he is probably, he is about to answer the 2nd question that's been asked in this question. I am waiting for the answer. Ex: Anything else? Nd: No.

5. Tutor :That sounds pretty interesting. Any problems with that?
Simon: At the start I had problems getting information from that far back, but after rooting around in the library, I found some magazines which gave me information and also gave me references to find other stuff.
*Tutor: It seems now the only problem is keeping to **the 4000 word limit**. It just seems that I have so much to write about. It seems I'll need 5000 or even 6000 words to be able to cope.*

Ex: What are thinking? Pl: Sorry, I couldn't understand. Ex: Did you think anything or heard	Ex: What are you thinking? Nd: The tutor asked Simon what problem Jaguar had in 1970s and 80s. But Simon just said he had a problem with coping with word

anything?	limit, 4000. So I got distracted and then I
	wondered why I missed it.
Pl: I think that there is a problem with words,	
4000 word limit. It would be better if it is	Ex: Why do you think you got distracted?
more than this. He faced this problem.	
	Tutor asked what problem Jaguar had but
	Simon replied he (Simon) had problem with
	word limit. So I was about to answer the 2nd
	question then I looked at the 3rd, then I
	wondered ok something is not going right.

6. Tutor: Yes, your essay title seems to me to be very wide-ranging. Would you think about cutting out part of it? How about looking at their sales and marketing strategy but only mentioning the problems in the 70s and 80s and not going too far into it?
Simon: That's a good idea. That will make it much easier to handle. By the way, how do you want us to hand in our work? Do you want us to drop in a hard copy to your office?
*Tutor: You could do that but **I'd prefer it if you just e-mailed it to me as an attachment.** You've all got my address. If not, give it to the secretary clearly marked that it's for me.*

Ex: What are you doing or thinking?	Ex: What are you thinking?
	Nd: Ok I got 2 answers for questions 3 and
Pl: I am trying to find out answer but I can't.	4. I missed out questions 1 & 2, I was
I can't because I am a bit weak in listening. I	wondering what the answers for questions 1
can understand but can't write.	& 2 are. Since I was probably a big
	distracted. I was waiting for the rest of the
Ex: Anything else came into your mind?	conversation.
Pl: What was in my head, mmm, 'word	
limit', probably 4000. And, I was trying to	
listen about preferable method but can't	
catch. That's all. I was trying to give full	
concentration, but to understand their accent	
was difficult for me. If it was writing, it	
wasn't a problem for me.	

7. Tutor: Right, Jennifer, how about you?
Jennifer: I've not really got going on it yet but I've decided on a subject. I'll try and do some research during the rest of this week and I should get writing this weekend.
Tutor: OK, what are you writing about then?
*Jennifer: I want to look into **how supermarkets use market surveys to develop their products**.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: Here was a conversation among three	Nd: I paid close attention to what Jennifer
students, in the instruction. First part ended.	was speaking and I got the answer to the
Now it's telling about Jennifer, what Jennifer	question no 5 that she was looking into how
will write about so far was being talked with	supermarkets use market surveys. That's it.

teacher. Jennifer told about that but I missed it.	Ex: Got any answer? How did you figure that out? Nd: Well Jennifer explicitly mentioned that she was looking into how supermarket used market surveys for mmm … the sale of their products.

8. Tutor: Will you have enough time to find out what sort of things that the supermarkets do? You won't have much time for that.
*Jennifer: I should be OK. **I've had a look in the stack system in the library and I've found a magazine** that surveyed all the UK major supermarkets and a trade publication that analysed the same things in Canadian supermarkets.*

Ex: What are you thinking? Pl: Sorry, could you please repeat? Ex: Sorry, it is not possible. You can say whatever came to your mind or you understood? Pl: (talking silently then) Actually I can't match question with listening. I am trying to find out but can't.	Ex: What is going on inside your mind? Nd: Jennifer said something about mmm… I can't remember. That means my attention was … I sort out the answer of 6 & 7 easily. Jennifer said something about financing or maybe I heard it wrong. I am feeling confused, what the answer of 6 really is. Ex: Anything else? Nd: No

*9. Tutor: **Be careful about using their conclusions too much. The university takes a tough stance on plagiarism**. Make sure you properly list where you get your information from in a bibliography and try and do your own analysis. Get going too as that analysis will take a bit of time.*

Jennifer: OK, thanks.

Ex: What is going on inside your head? Pl: What is said is that 'plagiarism' is going on frequently; it's to steal others' writings/works. The teacher wants Jennifer to list all from where she has taken the information. Ex: Got any answer? Pl: It's said to write within three words. So, can I write in the ways I want? Maybe there will be no direct answers here. Ex: It's upto you.	Ex: What are you thinking? Nd: So, the tutor warned Jennifer about plagiarism, that she should avoid plagiarism. That means she should not write explicitly the words she found in the magazines or in the papers that she was doing her research. And how I figured out the word 'plagiarism', ok I just know that this is what the tutor warned her to avoid, that is the answer to the question no 7.

Pl: "Tutor warned Jennifer - in her work." He warned Jennifer that you keep your answer correct from corruption, that is plagiarism. The answer will be 'sincere'? Or 'frank', I am writing. Ex: How did you get the answer? PL: I wrote 'frank' because the teacher warned in the audio that it's crime to steal others' writings/works. So, from my perspective/view, I wrote 'frank'.	

10. You now have some time to look at questions 8 to 10.
(20 second gap)

Ex: What are you thinking? Pl: Here is an essay, a sort of essay. There are gap filling questions. I need to fill in the gaps. They may be told in the audio. So I am trying to read. I am reading in advance so that I can catch/understand and I can answer.	Ex: What are you thinking? Nd: Ok this short passage starts with Melanie and it suggests that she has an infection. So I thought that the whole passage is going to deal with diseases and medicine. But suddenly I see that she is supposed to write something about housing trends. So the topic certainly changes. Ex: So you are assuming from the question paper right? Nd: So, I decided ok …ok this is a short passage with multiple things, so I have to pay close attention. Yes, I see these from the question paper.

11. Now listen to the rest of the discussion and answer questions.

Tutor: And Melanie. How is your work going?
Melanie: I'm a bit behind I'm afraid. I was sick all last week and weekend with flu. I've got a subject I think but I've not done any work on it yet. **Is there any chance I can get an extension to the submittal date***?*
Tutor: The policy of the department is not to give any extensions unless there are extenuating circumstances. **Do you have a doctor's certificate or anythin***g?*
Melanie: **I went to the doctor's but I didn't get a note** *as I didn't realise I would need it. The doctor will have a record of me though as I got a prescription.* **I'll go back and get one***.*
Tutor: Yes, do. If you get one, then there shouldn't be a problem getting an extension. Without it though, you'll be in trouble.

Ex: What are you thinking? Pl: Trying to answer. The person here is ill, so she went to doctor but she couldn't find him. Something like this. And she was also trying to extend her weekend. This is what I understand. Ex: Got any answer? Or did you think more? Pl: going so fast, would understand better if goes a bit slower. Will I listen to audio or write/answer the question. If I concentrate on one suppose 'when I concentrate on question 8, I am losing other part. There is no chance to hear again. That's the problem, main problem here'.	Ex: What are you thinking? Nd: The conversation between Melanie and her peer is easy… to hear; was not tough listening to what they are talking about and I figured out the answer to the question no 8 & 9 easily. The words are 'extension' and 'certificate'. That's it.

12. *Tutor: What subject are you considering anyway?*
*Melanie: I thought I'd do an overview of the **UK mortgage interest rate**s and their effect on housing sales trends over the last 10 years. I thought it might be of interest because of the huge increases of house prices over the last decade.*
Tutor: Certainly an interesting subject and it should be no great problem getting information as this has been fairly well documented. It's a lot of work again though and you'll really need to get cracking on it even with the extension – if you get one.
Melanie: Well, I've not got much on for the rest of the week and I've set aside the weekend to really get to grips with it.
Tutor: Good. Now, is there anything else?

Ex: What are you thinking? Pl: Sorry, I haven't …section 2, 11 to 20, did the audio say so? I couldn't get answer. I was trying to understand where the audio is now but I couldn't match with the target questions.	Ex: What are you thinking? Nd: The topic of Jennifer's work is mortgage interests in UK and their housing trends. That is the answer of question 10. And then I just read the last line of the passage, then I said to myself ok there is many questions coming up. So my concentration dropped. Ex: Can you detail a bit why your concentration dropped? Nd: I thought this is going to be end right there. Since there will be no further questions to be answered. Perhaps I was aware because of performance conscious.

13. That is the end of section. You will now have half a minute to check your answers.

(30 second gap)

Ex: What are you thinking?	Ex: What are you thinking?
Pl: Checking answer but … 'there is not very good answer in my script… question 8 to 10', I am trying to answer. I am thinking about the answers, some are done, and thinking if I can find the answers of the missing ones. This is what I am trying but can't find. Not thinking more.	Nd: I am wondering why, how come I missed three of the questions? It should not sopposed to go this way. I was very confident of my listening skills, I should have been able to make out what they are speaking and yet I missed out the answer to three easy questions. Perhaps I don't know how come this lack of attention occurred or whether it is really due to lack of attention or … I don't know something else. I feel a bit confused.

14. Now turn to section 2.
Section 2. You will hear part of a research methods lecture. First you have some time to look at questions 11 to 20.
(20 second gap)

Ex: What are you thinking?	Ex: What are you thinking?
Pl: I am just looking at questions from 11 to 20. Trying to understand what are there in the questions. Later on when audio will run I will understand.	Nd: Ok section 2 is going to be toughest part of this survey. Because it talks about research and I don't know that although I am taking part in helping out a research, helping out in surveys. I really don't know the academic process behind it. And this, section 2 requires a lot of info, it talks about mail, telephone and many other things. And I felt very…ok this going to be tough. Don't know if I can answer all of these. But this is the challenge.

15. Now listen carefully and answer questions.

Good afternoon ladies and gentlemen. Welcome to this auxiliary lecture on research methods. This lecture is not aimed specifically at one particular course but is a general lecture that will be relevant to any student who must conduct research into a topic for his or her course. ***For most of you, this will be the research that you need to do in order to write your dissertations and theses***.

Ex: What are you thinking?	Ex: What are you thinking?
Pl: The audio talked about something like a preface before the lecture. It was saying that it can be helpful for anybody, for any students, for any course. Since it is sort of	Nd: The tutor began with an introduction to the research. And I was looking into if it contains any answer to the question, and then the audio was stopped. I found ok I got the

auxiliary.	answer of question 11. The question demands to know what the lecture wants or what the students or what kind of students will be benefitted by this lecture. And after hearing the audio tape, I could easily made out that it is for all general students.
	Ex: What's the answer you got?
	Nd: The answer is any students who are writing on a topic of his or her course.

16. It has been said that first world societies are no longer industrial societies but information societies. *That is, our major problems and tasks no longer mainly centre on the production of goods and services necessary for survival and comfort, but rather require a prompt and accurate flow of information on preferences, needs and behaviour. This is why surveys today are regarded with so much importance.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: Mmm question no 12, since question no 11 is gone, so when I was about to read question no 12, I also missed it.	Nd: Mmm, this time nothing went on through my head. I was listening carefully to some words-industrial societies and information societies. And I thought whether these two words carry any importance in answering any questions. Then I found out that ok the information society actually refers to modern countries. That means the speaker describes the modern societies as information societies. That's the answer 'information societies'.
Ex: How did you know that they were gone?	
Pl: I was hearing that 11 was gone. But I didn't answer it, I will not. When I started to read no 12, I didn't get it, maybe it is not gone.	

17. What, then, is a survey? Today the word survey is used most often to describe a method of gathering information from a sample of individuals. This way, the results can be projected from the sample to the larger population.

An important consideration to take at the start is to decide how large a survey to perform. **The sample size required for a survey partly depends on the statistical quality needed** *and the size of the total population of the area in question. Even so, there is no simple rule for sample size that can be used for all surveys. Analysts, though, often find that a moderate sample size is sufficient statistically and operationally. A properly selected sample of only 1,000 individuals can reflect various characteristics of the total population but it is not always needed to sample the entire population for your needs.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: Can't understand anything. Here size and sample, actually I can't understand anything so can't generate inside my head. … was	Nd: Mmm I was looking for info as to what survey uh…what are the most important points of a survey and what things a good

| talking about population, size. What else did I think? I even forgot what I was thinking. I was trying to understand the speaker, what he was saying but I couldn't understand. Was looking for answer of the question but couldn't understand. | survey depends on. I heard this word 'statistical quality', and I thought ok , this is one of the basic element of a good survey. And the author mentioned another word… I have already forgotten it. Then he bubbled on things, these things related to statistics and survey. I find this thing boring… that's why I tried to pay close attention but I just heard and everything went out, I heard and forgot. |

18. I'd like now to look at some of the types of survey available to us and the focus here will be on methods for surveying individuals and companies. Mail, telephone interview, and in-person interview surveys are the most common ways for doing this. The latter can be in offices, homes or on the street.

| Ex: What are you thinking?

 Pl: Need to do uh the surveys, their advantages and disadvantages. Was seeing mail, telephone etc, and waiting to listen. | Ex: What are you thinking?

 Nd: So the last part of the audio …begins with describing types of survey. And the question requires specific information regarding each of them. I heard pretty clearly what they said. And now I am waiting to hear about the advantages and disadvantages are. |

*19. **Mail surveys can be relatively low in cost**. A decent response rate though is the major problem. Mail surveys can be most effective when directed at particular groups, such as subscribers to a specialized magazine or members of a professional association.*

| Ex: What are you thinking?

 Pl: I am trying to … what is the advantage of mail. Here the main advantage was the cost but disadvantage is not good for different response rate; it's not possible to response instantly through mail. The advantage - cost is low.

 Ex: How did you figure out the answer?

 Pl: It's said directly that low cost in mail, and this is an advantage actually. | Ex: What are you thinking?

 Nd: Ok the first advantage of mail survey is low in cost. I figure out it easily. And then there is another; the audio said another thing about direct info or something like that. Is that mail survey … is conducted through mail to get direct info or something like that. And since the answer requires me not to stretch the answer; the word limit is no more than three words, I was thinking how I put these into three words because I heard about 4 to 5 words. Ok mmm uh probably missed it as well. It's not going so smoothly as I expected to be.

 Ex: So what's your answer? Or what did you decide?

 Nd: I am thinking I stuck. I could not make |

	out the word direct through word. … I already forgot it. Then I thought survey things are important but when these things are discussed it's boring to hear.

20. Telephone interviews are an efficient method of collecting some types of data and are being used increasingly. They lend themselves particularly well to situations where timeliness is a factor and the length of the survey is limited. ***For students such as you though, cost will be an issue.***

Ex: What are you thinking?	Ex: What are you thinking?
Pl: I was trying to understand the disadvantage of telephone. I understood advantage and the disadvantage is uh said something related to students. What is actually the disadvantage? Maybe something like it will be costly for students I think. I didn't write the answer yet. Ex: How did you find it? Pl: what is said in the end… Since I have heard about advantage in the beginning, the last thing will be about disadvantage. I got it this way. It will be costly for students. Still I am not answering, will do later maybe.	Nd: So the problem of telephone survey is, lies with cost, advantage of mail survey turns out to be disadvantage of telephone survey. Now I got my concentration back and found it now interesting.

21. In-person interviews in a respondent's home or office are good when complex information is to be collected. ***It could involve a great deal of travelling around though.*** *Street interviews could also be useful* ***as they are easy*** *but the sampling is not very scientific.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: It's talking about in-person interview so far. It is good for collecting complex info, but can mean lot of, can create trouble. But why it can create trouble I didn't hear, understand.	Nd: This part of Audio was very easy. It spoke… info was very easy to figure out. Also it didn't say anything complicated. It said street interview is easy to conduct and in person interview requires travelling. So nothing unusual, I didn't counter anything difficult. So, the answers of question 16 & 17 are 'travelling' and 'easy'.

22. We also need to the look at the content of our surveys. Surveys can focus on opinions and attitudes or on factual characteristics or behaviour. Many surveys combine types of question. ***Questions may be open-ended such as: "Why do you feel that way?" or closed*** *such as: "Do you approve or disapprove?"*

Ex: What are you thinking?	Ex: What are you thinking?

Pl: Sorry, I missed.	Nd: So there was two types of questions- open-ended and closed. So I was curious about the word 'open-ended', I heard this word before, suddenly my concentration … I started thinking what are open-ended questions and what are closed questions. I figured out that the answer of question 18 is closed. But what I was thinking of what open-ended and closed questions are (Thinking). I was thinking ok what can they mean. Thinking open-ended questions are easy questions and closed questions require pondering before answer.
Ex: You can say anything that came to your mind?	
Pl: I got distracted, that is I was thinking more about the 1st one, in the meantime, next one started, so got distracted. That's why I couldn't answer it.	

*23. The questionnaire may be very brief -- a few questions, taking five minutes or fewer -- or it can be quite long -- requiring an hour or more of the respondent's time. Also because changes in attitudes or behaviour cannot be reliably ascertained from a single interview, **some surveys employ a "panel design," in which the same respondents are interviewed on two or more occasions**.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: there will be some questions here, uh not said yet, when they will be said, I will answer. I didn't think more.	Nd: It said that survey can be conducted more than once to get specific info. And question 19 says questions can be blank, then it said interviews can be done on two or more occasions. So I am thinking surveys can be conducted mmm more than once, and that's probably going to be answer.

24. There are also certain ethics to be looked at in conducting surveys. Some of you will see that the information that you will compile is of value to companies operating in that particular sector. Therefore you must always bear in mind a few guidelines.
*Surveys should be carried out solely to develop statistical information about a subject. They should not be designed to produce predetermined results or as a ruse for marketing and similar activities. The industry standard for all reputable survey organizations is that individual respondents should never be identified in reporting survey findings. **All of the survey's results should be presented in completely anonymous summaries, such as statistical tables and charts**.*

Ex: What are you thinking?	Ex: What are you thinking?
Pl: I didn't understand anything.	Nd: Ok the last question required how the result should be brought out or presented in a survey. And the answer was very easy- 'statistical figures and charts'. But I found this part is very interesting since it spoke
Ex: Can you please say what was inside your head whilst listening the audio to perform the task?	

Ex: Didn't think anything, how I will think as I didn't understand anything. I tried to understand but I couldn't. I couldn't understand their pronunciation, some words they said…A sentence has got a key word, if I miss that key word, I can't understand the whole sentence, I totally can't understand. The thing is that I missed the key words here. Suppose I understood half of a sentence then I couldn't understand a tough word used here or maybe an easy word but pronounced in different way. Maybe I pronounce that word in different way. So when I couldn't understand the word, I wouldn't understand the meaning of the sentence, and for this I won't be able to understand the next sentence. Thus I will fail to understand the remainder. So when I fail to understand I can't answer. It's undone. If it's writing, I could understand the text even after some vocabulary is unknown to me. I could understand and write, for example in admission test or en exams. But since I am not familiar with their speaking (Style). For example, it's easy to understand past English movies, but not movies of now-a days.

Ex: Did you think of all this whilst listening?

Pl: Yes, I was thinking this. And, that's why I can't understand the things here.

about ethics. I missed the 1st part about what they said about commercial. Then there is a sentence that individuals should not be mentioned. I was eager to know what their views about conserving individual rights and ensuring that people who are taking part in survey should be made anonymous.

25. That is the end of section. You will now have half a minute to check your answers.
(30 second gap)

Ex: What are you thinking?	Ex: What are you thinking?
Pl: I have nothing to think about since I have not answered that many. Just thinking that if I could have got a chance to listen for 2nd time, I could have done better. There were some easy questions, but there is no scope to hear 2nd time otherwise I could answer some more.	Nd: So, I missed, in section 2 I missed to answers. First answer I could not make out still, then I tried to remember the answer of question 14 that mail survey had an advantage since it can be directed at particular group. So I thought I was not as attentive as I thought.

Appendix 5B: Deciding on the non-parametric tests with data in non-normal distribution

This appendix describes how the quantitative data elicited via think aloud protocols meet or violate the assumptions of the parametric tests, and the justification for the use of the non-parametric tests with data in non-normal distribution. The following sub-sections elaborate on the assumptions of the parametric tests, and the tests to see if the data show homogeneity of variance and are in normal distribution.

Assumptions of parametric tests

As mentioned in Chapter 4 (see Section 4.2.2.1), there are four assumptions of parametric tests as proposed by Field (2011). The online strategy dataset should meet these assumptions for employing parametric tests for data analysis. This dataset conformed to two of the assumptions, namely interval data and independence; however, Levene's tests and Normality tests revealed that the data violated the assumptions of homogeneity of variance and normal distribution. The results of the Levene's tests and the Normality tests are shown in the following sections.

Levene's Tests

To understand homogeneity of variance between the groups in their strategy use and listening comprehension, Levene's tests were conducted. The Levene's tests showed the equality of variances between the groups for the strategy categories of metacognitive and cognitive strategies, and the think aloud task scores ($p>0.05$) (see Table 5B.1 and 5B.2 below). However, the data failed to show non-homogeneity of variance for overall strategy use of combined metacognitive and cognitive strategies ($p<0.05$) (see Table 5B.1 below). The Levene's tests for listening comprehension showed the equality of variances between the groups ($p>0.05$), as already shown in Chapter 4 (see section 4.2.2.2).

Table 5B.1

Homogeneity of variances for overall strategy use and strategy categories.

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Total of Metacognitive and Cognitive Strategies	4.975	1	28	.034
Metacognitive Strategies	.126	1	28	.725
Cognitive Strategies	.692	1	28	.412

Table 5B.2

Homogeneity of variances of think aloud task scores

Test of Homogeneity of Variances			
Think Aloud Task Scores			
Levene Statistic	df1	df2	Sig.
2.804	1	28	.105

Normality Tests

Normality tests were performed for the think aloud task scores, overall strategy use and strategy categories (see Table 5B.3 below for a summary of results). On the basis of three scales (Kolmogorov-Smirnov, Histogram, Normal Q-Q Plot), both think aloud task scores and cognitive strategies amongst all participants and the LSL group, and cognitive strategies amongst the MSL group were in non-normal distribution. However, overall strategies, and metacognitive strategies were in normal distribution amongst all participants and both of the listening ability groups. As shown in Chapter 4, normality tests of the listening scores showed non-normal distribution amongst all participants and the two listening ability groups; the Kolmogorov-Smirnov was always sig .000.

Table 5B.3

Findings of normality tests of think aloud scores, use of overall strategy and strategy categories, and listening scores

Participants	Think Aloud Task Score	Overall Strategy Use	Metacognitive Strategy Use	Cognitive Strategy Use	Listening Scores
All Participants	Non-normal	Normal	Normal	Non-normal	Non-normal
LSL Group	Non-normal	Normal	Normal	Non-normal	Non-normal
MSL Group	Normal	Normal	Normal	Non-normal	Non-normal

Normality tests amongst all participants

The results of the normality tests of the think aloud task scores amongst all participants showed a non-normal distribution: the Kolmogorov-Smirnov sig. is .034, as seen in Table 5B.4 below. Both Histogram (Figure 5B.1) and Q-Q Plot (Figure 5B.2) also suggested non-normality.

Table 5B.4

Kolmogorov-Smirnov results of think aloud task scores

	Tests of Normality					
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Think Aloud Task Scores	.166	30	.034	.921	30	.029

a. Lilliefors Significance Correction
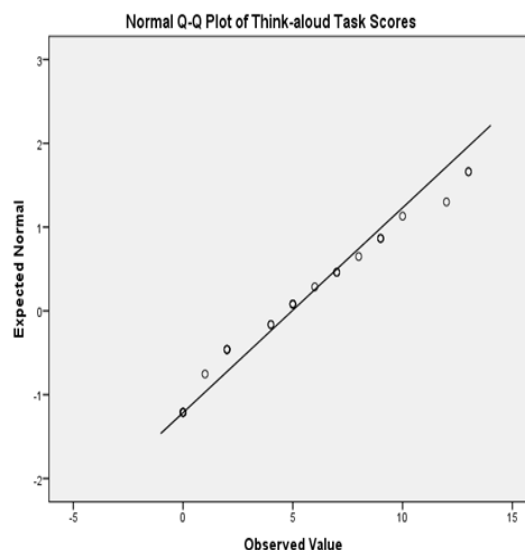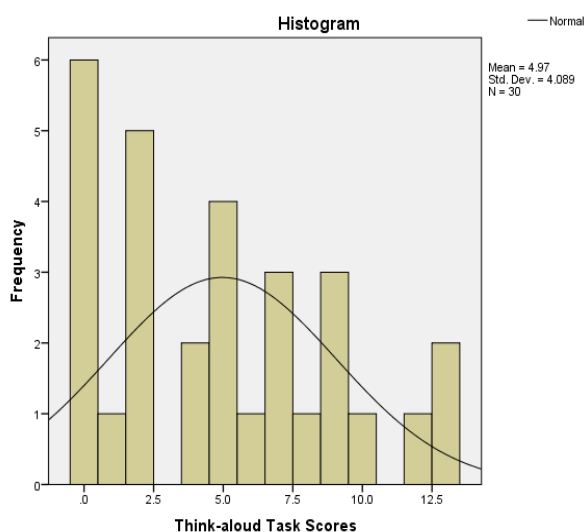
Figure 5B.1. Histogram of think aloud task scores

Figure 5B.2. Normal Q-Q Plot of think aloud task scores

The results of the normality tests of the overall strategies of combined metacognitive and cognitive amongst all participants showed a normal distribution; the Kolmogorov-Smirnov sig. was .200* (table 5B.5). Both Histogram (Figure 5B.3) and Q-Q Plot (Figure 5B.4) also exhibited the same result. As seen in the same Table 5B.5, the results of strategy categories showed a normal distribution of metacognitive strategies (the Kolmogorov-Smirnov sig. was .200*), however there was a non-normal distribution of cognitive strategies (the Kolmogorov-Smirnov sig. was .000) amongst all participants. Both Histograms (Figures 5B.5 & 5B.7 respectively) and Q-Q Plots (Figures 5B.6 & 5B.8) also supported the Kolmogorov-Smirnov results.

Table 5B.5

Kolmogorov-Smirnov results of overall strategy and strategy categories

	Tests of Normality					
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.

Total of Metacognitive and Cognitive Strategies	.113	30	.200[*]	.949	30	.163
Metacognitive Strategies	.095	30	.200[*]	.974	30	.640
Cognitive Strategies	.231	30	.000	.897	30	.007

*. This is the lower bound of the true significance.
a. Lilliefors Significance Correction
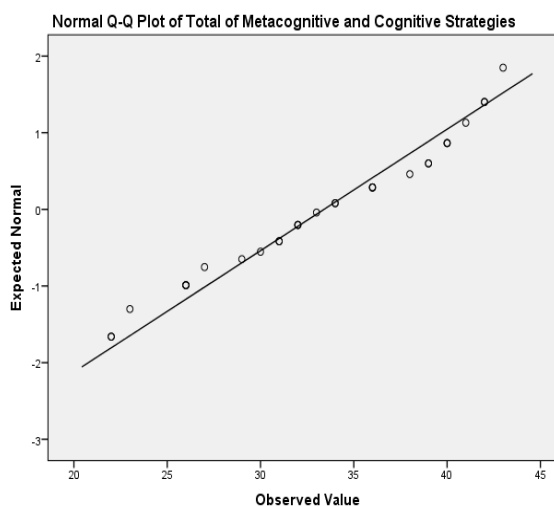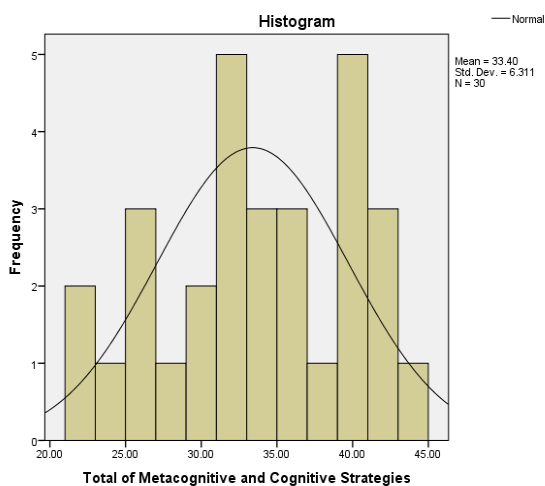
Figure 5B.3. Histogram of Overall Metacognitive and Cognitive Strategies

Figure 5B.4. Normal Q-Q Plot of Overall Metacognitive and Cognitive Strategies
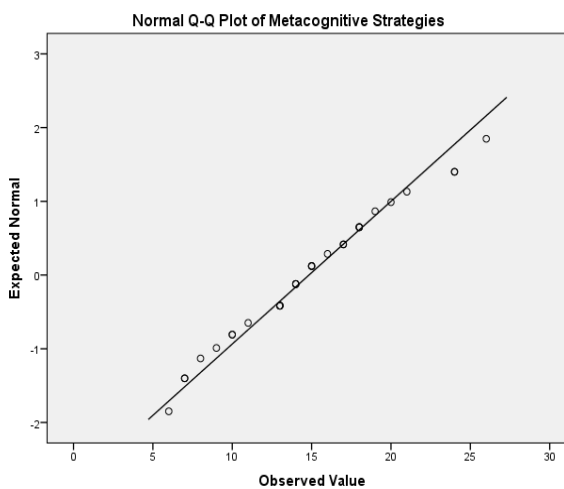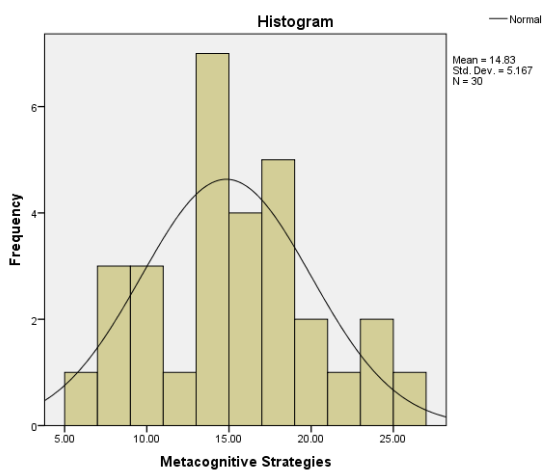
Figure 5B.5. Histogram of Metacognitive Strategies

Figure 5B.6. Normal Q-Q Plot of Metacognitive Strategies
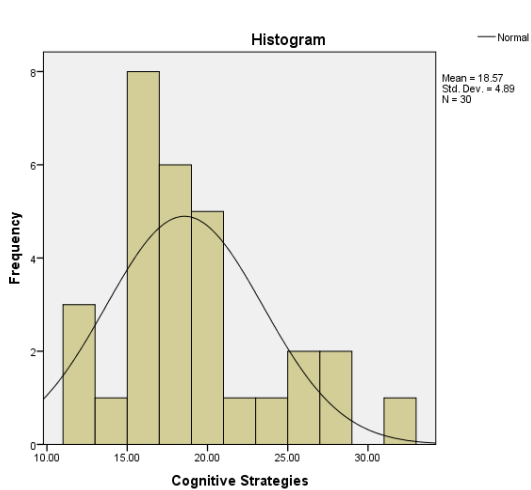
Figure 5B.7. Histogram of Cognitive Strategies
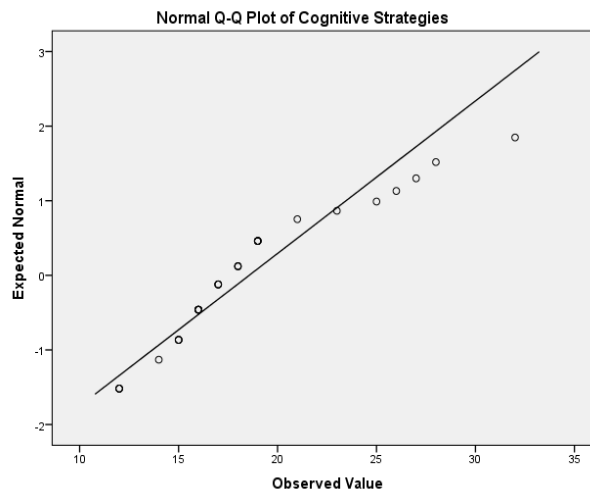
Figure 5B.8 Normal Q-Q Plot of Cognitive Strategies

Normality tests of the listening ability groups

The normality tests on the basis of three scales - Kolmogorov-Smirnov (Table 5B.6 below), Histogram, and Q-Q Plot show that the think aloud task scores were in non-normal distribution in the LSL group but in normal distribution in the MSL group. On the other hand, the overall strategies of combined metacognitive and cognitive, and metacognitive strategies were in normal distribution in both of the listening ability groups, however the cognitive strategies were in non-normal distribution in both the LSL group and the MSL group, as revealed by the normality tests on the basis of three scales - Kolmogorov-Smirnov (Table 5B.7 below), Histogram, and Q-Q Plot.

Table 5B.6

Kolmogorov-Smirnov results of think aloud task scores of the two listening ability groups

Tests of Normality

Less Successful Listeners and More Successful Listeners		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Less Successful Listeners	Think Aloud Task Scores	.244	15	.016	.789	15	.003
More Successful Listeners	Think Aloud Task Scores	.126	15	.200[*]	.941	15	.389

*. This is the lower bound of the true significance.
a. Lilliefors Significance Correction

Table 5B.7

Kolmogorov-Smirnov results of overall strategies and strategy categories of the two listening ability groups

Tests of Normality

Less Successful Listeners and More Successful Listeners		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Less Successful Listeners	Total of Metacognitive and Cognitive Strategies	.166	15	.200*	.913	15	.149
	Metacognitive Strategies	.122	15	.200*	.953	15	.566
	Cognitive Strategies	.229	15	.034	.907	15	.123
More Successful Listeners	Total of Metacognitive and Cognitive Strategies	.143	15	.200*	.940	15	.376
	Metacognitive Strategies	.167	15	.200*	.917	15	.175
	Cognitive Strategies	.224	15	.041	.886	15	.058

*. This is the lower bound of the true significance.
a. Lilliefors Significance Correction

Justification of doing non-parametric tests with non-normal data

The current dataset met the assumptions of interval data and independence; however, some of the data failed to meet the assumptions of homogeneity of variance and normal distribution. As revealed by Levene's tests and the normality tests, whilst overall strategy use failed to show homogeneity of variance ($p<0.05$), think aloud task scores amongst all participants and the LSLs, and use of cognitive strategies amongst all participants and the groups separately did not show normal distribution. Given that this dataset did not meet all the four assumptions

of the parametric tests, and that the sample size (15 LSLs and 15 MSLs) was very small, the parametric tests might not produce robust results. Therefore, the decision was for non-parametric tests to be performed for the content analysis of the think aloud protocols.

Appendix 5C: Mean use of individual task-based, online strategies

Table

Mean use of individual task-based, online strategies among all participants, and groups

	All Participants		LSL		MSL	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Planning	4.13	1.25	3.73	1.22	4.53	1.19
Directed Attention	1.07	1.23	.67	.72	1.47	1.50
Selective Attention	2.83	2.32	1.93	1.98	3.73	2.34
Self-management	.53	.68	.80	.77	.27	.46
Comprehension Monitoring	1.43	1.69	.93	1.62	1.93	1.67
Production Monitoring	.47	.63	.20	.56	.73	.59
Auditory Monitoring	.43	.77	.47	.74	.40	.83
Strategy Monitoring	.03	.18	.00	.00	.07	.26
Plan Monitoring	.07	.25	.00	.00	.13	.35
Double-check Monitoring	.97	1.16	.27	.59	1.67	1.17
Problem Identification	.87	.73	.67	.62	1.07	.80
Production Evaluation	1.13	1.04	.93	.96	1.33	1.11
Performance Evaluation	.37	.49	.40	.51	.33	.49
Auditory Evaluation	.17	.38	.27	.46	.07	.26
Strategy Evaluation	.33	.66	.40	.81	.27	.46
Linguistic Inferencing	2.43	2.24	3.93	1.91	.93	1.39
Paralinguistic Inferencing	.47	1.19	.87	1.60	.07	.26
Extra-linguistic Inferencing	2.20	1.62	2.60	1.72	1.80	1.47
Reverse Question Mapping	.57	.86	1.00	1.00	.13	.35
Personal Elaboration	.53	1.01	.27	.59	.80	1.26
World Elaboration	.77	.97	1.00	1.13	.53	.74
Academic Elaboration	.53	.68	.47	.74	.60	.63
Between Parts Elaboration	1.57	1.48	1.47	1.55	1.67	1.45
Questioning Elaboration	1.37	1.38	.60	.74	2.13	1.46

Creative Elaboration	1.13	1.13	.73	1.10	1.53	1.06
Imagery	.13	.34	.07	.26	.20	.41
Summarisation	3.03	1.75	2.13	1.77	3.93	1.22
Translation	2.10	1.92	2.13	1.96	2.07	1.94
Transfer	.07	.25	.13	.35	.00	.00
Repetition	.20	.41	.20	.41	.20	.41
Grouping	.30	.47	.20	.41	.40	.51
Note Taking	.70	1.93	.53	1.06	.87	2.56
Deduction/Induction	.17	.38	.13	.35	.20	.41
Substitution	.30	.70	.47	.91	.13	.35
Monitoring	.57	.43	.31	.31	.82	.38
Evaluation	.50	.36	.50	.43	.50	.30
Inferencing	1.70	1.31	2.46	1.45	.93	.46
Elaboration	.86	.50	.66	.37	1.07	.55
Valid N (list-wise)	30		15		15	

Appendix 5D: Non-parametric correlations

Table

Non-parametric correlations computed among participants' listening comprehension and use of individual on-line strategies

			Think-aloud Task scores
Spearman's rho	Think-aloud Task Scores	Correlation Coefficient	1.00
		Sig. (2-tailed)	.
		N	30
	Monitoring	Correlation Coefficient	.62**
		Sig. (2-tailed)	.000
		N	30
	Evaluation	Correlation Coefficient	.08
		Sig. (2-tailed)	.681
		N	30
	Inferencing	Correlation Coefficient	-.59**
		Sig. (2-tailed)	.001
		N	30
	Elaboration	Correlation Coefficient	.28
		Sig. (2-tailed)	.139
		N	30
	Planning	Correlation Coefficient	.37*
		Sig. (2-tailed)	.044
		N	30
	Directed Attention	Correlation Coefficient	.31
		Sig. (2-tailed)	.095
		N	30
	Selective Attention	Correlation Coefficient	.48**
		Sig. (2-tailed)	.008
		N	30
	Self-management	Correlation Coefficient	-.25
		Sig. (2-tailed)	.180
		N	30
	Comprehension monitoring	Correlation Coefficient	.19
		Sig. (2-tailed)	.326
		N	30
	Production monitoring	Correlation Coefficient	.48**
		Sig. (2-tailed)	.007
		N	30
	Auditory monitoring	Correlation Coefficient	.20
		Sig. (2-tailed)	.296
		N	30
	Strategy monitoring	Correlation Coefficient	.00
		Sig. (2-tailed)	1.000
		N	30
	Plan monitoring	Correlation Coefficient	.02

	Sig. (2-tailed)	.903
	N	30
Double-check monitoring	Correlation Coefficient	.78**
	Sig. (2-tailed)	.000
	N	30
Problem identification	Correlation Coefficient	.02
	Sig. (2-tailed)	.896
	N	30
Production evaluation	Correlation Coefficient	.13
	Sig. (2-tailed)	.497
	N	30
Performance evaluation	Correlation Coefficient	.04
	Sig. (2-tailed)	.833
	N	30
Ability evaluation	Correlation Coefficient	-.15
	Sig. (2-tailed)	.425
	N	30
Strategy evaluation	Correlation Coefficient	-.05
	Sig. (2-tailed)	.807
	N	30
Linguistic inferencing	Correlation Coefficient	-.69**
	Sig. (2-tailed)	.000
	N	30
Paralinguistic inferencing	Correlation Coefficient	-.38*
	Sig. (2-tailed)	.039
	N	30
Extra-linguistic inferencing	Correlation Coefficient	-.31
	Sig. (2-tailed)	.094
	N	30
Reverse question mapping	Correlation Coefficient	-.75**
	Sig. (2-tailed)	.000
	N	30
Personal elaboration	Correlation Coefficient	.25
	Sig. (2-tailed)	.182
	N	30
World elaboration	Correlation Coefficient	-.31
	Sig. (2-tailed)	.098
	N	30
Academic elaboration	Correlation Coefficient	.03
	Sig. (2-tailed)	.891
	N	30
Between parts elaboration	Correlation Coefficient	.06
	Sig. (2-tailed)	.741
	N	30
Questioning elaboration	Correlation Coefficient	.49**
	Sig. (2-tailed)	.006
	N	30
Creative elaboration	Correlation Coefficient	.34
	Sig. (2-tailed)	.064
	N	30

Imagery	Correlation Coefficient	-.05
	Sig. (2-tailed)	.810
	N	30
Summarisation	Correlation Coefficient	.67**
	Sig. (2-tailed)	.000
	N	30
Translation	Correlation Coefficient	-.20*
	Sig. (2-tailed)	.048
	N	30
Transfer	Correlation Coefficient	-.37*
	Sig. (2-tailed)	.042
	N	30
Repetition	Correlation Coefficient	.14
	Sig. (2-tailed)	.474
	N	30
Grouping	Correlation Coefficient	.19
	Sig. (2-tailed)	.305
	N	30
Note taking	Correlation Coefficient	.09
	Sig. (2-tailed)	.652
	N	30
Deduction/Induction	Correlation Coefficient	.14
	Sig. (2-tailed)	.458
	N	30
Substitution	Correlation Coefficient	-.07
	Sig. (2-tailed)	.714
	N	30

Appendix 5E: Median of task-based, on-line strategy use to interpret results of Mann Whitney U Tests

Statistics

Less Successful Listeners and More Successful Listeners

	Less Successful Listeners		More Successful Listeners	
	N Valid	Median	N Valid	Median
Overall strategies	15	.85	15	1.06
Metacognitive strategies	15	.73	15	1.20
Cognitive strategies	15	.95	15	.89
Monitoring	15	.33	15	.83
Evaluation	15	.50	15	.50
Inferencing	15	2.33	15	1.00
Elaboration	15	.57	15	1.00
Planning	15	4.00	15	5.00
Directed Attention	15	1.00	15	1.00
Selective Attention	15	1.00	15	4.00
Self-management	15	1.00	15	.00
Comprehension Monitoring	15	.00	15	2.00
Production Monitoring	15	.00	15	1.00
Auditory Monitoring	15	.00	15	.00
Strategy Monitoring	15	.00	15	.00
Plan Monitoring	15	.00	15	.00
Double-check Monitoring	15	.00	15	1.00
Problem Identification	15	1.00	15	1.00
Production Evaluation	15	1.00	15	1.00
Performance Evaluation	15	.00	15	.00
Auditory Evaluation	15	.00	15	.00
Strategy Evaluation	15	.00	15	.00
Linguistic Inferencing	15	4.00	15	1.00
Paralinguistic Inferencing	15	.00	15	.00
Extra-linguistic Inferencing	15	2.00	15	2.00
Reverse Question Mapping	15	1.00	15	.00

Personal Elaboration	15	.00	15	.00
World Elaboration	15	1.00	15	.00
Academic Elaboration	15	.00	15	1.00
Between Parts Elaboration	15	1.00	15	2.00
Questioning Elaboration	15	.00	15	2.00
Creative Elaboration	15	.00	15	2.00
Imagery	15	.00	15	.00
Summarisation	15	2.00	15	4.00
Translation	15	2.00	15	1.00
Transfer	15	.00	15	.00
Repetition	15	.00	15	.00
Grouping	15	.00	15	.00
Note Taking	15	.00	15	.00
Deduction/Induction	15	.00	15	.00
Substitution	15	.00	15	.00

Appendix 5F: Mann Whitney U Tests for individual on-line strategy use

Table

Mann Whitney U tests on group differences in individual on-line strategy use

	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2*(1-tailed Sig.)]
Planning	72.00	192.00	-1.74	.082	.098[b]
Directed Attention	82.00	202.00	-1.34	.181	.217[b]
Selective Attention	59.00	179.00	-2.25	.024	.026[b]
Self-management	69.00	189.00	-2.04	.041	.074[b]
Monitoring	36.00	156.00	-3.20	.001	.001[b]
Problem Identification	80.50	200.50	-1.44	.151	.187[b]
Evaluation	99.50	219.50	-.56	.572	.595[b]
Inferencing	34.50	154.50	-3.28	.001	.001[b]
Reverse Question Mapping	55.00	175.00	-2.78	.005	.016[b]
Elaboration	60.00	180.00	-2.19	.028	.029[b]
Summarisation	42.00	162.00	-2.97	.003	.003[b]
Translation	108.50	228.50	-.17	.866	.870[b]
Transfer	97.50	217.50	-1.44	.150	.539[b]
Repetition	112.50	232.50	.00	1.000	1.000[b]
Grouping	90.00	210.00	-1.17	.240	.367[b]
Note Taking	111.50	231.50	-.05	.957	.967[b]
Deduction/Induction	105.00	225.00	-.48	.630	.775[b]
Substitution	95.50	215.50	-1.01	.312	.486[b]
Comprehension Monitoring	68.00	188.00	-1.94	.049	.067b
Production Monitoring	56.50	176.50	-2.69	.007	.019b
Auditory Monitoring	104.00	224.50	-.41	.681	.744b
Strategy Monitoring	105.00	225.00	-1.00	.317	.775b

Plan Monitoring	97.50	217.50	-1.44	.150	.539b
Double-check Monitoring	31.50	151.50	-3.59	.000	.000b
Production Evaluation	89.50	209.50	-1.00	.319	.345b
Performance Evaluation	105.00	225.00	-.37	.710	.775b
Auditory Evaluation	90.00	210.00	-1.44	.148	.367b
Strategy Evaluation	110.50	230.50	-.11	.914	.935b
Linguistic Inferencing	18.50	138.50	-3.96	.000	.000b
Paralinguistic Inferencing	81.00	201.00	-1.87	.061	.202b
Extra-linguistic Inferencing	82.50	202.50	-1.27	.205	.217b
Personal Elaboration	87.50	207.50	-1.28	.199	.305b
World Elaboration	86.00	206.00	-1.20	.232	.285b
Academic Elaboration	95.50	215.50	-.80	.425	.486b
Between Parts Elaboration	99.00	219.00	-.58	.559	.595b
Questioning Elaboration	38.50	158.50	-3.19	.001	.001b
Creative Elaboration	61.500	181.500	-2.21	.027	.033b
Imagery	97.500	217.500	-1.06	.291	.539b

Appendices for Chapter 7

Appendix 7A: Triangulation of strategy use and strategy knowledge elicited via three data collection tools.

Table

Triangulation of the quantitative findings of strategy use and strategy knowledge elicited via three data collection methods

Strategies (elicited via 3 different tools)	Both LSLs and MSLs	LSLs	MSLs
Perceived strategy use (elicited via questionnaire)			
Pearson Correlation results	No significant correlation between listening comprehension and overall use of strategies, their categories. Elaboration reached positive significance whilst translation reached negative significance		
ANOVA results	A mixed between-within subjects ANOVA reveals that there were no significant group differences in strategy use		
Task-based, on-line strategy use (elicited via think aloud protocol)			
Spearman rho results	Significant positive correlation of listening comprehension with the metacognitive strategy category, and the individual strategies of monitoring, double-check monitoring, and summarisation, and significant negative correlation with inferencing, linguistic inferencing, reverse question mapping		

Mann Whitney U tests results	Significant differences between the groups, with higher use amongst the MSLs, in the metacognitive strategy category, and the individual strategies of monitoring, double-check monitoring, and questioning elaboration, and higher use amongst the LSLs in inferencing and linguistic inferencing		

Strategy knowledge
(elicited via semi-structured interview)

			Frequency of mentions of each of the strategy categories is higher
a. Strategies for comprehension	Frequently reported metacognitive strategy - directed attention		Frequently reported metacognitive strategies - self-management, directed attention, planning, selective attention, and self-monitoring
	Frequently reported cognitive strategies - inferencing, elaboration, and listening by repeating		Note taking
	Less frequently mentioned - self-monitoring, resourcing, asking for clarification - slightly higher amongst the MSLs	Reverse question mapping, repetition, translation reported only by the LSLs	Summarisation and self-encouragement reported only by the MSLs
b. Strategies for development of listening			Greater awareness of the strategies both in terms of frequency and strategy items
			Frequently reported metacognitive strategies - self-management and self-monitoring, and the cognitive strategy –

			elaboration Socio-affective strategies - cooperation, emotional temperature reported by the MSLs only
c. Strategies not working always	Inferencing, elaboration	Reverse question mapping	Selective attention, planning, and resourcing

Appendix 7B: A 'good' listener's metacognitive knowledge

Table

A GL's Metacognitive Knowledge

GL's metacognitive knowledge as reflected in MSLs' MK		GL's metacognitive knowledge as revealed in MSLs' and LSLs' GL knowledge	
MK categories and subcategories	Items	Factors	Items
Person Knowledge (listening self) Cognitive processes	Greater awareness of cognitive processes, motivation and exposure to listening, learner needs, and positive self-concept • More global listening		
Motivation and exposure	• Self-motivated to listen; integrative motivation to target culture and language, • Attribute of perseverance • Exposure to listening, on personal level, mostly from early stage of life	Motivation and exposure	Having interest in English language and culture Attribute of perseverance Exposure to and interaction with target language and culture

Self-concept	• Possess positive self-concept; • Self-rate their ability in the range of 50% to 80% • Satisfied with their improvement • Confident in future performance	Miscellaneous factors	Good sensory perception Good interpretation skills
Listening problems	• Although LSLs show greater awareness of listening problems, MSLs show awareness of more types of problems		Ability to understand the meaning quickly Ability to grasp main ideas and intended meaning
Obstacles	• Unlike LSLs, blame less on own personality; rather, more aware of social environment as an obstacle		Opportunity to check comprehension
Learner needs	• More aware of their needs. • Need to practise with different topics and input types and enhance strategy competence		Listening with purpose and goal in mind
Task knowledge	More aware of task knowledge, particularly input useful for listening and nature of listening		
Factors affecting listening	• More aware of factors affecting listening • More aware of each of the factor types - text, listener, speaker, and environment and EFL context (except task) • Awareness of subtitles and lyrics, types of input, accent, motivation, perseverance, physical conditions, and EFL context • Aware of both negative (e.g., speakers' accent) and positive (e.g., motivation) factors, unlike LSLs' awareness of mostly negative factors	Linguistic	Good knowledge of pronunciation and accents Good repertoire of vocabulary Understanding prosodic features
		Miscellaneous	Memory
Input useful for listening	• Much more aware of input useful for listening development; both in terms		

	of frequency and different types of input, e.g., teachers' lectures, songs		
Practices for developing perception skills	• Practise in pronunciation and accent, frequent listening to whatever interests them		Frequent listening and more practice
Nature of L2 listening	• More aware of nature of L2 listening • Aware that listening is an active skill • That listening is an integrative skill		
Strategy knowledge	Possess higher strategy knowledge - of both listening comprehension and development of listening, as well as of certain strategies that do not always work	Strategy	(Metacognitive strategies) Directed attention, Planning, Self-management, Selective attention, Monitoring
Strategies useful for listening comprehension	• Greater awareness of each category of strategies, particularly of metacognitive strategies • Awareness of self-management, directed attention, planning, and selective attention, compared to LSLs' directed attention only • Besides elaboration, listening by repeating, taking notes, and asking for clarification		(Cognitive strategies) Elaboration, Inferencing, Summarisation, Substitution
Strategies useful for development of listening	• More aware of strategies for development, particularly metacognitive strategies, in terms of both frequency and strategy items • Awareness of self-management, monitoring and elaboration		
Strategies that do not always work	• More aware of some strategies, both cognitive and metacognitive, those that sometimes do not work in some situations		

Abbreviations

ANOVA=Analysis of Variance

BA=Bachelor of Arts

CLT= Communicative Language Teaching

CLTA=Communicative Language Teaching Approach

EFL=English as a Foreign Language

EFLLSQ=English as a Foreign Language Listening Strategy Questionnaire

ELTIP= English Language Teaching Improvement Project

GCE=General Certificate of Education

GL=Good Listener

GLL=Good Language Learner

GTM=Grammar Translation Method

HSC=Higher Secondary School Certificate

IELTS=International English Language Testing System

JSC=Junior School Certificate

L2= Second/Foreign Language

LLS=Language Learning Strategy

LSL=Less Successful Listener

LTM=Long Term Memory

MALQ=Metacognitive Awareness Listening Questionnaire

MK=Metacognitive Knowledge

MSL=More Successful Listener

NCTB= National Curriculum and Textbook Board

PSC=Primary School Certificate

RQ=Research Question

SILL=Strategy Inventory of Language Learning

SSC=Secondary School Certificate

STM=Short Term Memory

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