INTERVENING IN TERTIARY STUDENTS' STRATEGIC
LISTENING IN JAPANESE AS A FOREIGN LANGUAGE

By

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ABSTRACT

This is an exploratory study from a cognitive psychology perspective. It investigates the listening strategies used by tertiary-level learners of Japanese as a foreign language in non-interactional listening tasks. The study addresses four research questions: (1) What are the listening strategies used by native speakers of Japanese (L1) and by above-average proficiency (AAP) and below-average proficiency (BAP) tertiary-level learners of Japanese as a foreign language who are Australian-English speakers, in audiovisual (AV) and audio-only (A) listening contexts?; (2) How does the voice medium in different genres (television news broadcasts and television family dramas) influence these speakers' listening strategies in AV and A listening contexts?; (3) What are the similarities and differences in strategy use in AV and A listening contexts between the L1 group and the AAP and BAP L2 subgroups?; what are the effective strategies used by these speakers?; and what types of strategies should be included in an instructional package for an effective intervention program? (4) Does the listening strategy intervention program developed in this study result in more strategic listening in Japanese?

The study was conducted in two stages. Study 1 pursued refinement of a listening strategy classification scheme for use in Study 2. Study 2 sought to develop, administer, and evaluate the efficacy of a listening strategy intervention program. The participants' verbal data were collected and analysed using the think-aloud protocol method, which is most effective for capturing listeners' on-line processing of authentic Japanese satellite texts.

In Study 1, twelve students were classified as the AAP and BAP groups according to their test results on The Japan Foundation Japanese Language Proficiency Test. The AAP and BAP data were compared to the data of the
two native speakers of Japanese.

Data analysis from Study 1 identified similar and dissimilar use of listening strategies by the L1 and L2 groups. All three groups used cognitive strategies more often under the AV conditions and metacognitive strategies more often under the A conditions. Under the AV conditions, they used cognitive strategies related to top-down processing and under the A conditions they used those related to bottom-up processing. The data also revealed a distinctive pattern in strategy use that differentiates the L1 from the two L2 subgroups. The L1 used more cognitive strategies to comprehend the news texts and more metacognitive strategies to comprehend the drama texts. The reverse applied for both the two L2 groups. More importantly, the L1 and to a lesser extent the AAP, used cognitive strategies related to top-down processing. The BAP focused on other strategies related to bottom-up processing. The genre of text had little effect on the choice of listening strategies by the learners of Japanese in this study.

Qualitative analysis of the protocol data, however, revealed striking differences between the two L2 groups despite the similarities in the range and frequency of the strategies they used. The AAP identified the meaning of key terms then evoked instantly other top-down processing strategies: 'elaborating', 'inferencing', or 'visualising'. The BAP identified key terms in isolation without attempting linkage to other parts of the same texts or aspects of the full text. Unlike the AAP, the BAP could not access this information quickly to enable them to trigger other strategies so their interpretation was mostly confined to single words. With extensive attention to individual words, the BAP's processing became overloaded and they generally could not remember what they had comprehended. In contrast the AAP could relate what they comprehended and process larger chunks of
information, which produced more coherent interpretation of text. These behavioural differences between the two groups have significant implications for short-term memory processing capacity. The features of strategy use by the AAP group were incorporated in the strategy intervention program. However, the L1 data were not comparable to the L2 data due to the L1 group's ability in automatic language processing in their native language.

In the intervention, the intervention group (IG) were trained in three task-effective strategies identified from the Study 1 data, assisted by teacher 'scaffolding'. These strategies were 'identifying key terms', 'inferencing' and 'elaborating'. The IG were also instructed to use titles as 'advance organisers' to establish the working framework of a test and to trigger other strategies. In the pre-test and post-test design, the effect of the intervention was measured by comparing the performances of the IG and the non-intervention group (NIG).

Analysis of the test data revealed that the IG improved overall especially through bottom-up processing that resulted from greater metacognitive awareness. However the skills relating to top-down processing generated from the text title and subsequent inference and elaboration were difficult to proceduralise and were less sensitive to the intervention treatment. Equally important was the finding that the intervention was beneficial for the IG to become more resilient in dealing with problems that are inherent in authentic listening. The IG students showed higher levels of confidence and ability in coping with the speed of text delivery and unfamiliar words in the text. Implications for future studies and L2 pedagogy conclude the study.
STATEMENT OF SOURCES

I declare that this work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Kyoko Sai
Signed:
Date:
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DEDICATION

This work is dedicated to the memory of my father, YOSHIO SEO
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CHAPTER 1: INTRODUCTION

1.1 Background to this Investigation

During the past fifteen years, there have been strong enrolments in Japanese language programs at Australian educational institutions. Enrolment numbers peaked in the late 1980s. Because of its magnitude and speed, some observers referred to this development as *tsunami* or tidal wave (Lo Bianco, 2000). The demand for Japanese language programs in Australia has been largely due to the widely held perception in Australia that because of Japanese economic strength and links with Australia's economy, Japanese language is useful for obtaining employment. This was recognised by changes in language education policy both at the federal and state levels. The National Policy on Languages (DEED, 1991; Lo Bianco, 1987) identified the Japanese language as one of fourteen priority languages given priority because they are languages of: 1) significant ethnic communities (Aboriginal languages; Italian; German; Greek; Spanish; and Vietnamese); 2) regional and economic importance (Chinese; Indonesian/Malay; Japanese, Korean; Russian; and Thai); and 3) relevant for economic or cultural reasons but are less salient as community languages in Australia (French and Arabic).

Alongside this interest in developing Japanese language skills inside Australia, we can observe greater numbers of Australian students studying in Japan through institutional exchanges and other opportunities made possible by working holiday visas and other formal or informal work or study programs. These circumstances have meant that many students enter

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1 Lo Bianco's study recognises the correlation between the state of Japanese economy and Australia's national language policy. The data in this study also highlight the time lag between policy development and policy outcome (i.e., actual increases in students enrolments in Japanese language programs).
tertiary-level Japanese language programs in Australia with a level of Japanese language skills that is already advanced. Yet there are also many students who enter tertiary-level Japanese language programs with no experience of living in Japan or studying Japanese language at the pre-tertiary level. This situation creates an immediate concern for Japanese language teachers. Teachers’ concerns have deepened as state governments introduced higher second language (L2) proficiency levels for students, requiring teachers of LOTE (languages other than English) to achieve even better outcomes for their students in teaching programs.

According to Jordan and Lambert (1991), which is based on the English-speaking learner population, learning ideographic languages like Japanese and Chinese requires approximately 1,320 hours of instruction in an intensive program to bring students to the same level of proficiency reached after only about 480 hours of instruction in languages such as French or Spanish. Thus many L2 teachers perceive that the relatively high L2 proficiency ratings set by government may not be achieved by students undertaking conventional programs in the non-alphabetical languages such as Japanese (De Courcy & Birch, 1993). This situation has created an extra imperative for L2 educators to identify ways to increase success in language learning given constraints on classroom teaching time.

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3 The 1998 Japanese language education organisation survey (as at 1st March 1999) conducted by the Japan Foundation Japanese Language Institute (2000) reports the total number of learners of Japanese language in Australia as 311,373 comprising primary-school level: 166,969; secondary-school level: 133,804; and post-secondary level: 10,600 (universities: 7,483; TAFE: 2,112; business/community colleges: 1,005). These figures indicate that Australia has the world’s second highest number of Japanese language learners after Korea.

4 The term, second language includes foreign language unless otherwise stated.
5 The minimum proficiency levels set by International Second Language Proficiency Ratings (ISLPR) for learners of ideographic scripts (eg., Japanese and Chinese) are Speaking 3; Listening 3; Writing 2; and Reading 3, and for learners of non-ideographic languages are Speaking 3; Listening 3; Writing 3; and Reading 3 (Ingram & John, 1990; Wylie & Ingram, 1999).
Research on education (Geary & Wideman, 1987 cited in Glover, Rouning, & Bruning, 1990:13) has claimed that to perform complex tasks, a learner requires three kinds of knowledge: domain specific knowledge, general knowledge, and strategic knowledge. The present study has a specific focus on the third of these, strategic knowledge. Strategic knowledge relates to the effective performance of a given task and the studies of several L2 researchers (Canale & Swain, 1980; O'Malley & Chamot, 1990; Wenden, 1991) have focused on the importance of strategic knowledge in acquiring L2. Nonetheless, language educators have generally paid comparatively little attention to strategic knowledge and learners’ cognitive processes. Recognising the imperatives for improving Japanese language teaching as discussed above and the potential of strategic knowledge to contribute to this improvement, this study investigates one important aspect of strategic knowledge: the process of listening comprehension. The study investigates this process as a form of strategic knowledge and develops a teaching intervention program as a means of improving Japanese language teaching.

1.2 The Importance of Listening in Contemporary Society

A number of early empirical studies of English language speakers indicate that adults spend 40 per cent of their time awake listening, 30 per cent speaking, 16 per cent reading, and 9 per cent writing (Rivers, 1981). Listening is the foundation of formal education. A study of students in the United States reported that about 90 per cent of students' class time in high schools and colleges is spent either listening to lectures or in discussion (Coakley, 1988a cited in Coakley & Wolvin, 1990). Listening is also instrumental in the workplace. Employer organisations identified listening as one of the most important communication skills for employees at all levels indicating that good listening skills are a vital aspect of employee competence (Wolvin & Coakley, 1995).
Technological development has rendered us a ‘nation of viewers’ (Freedman, 1986 cited in Dunkel, 1991). Freedman (1986:A-15) asserted that ‘a nation of listeners’ is also ‘a nation of viewers’, thus:

We have slowly but emphatically shifted our means of communication from the printed word to images and sounds, from books to television, movies, radio, and recordings. Instead of reading today, most of us prefer to look and listen.

It is important to acknowledge some limitations on the observation above. First, we live in times of immense technological change that has influenced profoundly the way many people communicate. E-mail communications and internet chat groups that replace telephone or face to face communications have replaced some listening situations with reading/viewing situations. This is true of the late 1990s with the advent of personal computers and electronic communications on screen. Second, since these studies are of native speakers in advanced industrialised nations with English as their first national language, the studies do not apply to all humankind or to all cultures. Nevertheless, they are certainly relevant for indicating the importance of listening in an industrially advanced nation like Australia.

Yet despite its importance in communication and the sense of urgency in understanding listening in strategic knowledge, L2 educators have paid relatively little attention to the development of this skill in the language teaching process. This is mainly because in the past 30 years, the interests

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6 Americans from ages two to eighteen spend more than 20,000 hours before television sets, which is over 7,000 hours more than they spend in school from kindergarten through 12th grade (Wolvin & Coakley, 1988)
of L2 educators (and researchers) have been elsewhere, they have spent their energy on the skills of literacy: reading and writing. Another reason may be a lack of instructional practice which has stemmed from the common assumption by educators that students' listening skills would develop naturally as students are taught to speak (Abelleira, 1987; Pimsleur, Hancock, & Furey, 1977). As a result, most L2 teachers are not familiar with how to teach listening effectively (Swanson, 1986).

Listening is, after all, a covert activity, and has been subject to scant academic analysis for its place in L2 learning. There has been naturally even less research on the specific topic of audiovisual listening in L2. We have little knowledge and understanding of how people listen to audio stimuli presented in either their L1 or their L2 (Bostrom, 1990; Long, 1990; Pearson & Fielding, 1982).

1.3 The Relevance of Listening to Second/Foreign Language Acquisition (SLA/FLA)

The importance of listening as a language skill in L2 has been reflected in a number of language teaching methods and approaches (Audio-Lingual Method; Community Language Learning; Natural approach; Silent Way; Suggestopedia; and Total Physical Response). These methods and approaches have emphasised listening in the initial stages of L2 learning and stress listening as a means to achieve L2 production (Daniels, Pringle, & Wood, 1986; Krakowian, 1981; Met, 1984; Thiele & Scheibner-Herzig, 1983).

The most important argument in favour of an initial 'silent' or 'pre-speaking' period without speech production came from studies of first language (L1) acquisition. Small children demonstrate the ability to comprehend long before they can speak their L1. Therefore, in learning L2,
we should follow this natural order from comprehending speech to speaking (Asher, 1969; Postovsky, 1974; Winz & Reed, 1973). Another argument in favour of delaying speech production in the initial period has come from the findings of studies in cognitive psychology which support the possibility of avoiding short-term memory (STM) overload: When a learner must perform two tasks of speaking and listening, s/he must process auditory input while producing speech. These two operations must be performed simultaneously and they require complex cognitive skills (Anderson, 1995; Ericsson & Simon, 1993; Nagel & Sanders, 1986; Nord, 1980). As a result, a learner may become frustrated and inhibited from further learning.

It appears that cognitive advantage means efficiency in learning. When L2 learners can use only limited attention resources in STM, they are able to concentrate on the development of one particular language skill and as they advance through learning stages, more skills will be gradually acquired and these skills are more easily integrated. Cognitive theory draws attention to this type of skill development and has a significant relevance to L2 learning and acquisition (Anderson, 1995), in contrast to behaviourist learning principles of the repeated association of a stimulus with a response.

In recent years, the Natural Approach has attracted a lot of interest from L2 educators and researchers. The advocates of this approach (Krashen, 1982) maintain that adequate listening input must constitute a structure which is slightly above the learner's current competence level so that the learner can engage in problem-solving activities from the beginning by guessing at the meaning of unfamiliar language elements (Krashen, 1982; Krashen & Terrell, 1983). They assume the L2 learner will develop listening

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7 Krashen and Terrell (1983) thus regard the process involved in L2 learning as analogous to that of L1 learning.
comprehension ability as a result of exposure to comprehensible input\(^8\) after an extended initial stage of learning without producing the target language, either spoken or written.

Although these L2 teaching methods and approaches have recognised the importance of this teaching of one skill (for example, listening) and adaptations of teacher input or techniques to enhance comprehension, individual factors have not been taken into consideration nor have researchers attempted to explore the cognitive processes involved in listening.\(^9\)

With the increased availability of media technology, satellite video has the potential to provide L2 learners with rich context and ability to render information that is more meaningful to them. Without understanding their learners' mental process, L2 teachers must continue to rely on their intuition in selecting and producing teaching materials for their students (Lund, 1991).

1.4 From Product to Process of SLA/FLA

Investigation into the L2 learning process has recently become an area of interest for those who want to improve their instructional practice. Twenty-five years ago, Rubin (1975:44-45) acknowledged the importance of a process-oriented approach:

What fascinates me is how often the teacher plans ahead with the

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\(^8\) The Input Hypothesis states that "humans acquire language in only one way by understanding message, or by receiving comprehensible input" (Krashen, 1985:2). Other hypotheses claimed by Krashen include the Monitor Hypothesis, the Natural Order Hypothesis, and the Affective Filter Hypothesis (Krashen & Terrell, 1983). Krashen maintains the non-interface position that claims that formal classroom practice plays only a minor role in a learner's L2 development.

\(^9\) Jakobovits (1972) states that learners' individual factors relate to about 86 percent of the
lesson seemingly with little awareness of what is going on in each student, and often without directing the attention of the poorer students to show how the successful student arrives at his[her] answer. That is, many foreign language teachers are so concerned with finding the best method or with getting the correct answer that they fail to attend to the learning process.

Similarly, Hosenfeld (1979a:52) who was dissatisfied with conflicting results of the empirical research undertaken in the area of L2 teaching method observed thus:

What is needed is a reversal of our thinking about the instructional process. Instead of initially focusing upon the teaching act (or language stimulus) and viewing learning as adapting to this act, we should initially focus upon the learning act and view teaching as adapting to learning. In this reconceptualisation of the instructional process, which we might label ‘learning-teaching process’, students provide the first input into instruction in the form of learner strategies, and teaching consists of adapting to this input.

Hosenfeld’s view that teaching principles should be guided by learning principles (‘inside the learner’s head’ factor) was also endorsed by cognitive psychologists (for example, Ausubel, Novak, & Hanesian, 1978). These researchers view cognitive theory as a vital framework for conceptualising and accounting for the power of learning strategies to influence learning outcomes.

In recent years, this shift of focus from product to process has resulted in a
growing literature concerned with learner strategies. Researchers began to
investigate the cognitive processes involved in reading (Anderson, 1991;
Block, 1986, 1992; Carrell, 1984a, 1987; Davis & Bistodeau, 1993; Horiba,
1990, 1993; Hosenfeld, 1977, 1984; Olson, Duffy, & Mack, 1984; Sarig,
1987) and in writing (Arndt, 1987; Flower & Hayes, 1981, 1984; Raimes,
1985, 1987; Scardamalia & Bereiter, 1984, 1987; White & Caminero, 1995;

The processes involved in listening, however, have not yet been the subject
of intensive or extensive research. It is however imperative to expand our
knowledge base on the process of L2 listening comprehension and to further
develop L2 listening theory. As argued by Long (1989), Dunkel (1991), and
Pearson and Fielding (1982), we urgently need fundamental studies that
describe this covert mental activity.

1.5 Purpose of this Investigation
This study aims to contribute to filling in this vacuum in our knowledge of
the listening process. As a point of departure, the study first identifies
listening strategies used by L1 and L2 speakers of Japanese and then
validates them through empirical testing (Study 1) to develop an
intervention program for classroom use. The intervention program (Study 2)
is designed to improve students’ strategic listening skills. Its purpose is to
encourage learners to become not only more efficient at learning, but also
more capable of self-directed learning. Self-directed or autonomous learners
accept more responsibility for their own learning, which is one of the major
educational goals of teachers (Kinoshita-Thomson, 1996; Wenden, 1991;
Weinstein, 1987).

Thus this study seeks to make theoretical and practical contributions to L2
pedagogy. Findings of the study contribute to the body of theoretical
knowledge concerning L2 listening comprehension processes. The intervention program developed in this study has immediate practical application in Japanese language and other language teaching programs. In this way, it helps to address the current needs of Japanese language teachers to improve their teaching and outcomes, and Japanese language learners to improve the effectiveness of their language studies.

1.6 Significance of this Study
By meeting the purposes identified above, this study has special significance for L2 teaching and learning in Australia. This is particularly important in terms of the national need for proficient speakers of LOTE, given economic, political, social and geostrategic imperatives driving national policies at all levels of government in Australia. These imperatives have institutionalised the demands on L2 teachers and learners to maximise their performances. Beyond national need, this study has valuable implications for L2 pedagogy.

Of equal importance, the findings of this study benefit Japanese language teachers as they seek to improve their teaching performance, and Japanese language learners who seek to maximise their learning outcomes to become proficient language learners.

This study has examined the case of Japanese language. These findings, however, have some direct relevance for other L2 teaching and learning beyond the Japanese case. This is particularly so for the non-alphabetical languages such as Chinese and Korean. The regional and economic importance of these nations is acknowledged in the presence of these languages on Australia’s priority language list.
1.7 Structure of the Study

The study was conducted in two stages: Study 1 aims to identify the range and types of listening comprehension strategies used by native speakers of Japanese and tertiary-level students of Japanese as they listen to two different types of texts under audiovisual and audio-only listening contexts. Based on the findings of Study 1, Study 2 evaluates the efficacy of a listening strategy intervention program.

To address the research questions in Study 1 and Study 2, this thesis is structured in six chapters: Chapter 1 presents the background of the issues to be investigated, the importance of listening, and its relevance to SLA/FLA. It sets out the purpose, the significance and the structure of the study. Chapter 2 reviews literature from a cognitive psychology perspective that is pertinent to this investigation. This includes studies in learning strategies, reading strategies, and listening strategies. Chapter 3 details and provides justification for the choice of research methods for Study 1 (development of a listening strategy classification scheme) and for Study 2 (the listening strategy intervention program). The results obtained from Study 1 and Study 2 are reported in Chapter 4. Chapter 5 analyses and discusses the results obtained from these studies and Chapter 6 concludes with a summary of research findings. This final chapter also considers the implications for language pedagogy and future research directions.
CHAPTER 2: REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

2.1 Overview

Studies of listening in second/foreign language acquisition (SLA/FLA) draw on a number of theoretical perspectives. The first is linguistically oriented where the aim is to describe target language properties and how variables such as speech rate, discourse markers, morphological and syntactic modification may affect listeners' comprehension (Blau, 1990; Chaudron & Richards, 1986; Chiang & Dunkel, 1992; Griffiths, 1990a, 1992; Flowerdew & Tauroza, 1995). The second theoretical perspective is ethnographic. It concerns the way learners process text information and how this is influenced by interaction with other participants of the study (for example, peers and/or teachers) by examining learners' written records and/or interviews (Benson, 1989; Fujita, 1984; Schumann & Schumann, 1977). The third is from a cognitive perspective. This approach is adopted in studies on learner strategies that attempt to identify characteristic strategies by an individual learner or a certain group of learners (Bacon, 1992a, 1992b; O'Malley & Chamot, 1990; Vandergrift, 1992, 1996). These researchers usually collect their data through the think-aloud protocol method and interviews conducted concurrently or retrospectively. The aim of these studies is, once effective strategies are identified, to encourage less-effective language learners to adopt the more effective strategies.

The aim of the present study is to identify listening comprehension strategies to develop and evaluate a strategy intervention program in listening within a cognitive framework. Current research on language learning strategies (LLSs) that adopt cognitive frameworks has been conducted from two major perspectives: one is concerned with production
of language and the other with comprehension (Brown, 1994; Richards, 1990). The former relates to interaction in which meaning is negotiated, while the latter, to the receptive aspects of language use where a learner solves problems through decoding aural and written stimuli. This study focuses on the second aspect of language use and explores what L2 learners do while they are still engaged in the listening task.

Research investigating this covert activity has been the most neglected area of language study, with subsequent effects on availability of useful findings. This chapter therefore relies heavily on the contribution made by studies in L2 reading findings that indicate that cognitive processes involved in reading and listening may be similar. Findings from these studies provide considerable insights into the complex nature of the mental processes involved in L2 listening.

A brief history of the changing views on the nature of the human mind proposed by cognitive psychologists will be presented as an initial backdrop to current theories of comprehension processes from an information-processing perspective followed by a review of theoretical and empirical literature. The relationships between the comprehension processes involved in reading and listening will be examined prior to an extensive review of studies on the use of strategies involved in these two modalities. Throughout this chapter, significant references are made to adult learners of language as L2.

2.2 A Brief History of Cognitive Psychology

Advances in the theory-driven study of SLA over the past thirty years have made a great contribution to our understanding of language, its use, and learners' cognitive capacity/ability. Behaviorists' (for example, B. F. Skinner) views on language learning
which were dominant until the early-1960s, theorised that behaviour was 'learned' by providing positive consequences or 'reinforcement'. In S-R (stimulus and response) psychology, all learning was characterised, whether overt or covert, as associative learning or habit formation that was brought about by the repeated association of a stimulus with a response. Internal structure or process of the mind that may operate within learners as they learn, had no relevance to human behaviour within this paradigm. After the publication of his treatise, *Verbal Behavior* in 1957, Skinner's position was challenged by generative linguists such as Chomsky (1957, 1965) who claimed that linguistic behaviour is not determined solely by environmental characteristics. This argument centred on theoretical and empirical evidence from child L1 acquisition theory (an innate language acquisition device) and the mental operation process involved in adult speech. For generative linguists, the mental processes that come between the physical stimuli and the behavioural response were the key to understanding the human language process. Although Chomsky's major goal was to produce universal grammar theory, his position was criticised by several sociolinguists (Fishman, 1971; Gumperz, 1966; Halliday, 1973, 1978; Hymes, 1972) who raised questions concerning the role played by contextual factors which cannot be divorced from the social environment where the language is used. Moreover, it is, ultimately, an individual who manipulates linguistic symbols for communication. Bransford and Johnson (1972 cited in Nord, 1980:10), for example, state the case thus:

Language is more than a linguistic set of rules determined by the language community. It is also a symbolic system used by individuals for the purpose of communication ... and ... the view affecting use of this symbol system depends on other knowledge (conceptual knowledge of the world) available to the user.
These researchers stressed the importance of internal individual factors that may influence the use of language. Other researchers of the same area spearheaded by Piaget (1969), focused on the cognitive structures and processes that underlie human development and growth. The accumulating evidence from studies into the conceptions of learning that considered what goes on 'inside the learner's head' (Gagné & Driscoll, 1988:12) offered reasonable explanations of why behaviourist principles do not apply to all situations. Another prominent factor that contributed to strengthening the cognitivist position in recent years was the emergence of computers, particularly in the area of artificial intelligence (Glover, Rouning, & Bruning, 1990). With a computer simulation program as a tool, researchers are able to test their hypotheses relating to human cognitive processes involved in learning more precisely and systematically.

2.3 Language Learning and Cognitive Psychology

Analogous to L1 acquisition, L2 acquisition cannot be understood without addressing the interaction between language and cognition (O’Malley & Chamot, 1990). O’Malley and Chamot claim L2 learning involves an active, dynamic process with a high degree of learner involvement and learning a L2 is strategic in the use of high-order thinking skills. According to these researchers, cognitive theory is a vital framework for both conceptualising language learning and accounting for the power of LLSs to influence memory processes. Cognitive theory explains how new knowledge is acquired, how the ability to use this knowledge is developed, and how new knowledge is integrated into the learner’s existing cognitive structure. Within this framework (an information-processing model), L2 acquisition is identified as one of the complex cognitive skills that are represented in human memory as meaning-based propositions and it
provides a mechanism for describing how LLSs can be used for processing information without creating an unduly cognitive overload in our memory system.

2.3.1 The Information-Processing Model of Comprehension

In the information-processing model, humans are perceived as limited-capacity processors in terms of what they can attend to and process at a given point in time. The processes that are presumed to account for learning make certain kinds of transformations of inputs to outputs in a manner analogous to the workings of a computer. These forms of transformation are called 'learning processes'. They are what go on 'inside the learner's head' and learning is a result of these activities.

Information-processing theorists constructed various models of cognitive processes involved in human memory in L1. Currently, they assume the existence of two types of memory which are involved in learning in regard to the important role played by memory in processing, storing, and retrieval of information. The two types of memory are short-term memory (STM) or working memory, and long-term memory (LTM). The model conceives of human cognitive processes as successive mental states of heeded information. This means initial information from the environment is registered in sensory organs (echoic memory) from which some will be filtered out, while the remainder enters into STM. STM is a conscious memory and thus the information kept in STM is directly accessible through verbalisation. However, the capacity to maintain information in this memory is extremely limited and due to the decay of information,

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10 Other models of L1 memory are found in Atkinson and Shiffrin (1968), and Baddely (1986).
11 This study uses the term 'short-term memory' (STM) throughout in order to avoid the complexity of notion associated with the term 'working memory'.
12 The capacity of STM is about seven units, plus or minus two (Miller, 1956 cited in Call, 1985). The notion of a unit, however, varies across individuals and the way in which
the content must be processed in some way; otherwise, it will be lost quickly. If processed, information from STM is transferred into LTM. Information retrieved from LTM must first enter into STM to be attended to but some information that has become automatic may be transferred directly into LTM without involving STM (Anderson, 1995; Atkinson & Shiffrin, 1968; Ericsson & Simon, 1980, 1984, 1993). This model views a process that has become automatic as an unconscious mental operation and hence it is inaccessible for observational analysis (for example, verbalisation). This theoretical base has been applied in the area of listening in L1 (Clark & Clark, 1977; Goss, 1982; Witkin, 1990) and in L2 (Bacon, 1992a, 1992b; Chamot, 1995; Nagel & Sanders, 1986).

Researchers of L1 listening consider a listener's use of various strategies depends on the phase of the listening task. They maintain that listening, similar to reading, is not just a decoding skill for acoustic input. Instead, it is seen as part of the overall schema of cognitive processing, particularly in the case of adult listening (Witkin, 1990). Listening processing within the information-processing model accounts for two major functions: auditory perception and message comprehension. These two functions are further divided into three parts: 1) signal processing (SP); 2) literal processing (LP); and 3) reflective processing (RP) (Goss, 1982). SP is largely associated with auditory perception, while LP and RP are equated with message comprehension. The SP phase involves segmentation of a speech signal into units that are potentially meaningful. At this stage, the main focus of attention is on the signal itself. In the LP phase, listeners initially assign literal meaning to the parts of a message but without evaluating the whole message. Therefore, any inferences that occur during

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13 The working model proposed by Baddeley (1986) does not account for the automatic processing change resulting from repeated practice.
this stage are a function of the listener's basic understanding of the utterance. Once the listener understands the basic meaning of a message, s/he begins the process of interpreting the message. This phase of processing is deeper than the LP phase because it involves more extensive inferences and evaluation. Thus some messages may be processed differently according to the function of strategies employed by a listener.

It is reasonable to assume that certain cognitive processes used in comprehending L1 may also occur in L2 since human beings share similar processing capacities. The investigator of this study is not suggesting here that these processes are identical in L1 and L2. Nevertheless, studies of the L1 process can provide valuable information for adding to our knowledge of processes involved in L2 listening. In general, the listening phases identified by L1 listening researchers (Clark & Clark, 1977; Goss, 1982; Witkin, 1990) relate to those components proposed by L2 researchers (James, 1984; Nagel & Sanders, 1986; O’Malley, Chamot, & Kupper, 1989; Rivers, 1983; Taylor, 1981).

In L1 listening, listeners follow entire comprehension stages with no effort and hence each stage occurs almost subconsciously. As a result, they are able to pay great attention to non-acoustic features, such as context and their own prior knowledge. In the case of L2 listening, however, learners may experience different kinds of problems. They often rely heavily on acoustic signals since they are still developing their linguistic skills in the target language, not to mention other aspects of knowledge which may influence comprehension such as sociocultural knowledge (Ringerling, 1990). For L2 listeners, as soon as information is received, they must identify phonological features such as segmental features (sounds; sound combination) and suprasegmental features (rhythm; intonation; stress or pitch in the case of Japanese) before they
commence syntactic analysis. As L2 listeners begin syntactic analysis, they must be able to identify various discourse markers readily (cohesive markers; proposition markers). Furthermore, these activities must be performed simultaneously. Thus, the L2 listening situation requires a listener to have a multiplicity of skills (James, 1984). It is reasonable to assume that L2 listeners with a higher language proficiency, tend to base their comprehension on semantic cues and rely less on syntactic information (Bacon, 1992a, 1992b; Conrad, 1985; Voss, 1984).

2.3.2 The Role of Memory Representation in Long-Term Memory

The fact that we are usually unable to recall exact words or sentences that have been uttered attests to the fact that people listen for meaning. Moreover, even when we remember an utterance/written text verbatim, we tend to distort the original verbatim information by adding and deleting even though such information was not explicitly stated in the original text (Bartlett, 1932). This indicates that memory plays an important role in comprehension and what we remember is influenced heavily by the knowledge stored in our LTM. To explain the way that information is processed and stored in human memory and to gain control over it, Anderson (1995) suggests that knowledge is stored in LTM as either 'declarative' or 'procedural' knowledge. The declarative knowledge is knowledge about facts and things, and the procedural knowledge is knowledge about how to perform various cognitive activities. The distinction between these two types of processing is useful to describe various stages of L2 development.

Declarative knowledge is acquired quickly and is stored in LTM in the form of meaning-based 'propositions'. Comprehension involves constructing a propositional representation (Anderson, 1995; Kintsch, 1974, 1998). According to propositional theorists, a proposition contains a
'relation' and 'argument': the 'relations' correspond to relational terms in
the sentences (for example, verbs and adjectives), while the 'arguments'
correspond to the nouns. 'Nodes' that form a network or inter-related
body of knowledge connect each proposition, relations, and arguments.
Furthermore, these concept nodes are linked together by pathways and
activation begins at a concept node and then starts spreading throughout
the network along the connecting pathways. The propositional theorists
suggest that the strength of connections between concepts and the distance
between them have effects on retrieval time. In other words, they predict
that: 1) closely related concepts in the network should require less time
for verification than those that are further apart; 2) frequently listed
category members are verified more rapidly than others since pathways to
less-frequent category members are longer; and 3) typical or central
members of the category are verified more rapidly than the atypical or
peripheral members since they are connected to the superordinate node by
shorter pathways (Ashcraft, 1989).

Since comprehension is said to occur as a result of interaction between
new information and a learner's prior knowledge, these prediction
statements imply that declarative knowledge is learned most effectively
by building on learners' existing knowledge (Chamot & O'Malley, 1993;

Procedural knowledge, on the other hand, refers to the ability to perform
various skills such as the ability to solve problems, apply strategic modes
of thought to learning, and the ability to use language. This knowledge is
a basic mechanism through which control over cognition is exercised and
it is acquired slowly through practice (Anderson, 1995; Chamot &
O'Malley, 1993; O'Malley & Chamot, 1990). Once acquired, it does not
fade away as quickly as declarative knowledge does. It is stored in LTM
in the form of 'production' systems. The use of production systems to
represent procedural knowledge is necessary to fully characterise the way in which these processing strategies operate (O’Malley & Chamot, 1990).

Production systems consist of a set of ‘productions’ which represent causal relationships between a ‘condition’ and an ‘action’ in the following sequence: 1) a statement of the goal preceded by ‘IF’, which is then followed by a clause(s) specifying a condition; and then 2) a command preceded by ‘THEN’, and action statement with a clause(s), or simply, certain conditions must exist when a given action takes place. The concept of production systems was originally derived from the study of logic and research on auditory comprehension (Townsend, Carrithers, & Bever, 1987). Anderson (1995) views all cognitive activities (including language-related tasks) as fundamentally problem solving, which is goal oriented in nature. The example below illustrates a simple production rule that may be used by a learner of Japanese language in solving linguistic problems. In this case, the learner attempts to work out how to formulate a ta-form (a past-tense verb marker) based on his/her knowledge of a dictionary form of the verb. The dictionary form of a verb exhibits ‘non-past’ tense form (as well as ‘uncompleted’ aspectual use).

Example:

IF the goal is to produce a ta-form (past tense) of a Japanese vowel verb (verb ending in -iru/eru), and the verb is in dictionary form

THEN change -ru into ta.

Eg., taberu (to eat) becomes tabeta (ate)

The early stage of L2 learning is a very slow process as learners execute their action in a controlled manner to solve their problems. But as they acquire various skills, they are able to perform these tasks with less effort.
2.3.3 The Three-Stage Model of Skill Acquisition in L2 Learning

L2 learning involves the acquisition of complex skills. Anderson (1995:273-275) proposed a three-stage model of skill acquisition that predicts that learned skills gradually become proceduralised or automated through three stages: the cognitive stage, the associative stage, and the autonomous stage.

1. During the cognitive stage, a learner develops declarative knowledge but the performance at this stage is very deliberate and slow.

2. In an associative stage, the learner finds connections between some components of factual knowledge acquired in the previous stage and this knowledge is gradually converted into a procedural form through repeated practice. Performance at this stage becomes expert-like but sometimes with some errors. This is because in this intermediate stage, two forms of knowledge still coexist side by side.¹⁴

3. Finally, in the autonomous stage, the skill becomes more rapid and automatic with increased rehearsal, and learners are able to process information with very little conscious processing and errors disappear. When a learner becomes more advanced in L2 learning, s/he is able to comprehend and produce utterances without any effort.

The model explains how we acquire language skills to perform complex tasks such as speaking fluently or comprehending spoken speech in L2 without imposing a process overload on STM. In Anderson’s view, skill

¹⁴ This stage resembles the stage called ‘interlanguage’: an underlying intermediate linguistic system between L1 and L2, which is revised actively and continually (Selinker, 1972).
acquisition is a process by which declarative knowledge is converted into an efficient proceduralised form, and we can only achieve the goal through repeated practice. This model incorporates two important aspects of learning that are relevant to SLA/FLA: controlled and automatic processing (McLaughlin, Rossman, & McLeod, 1983). In the model of McLaughlin et al., similar to Anderson's three-stage model, skills are learned and routinised only after the use of controlled processes. In other words, controlled processing lays down the ‘stepping stones’ for automatic processing (McLeod & McLaughlin, 1986:111).

2.3.4 The Role of Schema in Text Comprehension

The findings from memory studies indicate that when we comprehend incoming information, we rely on our background knowledge or schema stored in LTM. This tacit knowledge and inferences drawn from that knowledge, are all important parts of comprehension, since acts of comprehension involve information that was not explicitly stated.

Recent cognitive theory of comprehension in both reading and listening incorporates the powerful role played by background knowledge or schema as a part of the process of comprehension and this schema theoretic notion has become a driving force behind the empirical investigation of comprehension processes in L1 and L2. Some researchers even advocate that a reader's/listener's schematic knowledge is a major factor in text comprehension (Anderson, Reynolds, Schallert, & Goetz, 1977; Anderson & Lynch, 1988; Anderson & Pearson, 1984; Coady, 1979; Goodman, 1982; Hudson, 1982; Long, 1990).

Schema is a hierarchically arranged mental representation of a set of related abstract concepts underlying objects, events, and actions (Anderson, 1995; Anderson et al., 1977; Rumelhart, 1980). This
knowledge can be represented in the same kind of network structure as propositional knowledge and is assumed to be accessed through a similar process (spreading activation). However, schema is not an extension of propositional representation, but a way of encoding regularities in categories from the most general at the top to the most specific at the bottom. It represents each object with a 'slot' structure, where slots specify values that the object has on various attributes (Anderson, 1995). The slot must be filled to 'instantiate' during interpretation of the text. When the slot is filled in the appropriate schema, comprehension of a message is achieved. If the slot is unfilled, comprehension will fail. These schematic effects allow a reader/listener to predict what tends to occur together about unobserved events by permitting reasoning from incomplete information (Anderson, 1995; Rost, 1990). The fundamental role played by schema is often referred to as a 'building block of cognition', which forms a central notion in understanding the processes involved in reading (Rumelhart, 1980:33). Two special types of schemata currently identified are 'scripts'\textsuperscript{15} and 'story grammar'.\textsuperscript{16}

2.3.5 Two Basic Types of Information Processing

Researchers in both L1 and L2 differentiate between two basic types of information processing on the basis of how a learner attempts to derive meaning from input. These types were identified from the findings of empirical studies which were conducted by reading researchers (Clarke, 1980; Cziko, 1980; Goodman, 1982; McLaughlin, 1987a). These researchers compared the reading behaviour patterns of less-effective L2 readers with those of effective L2 readers or native speakers who

\textsuperscript{15} Large-scale semantic knowledge, which guides our interpretation and comprehension of daily experience as the events unfold by leading to certain expectations.

\textsuperscript{16} A set of rules that specifies the structures of a well formed story which provide a basis for predicting what would come in narrative passages (Mandler & Johnson, 1977). See 2.5.1 in this chapter for more information.
performed various tasks involved in selecting between 'function' words and 'context' words in the texts.

One type of processing is called the 'bottom-up' or 'conceptually driven' model. This processing is based on mainly linguistic information and the other type, which is based on prior knowledge, is usually referred to as either the 'top-down' or 'conceptually driven' model, since it emphasises what a learner contributes to incoming language input (Fries, 1962/63; Gough, 1972 cited in Samuels & Kamil, 1984; Howard, 1985; Rost, 1990).

In the bottom-up processing model, comprehension is seen primarily as a decoding process of linguistic features that recognises the smallest textual units (phonemes and words) at the bottom, and the largest units at the top (clauses and sentences). As such, comprehension failure is viewed as 'parasitic on language' (Mattingly, 1972). This processing is commonly used by beginning-level L2 learners where the language tasks assigned to them are usually simple and by those who favour 'accuracy' over 'fluency'.

This model views the stages of mental processing as occurring in a fixed order serially and more importantly, it is assumed that each stage is autonomous and non-overlapping. Since each stage is non-overlapping, its operation must be finished completely before the next stage in the sequence starts operating.

In contrast, the top-down processing model draws on information from the LTM to project additional meanings, and comprehension is regarded as primarily concept-driven by relying heavily on the information derived from learners' schema. Goodman (1982:33) characterised the

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reading/listening process as a 'psycholinguistic guessing game'\(^8\) and offered the following explanation:

Reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation. As this partial information is processed, tentative decisions are made to be confirmed, rejected, or refined, as reading progresses.

Since top-down knowledge provides information on the topic, a reader needs to sample less textual information in order to predict and confirm meaning, which in turn, results in reducing demands on the processing capacity in STM. This approach is generally favoured by advanced-level L2 learners and native speakers, both of whom tend to focus on content words and higher level information in the texts (Cziko, 1980).

A major problem associated with the bottom-up model is that it does not account for the contribution made by context as a facilitating variable in both word recognition and comprehension. The meaning of a word is often context dependent and comprehension without using schema or inferencing ability results in inefficiencies. Heavy reliance on a bottom-up approach also demands that a learner has a large processing capacity in STM and inhibits other information to be processed (Anderson, 1995; O'Malley & Chamot, 1990; Perfetti, 1986; Schneider & Shiffrin, 1977). Moreover, this model does not recognise the recursive nature of the text comprehension process required in reading and listening.

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\(^{8}\) His claim was based on 'miscue' analysis used in reading experiment. The miscue analysis compares the mismatch between observed and expected responses as readers read a written text orally. A key assumption is that whatever the readers do is not random but is the result of the reading process (Goodman, 1982).
The top-down processing model was based on L1 and effective ESL readers whose decoding skills have become automatic (Cziko, 1980; Eskey, 1988; McLaughlin et al., 1983). However, despite the strong impact of Goodman’s theory on both L1 and L2 reading, it was criticised for failing to consider the dimensions involved in bottom-up processing which is characteristic of the less-skilled learner (Eskey, 1988; Samuels & Kamil, 1984). In L2 learning situations, task difficulty is usually related to the proficiency level of a learner. Beginning-level learners, due to their limited knowledge of the new language system, tend to rely on their L1 knowledge. Consequently, they are more inclined to use bottom-up processing such as translation strategies (Carrell, 1988; Koda, 1992; McLaughlin et al., 1983; O’Malley & Chamot, 1990).

From the evidence presented, neither the bottom-up nor the top-down processing approach is in itself a viable explanatory model of the comprehension process. The more adequate model, then, must acknowledge various different levels of processing and it must also describe adequately the processes used by language learners at various stages. In other words, these two approaches should be viewed as complementary to each other (Eskey, 1988; Rumelhart, 1980; van Dijk & Kintsch, 1983).

The current model of text comprehension emphasises that effective processing of texts requires a constant interaction between top-down and bottom-up processing (Howard, 1985; Lesgold & Perfetti, 1981; Rumelhart, 1980; van Dijk & Kintsch, 1983). This ‘interactive’ processing model9 (or ‘interactive-parallel’ processing model) was developed on the

9 This term includes both the interaction between information obtained by means of bottom-up decoding and information provided by means of top-down analysis, as well as the interaction between textual information and reader’s prior knowledge.
basis of findings from experimental studies that focused on the effects of context on word perception and identification, and memory. This model does not presuppose a primacy of either top-down or bottom-up processing, but accepts that different levels of processing are available simultaneously: bottom-up processing ensures that the language learners will be sensitive to new information which is in the text, while top-down processing assists them to resolve ambiguities in the incoming data. This model also incorporates (in addition to the notions of rapid and accurate feature recognition for letters and words) the concept of controlled and automatic processing of the information which was referred to in 2.3.3 in this chapter. In the interactive model, the prior knowledge that a reader/listener brings to perform the comprehension task still remains a powerful and fundamental element upon which all information depends, as previously advocated by the top-down processing model.

A sub-version of the interactive processing model called the 'compensatory-interactive' model (Stanovich, 1980) incorporates the characteristic features of skilled and unskilled reading at different developmental levels. A key notion associated with this model is that "a process at any level can compensate for deficiencies at any other level" (Stanovich, 1980:36). It means that if a poorer reader is deficient at a decoding level such as letter or word recognition, then her/his conceptually driven higher-level knowledge will attempt to rescue this deficiency. In contrast, if a reader has little knowledge about the topic of the text, s/he relies on a bottom-up strategy by decoding the words. Thus this model assumes that "a deficit in any knowledge source results in a heavier reliance on other knowledge sources, regardless of their level in the processing hierarchy" (Stanovich, 1980:63). Stanovich's model is

See Marslen-Wilson and Komisarjevsky Tyler (1980) for syntactic and semantic analysis of the speech.
useful in explaining the anomalous results of empirical studies that poor readers are more sensitive to contextual constraints or that good readers are sometimes less sensitive to contextual effects since in most cases they are efficient decoders (Clarke, 1980; Spiro, 1980; Eskey, 1988; Samuels & Kamil, 1984). Although the theoretical basis of this model is related to reading, the compensatory-interactive model could be extendable to listening situations as well.

Text processing may also relate to the notion of ‘depth-of-processing’ that conceives retention of text information to be dependent on the level at which information is processed and not a function of the speed of the analysis (Craik & Lockhart, 1972). This claim was verified by the empirical study of the vocabulary by readers of English as a second language (ESL), which examined language retention by using three different learning strategy methods (key word, semantic, and a combination of these two). The results of this study demonstrated that the key word semantic method produced significantly better outcomes than the other two methods (Brown & Perry, 1991). Similarly, Glover et al. (1990) claimed that meaningful stimuli are well retained because they are processed at a deeper level more rapidly than less meaningful stimuli. This view accords with the findings of earlier work by processing theorists.

In summary, research evidence indicates that a cognitive approach is the most appropriate research framework for the present investigation. Cognitive theorists who support the interactive process model acknowledge the important role played by a learner’s prior knowledge and emphasise the effect of interaction between top-down and bottom-up processing on text comprehension. Thus the interactive model is dominant in the field today.
2.4 Language Learning and Language Strategies


Three major strategy categories in L2 learning which contribute directly or indirectly to language learning have been identified in the literature: learning strategies (O’Malley & Chamot, 1990); communication strategies (Færch & Kasper, 1980, 1984); and production strategies (Tarone, 1981). Since this study focuses on the specific learning strategies involved in a non-interactional audiovisual listening situation, the two last-mentioned sets of strategies will be excluded from the subsequent sections.

2.4.1 Defining ‘Learning Strategy’

Despite widespread reference to the construct of learning strategy, there seems to be some conceptual and terminological confusion among researchers (Brown, 1994; Cohen, 1984; Ellis, 1994; Færch & Kasper, 1980, 1984; Rubin, 1981; Stevick, 1990; Wenden, 1987).

It is assumed that language learning involves two types of mental processing operations: ‘process’ and ‘strategy’. In the literature, these two operations have often been used as synonyms, and at other times, they

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21 Learning strategies are used to develop linguistic and sociolinguistic competence in the target language; production strategies are specifically used to accomplish communication goals; and communication strategies are an adaptation to the failure to realise a language production goal (O’Malley & Chamot, 1990:43).
have been used to differentiate two distinct operations. Cohen (1984:110), for instance, defined the use of these terms thus:

Strategy is used here to refer to the mental operations that learners utilise in accomplishing learning tasks. Some researchers prefer to reserve the term ‘strategy’ for general categories of behaviour (viewing language as a system, monitoring L2 performance). They refer to more low-level activities within a given category (classifying the verbs into groups that are conjugated similarly; checking to make sure that nouns and adjectives agree in gender and number) as ‘techniques’ (Naïman et al., 1978) or ‘tactics’ (Seliger, 1983). For our purposes, we refer to all such operations as strategies.

In contrast, Frerch and Kasper (1984:51-58) use the term process to refer more specifically to the planning process and strategy is considered a separate operation of intellectual behaviour (although the major work of these researchers focuses on the use of communication strategies). Rubin (1981:118) emphasises the role of memory (storage and retrieval of information) and states thus:

Cognitive processes are those general categories of actions that contribute directly to the learning process. Cognitive strategies are the specific actions that contribute directly to the learning process.

In reviewing the cognitive literature in L1 and L2, the investigator of this

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22 See Brown (1994).
23 The definition adopted by Frerch and Kasper (1984) is based on communication strategies that derived from a communication problem experienced by an individual language user.
study views these two aspects of learning - process and strategies - as interactive and inseparable concepts involved in human thinking processes and accepts the definition that language learning strategies are deliberate, cognitive steps used by learners to enhance their comprehension, learning, and retention of information (Anderson, 1995; Cohen, 1984; MacIntyre, 1994; O’Malley & Chamot, 1990; Weinstein & Mayer, 1986). This definition implies that these cognitive processes are accessible by researchers through learners’ conscious verbalising protocols.

Earlier studies on L2 learning strategy, in general, however, did not utilise the method of learners’ verbalisation of strategy use. Rather, these studies attempted to identify the overt and observable behaviour characteristics of good L2 learners. It is evident that the researchers did not differentiate between observable learner characteristics and learners’ unobservable mental processes involved in performing language tasks.

Several researchers identified specific learning behaviours exhibited by good language learners (Naiman, Frohlich, Stern, & Todesco, 1978; Rubin, 1975; Stern, 1975). A pioneering work conducted by Rubin (1975:45-47) identified seven features of a good language learner. She described the good language learner: 1) is a willing and accurate guesser; 2) has a strong drive to communicate, or to learn from a communication; 3) is often not inhibited; 4) is prepared to attend to form in addition to focusing on communication; 5) practices; 6) monitors his or her own speech and the speech of others; and 7) attends to meaning. Similarly, Stern (1975:316) identified ten strategies used at various stages of L2 learning: at the initial stage, during the learning process, and at the end stage. These strategies are: 1) positive learning style; 2) an active approach to the learning task; 3) a tolerant and outgoing approach to a target language and empathy with its people; 4) technical know-how about how to tackle a language; 5)
strategies of experimentation and planning with the object of developing a new language into an ordered system, and revising this system progressively; 6) constantly search for meaning; 7) willingness to practice; 8) willingness to use the language in real communication; 9) self motivation and critical sensitivity to language use; and 10) developing a target language more and more as a separate reference system and learning to think in it.

Although these initial studies provide insights into the L2 learning process, the results remain a broad generalisation across language skills and more importantly, they are highly speculative. Nevertheless, their lists share the common features of proficient L2 learners identified by the more recent studies on LLSs which reported that the proficient L2 learners are active strategy users, they are equipped with a high-level of metacognition and have ability to focus on form and meaning simultaneously (Block, 1986; O’Malley et al., 1989; Wenden, 1991).

Despite criticisms directed against the unscientific methodologies adopted by these researchers, Rubin made a significant contribution toward the development of an observation schedule for data collection and a classification system that serves as a useful tool to describe specific aspects of the learning process. Rubin (1981) classified LLSs into two basic categories: strategies that contribute directly to learning; and those that contribute indirectly to learning. The first category includes clarification/verification, monitoring, memorisation, guessing/inductive inferencing, deductive reasoning, and practice. The second category includes creating opportunities for practice and use of production tricks. The first category (excluding monitoring strategy) correlates with cognitive strategy and the second category with metacognitive strategy of the LLS classification scheme developed by Chamot and Kupper (1989).
Studies conducted from the mid-1980s have adopted a more scientific approach to data collection and analysis. Current research on LLSs has been carried out following the frameworks used by Oxford (1990) or O'Malley and his colleagues (1985a, 1985b, 1989). The former adopts a quantitative approach and the latter a qualitative case-study approach.

Researchers who adopt a quantitative approach usually focus on the relationship between LLSs and other variables such as learner characteristics and/or situational factors that may affect the language learning process (Ehrman & Oxford, 1988; Oxford, 1990; Oxford & Ehrman, 1995; Oxford & Nyikos, 1989). Data for these studies are collected by questionnaires and interviews which are subjected to statistical analysis.

Some of the personal variables include gender (Ehrman & Oxford, 1988; Oxford & Ehrman, 1995; Oxford, Nyikos, & Ehrman, 1988; Oxford & Nyikos, 1989); language proficiency level (Oxford & Ehrman, 1995; Oxford & Nyikos, 1989); ethnicity (Grainger, 1997; Politzer & McGroarty, 1985); anxiety, attitudes, and motivation (Ehrman & Oxford, 1995; Gardner, 1985; Horwitz & Young, 1991; Oxford & Nyikos, 1989), and/or learners' goals (Ehrman & Oxford, 1995; LoCastro, 1994). Those related to situational factors are speech rate (Griffith, 1990a, 1992); pausal interval (Blau, 1990) and speech modification (Chaudron & Richards, 1986; Chiang & Dunkel, 1992), memory (Call, 1985) and type of texts (Allen, Bernhardt, Berry, & Demel, 1988). The findings of these studies demonstrate the complex nature of interaction between the choice of strategy and personal/non-personal variables.24

24 For example, the study of gender differences in strategy use has shown that females use more strategies than males (Ehrman & Oxford, 1988; Oxford et al., 1988).
Although these correlational data are informative, it is appropriate to note they give no information beyond the connection between the use of LLSs and other variables, which in most cases is not causal. For instance, factors such as gender and ethnicity may not be directly related to individuals' strategy choices. Rather, they may be more strongly correlated with other variables (for example, level of motivation, attitude, learning style), which in turn, influence the choice of strategies by learners (MacIntyre, 1994).

Oxford (1990) made a significant contribution in developing a L2 strategy classification scheme (Strategy Inventory for Language Learning or SILL). The SILL was field tested with adult learners of ESL and foreign language (FL) in various settings and it has been used for a number of factor analytic studies among different populations worldwide (Oxford & Burry-Stock, 1995; LoCastro, 1994). This scheme, similar to that developed by Rubin (1981), has two basic categories of strategy: direct and indirect. The three subcategories under the direct category include memory, cognitive and compensatory strategies, and those under the indirect category are metacognitive, affective and social strategies.

While the SILL scheme was acknowledged widely as a significant development, it was not without criticism. O’Malley and Chamot (1990), for example, were critical of the SILL classification system and asserted that “The problem with this [quantitative] approach, so far as a taxonomy of strategies is concerned, is that this extended listing is far removed from any underlying cognitive theory, fails to prioritise which strategies are most important to learning, and generated subcategories that appear to overlap” (p.103).
More recent studies developed largely from work in cognitive psychology have identified discrete strategies and categorised them systematically into taxonomy of LLSs. Such studies adopt in-depth analysis of differences among individuals and/or a small group of learners. The importance of identifying strategies and appropriate intervention programs for less-successful language learners were also acknowledged (Block, 1992; Chamot, Kupper, Impink-Hernandez, 1988a; Cotterall, 1990; O’Malley, Chamot, Stewner-Manzanares, Russo, & Kupper, 1985h; Thompson & Rubin, 1996; Vann & Abraham, 1990).

Among their short-term and longitudinal studies, O’Malley and his colleagues identified and classified general LLSs used by Spanish-speaking high school students of ESL learners (O’Malley, Chamot, Stewner-Manzanares, Kupper, and Russo, 1985a). These researchers refined their initial scheme based on data obtained from English-speaking college students of Spanish and Russian as a FL (Chamot & Kupper, 1989). To gain in-depth understanding of LLSs, they established a specific classification scheme in L2 listening through the think-aloud procedure (O’Malley et al., 1989) and attempted to discover task-specific strategies and changes in the strategy use by FL learners over time (Chamot et al., 1988a).

In Phase 1 of their first study (1985a), O’Malley and his colleagues concentrated on: 1) identification of LLS type and the frequency pattern of Spanish-speaking high school students of ESL at beginning and intermediate-levels; and 2) investigating the relationship between LLSs and the oral-language tasks. The data were collected through retrospective interviews.

These researchers found a total of twenty-three distinct strategy types
which were classified into the scheme developed originally by Brown and Palincsar (1982) in L1. This scheme was adopted because of its utility value in planning and implementation of the Phase 2 study (training phase). It contains three major categories: metacognitive strategies (7), cognitive strategies (14), and social mediation strategies (2). The major subcategories of Wenden's (1983) metacognitive strategies (planning, monitoring, and checking outcomes or evaluating) were also included in the list.

Analysis of the data indicated that, of the reported instances, 85 per cent involved metacognitive strategies and no dominant cognitive strategies were identified. Within the cognitive strategy category, repetition and translation strategies accounted for over 30 per cent of total usage. Generally speaking, these high school learners used LLSs most often for discrete language learning tasks such as vocabulary learning and pronunciation, and least for integrative tasks such as listening activities. The beginning-level students reported using more strategies than the intermediate-level students did.

Another important finding of this study was that when these researchers examined the interaction between type of strategies and the language task, the strategies used by the two groups did not differ in any significant way. Similar findings were reported by the cognitive literature in L1. These researchers speculated that “strategic processing is a generic activity applied to all areas of learning” (O'Malley & Chamot, 1990:122). Discovery of a high level of metalinguistic awareness by both groups of learners has profound pedagogical implications. This observation led

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35 Social mediation strategies were later renamed as social and affective strategies. The figures in the brackets indicate the frequency count of strategies used within each category.
O’Malley and his colleagues to conduct their second study of strategy instruction (1989) which will be referred to in later chapters.

To validate the first classification scheme (O’Malley et al., 1985a study), Chamot and Kupper (1989) conducted a second three-year project (Study 2), that consisted of three phases: a descriptive study; a longitudinal study; and a strategy-training study. The participants of this study were English-speaking college learners of Russian and high school learners of Spanish as a FL who were at different proficiency levels. The researchers collected data through retrospective interviews based on the students’ performance in seven different language tasks relevant to FL learners. Less-effective learners were included in the sample and their strategy use was compared with the strategies used by effective learners.

In the descriptive phase of the study, these researchers reported that FL students’ use of strategy was similar to the strategy of ESL students in their first study. With a slight modification of the original scheme, the researchers refined and validated the scheme. Their refined classification categories and definitions are presented in Table 2-1.

<table>
<thead>
<tr>
<th>Table 2-1: Classification Scheme Developed by Chamot and Kupper (1989:15-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Metacognitive strategies</strong></td>
</tr>
<tr>
<td>These involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned. Metacognitive strategies include: 1) planning; 2) directed attention; 3) selective attention; 4) self-management; 5) self-monitoring; 6) problem identification; and 7) self-evaluation.</td>
</tr>
<tr>
<td><strong>2. Cognitive strategies</strong></td>
</tr>
<tr>
<td>These involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task. Cognitive strategies are: 1) repetition; 2) resourcing; 3) grouping; 4) note-taking; 5) deduction/induction; 6) substitution; 7) evaluation; 8) summarisation; 9) translation; 10) transfer; and 11) inferencing. Under evaluation, personal evaluation; world evaluation; academic evaluation; between-parts elaboration; questioning elaboration; self-evaluative elaboration; creative elaboration and imagery are included.</td>
</tr>
<tr>
<td><strong>3. Social and affective strategies</strong></td>
</tr>
<tr>
<td>These involve interacting with another person to assist learning, or using effective control to assist a learning task. Social-affective strategies include: 1) questioning; 2) cooperation; 3) self-talk; and</td>
</tr>
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</table>

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38 The seven tasks include: vocabulary learning; oral or written grammar drills; listening comprehension; reading comprehension; written composition; and oral presentations.
Contrary to the results obtained from the previous study of ESL learners, these researchers reported that the FL learners of this study used fewer metacognitive strategies than cognitive strategies. One of the predominant metacognitive strategies used was planning strategies. The intermediate-level students used proportionally more metacognitive strategies than the beginning-level students. On cognitive strategies, the beginning-level students in Russian and Spanish languages used LLSs associated with rote strategy and bottom-up strategies (repetition; translation; transfer) rather than selecting those required to perform more cognitively demanding tasks. The students at higher proficiency, on the other hand, favoured strategies which relate to top-down processing such as inferencing and contextualisation although they reported using these strategies less often than other strategies. Another important finding of this study was that the advanced-level learners in both languages used more strategies than the beginning-level learners. Similarly, the effective learners used more strategies than the less-effective learners at all proficiency levels. Furthermore, the former group of learners had a wider repertoire of LLSs. As a result, they were able to use strategies more often and more appropriately in a task-directed way than their counterparts.

Some of the conflicting results of their ESL and FL studies may be related to the learners’ language experience and the tasks assigned to learners. The behaviour pattern of the beginning-level learners may have been related to their limited learning experience in L2 as their interlanguage system was not yet developed. As a result, they may have relied on their L1 and experienced difficulties in talking about their strategy use effectively (Wenden, 1983). Another factor that may have influenced the results was the type of task. In the ESL study, the task given to the
students was only one oral task. In contrast, the learners in the FL study were assigned to perform seven different tasks. This may have contributed to the differences in the result since cognitive strategies are task specific by definition. Additionally, the cognitive capacity of the high school level learners and college level learners may also have contributed to the conflicting result.

Although this literature review has identified a number of studies that attempt to identify learning strategy classifications, the classification scheme developed by O’Malley and his colleagues is regarded as the predominant framework in this research area.

2.4.2 The Comprehension Processes in Reading and Listening

One group of researchers and educational psychologists (Anderson, 1995; Coady, 1979; Danks & End, 1987; Fries, 1962/63; Goodman, 1982; Kintsch, 1977,1998; Pearson & Fielding, 1982; Perfetti & Lesgold, 1977; Resnick, 1984; Rubin, 1980; Smith, 1982; Steffensen, Joag-Dev, & Anderson, 1979; Sticht & James, 1984; Townsend et al., 1987) believe that although reading and listening involve different linguistic decoding skills (visual or aural), processes involved in effective reading have much in common with those involved in effective listening.

Sticht (1972:293), for example, claims “reading and listening are fundamentally the same activity, and they are not two separate skills but one holistic ability to comprehend by language”. Others (Kintsch, 1977; Perfetti & Lesgold, 1977) also assume “the comprehension process is the same after the initial perceptual analysis whether a person reads or listens to the text” (Kintsch, 1977:33). Still others support a non-unitary position.

37 Due to the nature of input presentation, listening may elicit more inferencing strategies and writing may elicit more metacognitive strategies.
and disagree on the nature of comprehension: reading and listening differ from each other to the extent that the two modalities impose different demands on the cognitive processing system, and comprehension requires processes that are different from those required for reading or listening (Kolers, 1970 cited in Rubin 1980). This position claims that the marked difference at the decoding level influences the comprehension phases that follow. Despite these differences, the two groups of researchers recognise that receptive language processing consists of two aspects: decoding and comprehension. Decoding involves perception of acoustic or printed stimuli into basic language units. Comprehension is viewed as an interaction between the decoded language and the comprehender's prior knowledge (Carrell, 1987; Lund, 1991; Rumelhart, 1980). The two groups also acknowledge the difference at the decoding levels by virtue of the different modalities of input and the amount of control the comprehender has over the input signals.

2.4.3 Modality Effects on Comprehension

Studies that investigate modality effects on text comprehension usually use identical materials for listening and reading, and adopt measures such as the extent of recall of texts and/or the number of questions answered correctly. When study results have produced the same pattern or the readers/listeners have produced the same meaning structure in two modalities, the comprehension processes are then considered to be the same (Kintsch & Kozminsky, 1977).

Several researchers (Danks, 1980; Danks & End, 1987; Sticht & James,

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28 More detailed information can be found in 2.3.1 in this chapter.
29 Reading is spatial and visual, while listening is temporal and acoustic.
30 A listener has minimal control over the auditory signal, while a reader has complete control over the amount and rate of visual input which are continuously available for reprocessing. See Glisan (1988) for more information.
1984) reviewed the large body of comparative studies in L1 reading and listening. However, due to the variations in methodology and conditions under which these studies were conducted, the results remain inconclusive.³¹

Danks and End (1987:283) expressed the difficulty of conducting research on this topic: "the memory representation to process is tenuous because the same representation could result from different processes." Danks (1980:31) observed thus:

It is possible to analyse task demands and to tap the underlying processes the listener/reader devised. If there are separate listening and reading comprehension processes, then interactions will result in different patterns of results. If there are no interactions, then perhaps listening and reading comprehension processes are the same... If the comprehension processes were unitary, the best research strategy would be to show that any differences obtained between listening and reading were due entirely to decoding differences.

One of the important considerations in conducting research on this topic is the defining of key ambiguous terms. For example, the term 'reading' was not used in a uniform way among the researchers and the distinction between oral reading and silent reading was often not made. Despite these limitations, it is useful to review those studies that investigate processes involved in the two modalities.

The study conducted by Walker (1975/76) demonstrates common

³¹ Many studies focused on the orthographic or phonological structure of language instead of higher-order language structures in natural speech and texts (Witkin, 1990).
comprehension processes that underlie listening and skilled reading. One group of English-speaking high school students viewed and listened to three different videotaped short discussions, while the other group read the same texts. Their written summaries revealed that both groups reconstructed information comparable to a degree with the original texts but the degree of distortion was far greater for the listeners than the readers. Walker attributed the differences to the readers’ being able to reconstruct the meaning more precisely than the listeners because reading is a self-paced activity. In contrast, the listeners were more prone to forgetting to process ideas and tended to gloss over some of the factual details in order to make the text comprehensible. Thus, the impact of information other than that derived directly from the input cues was relatively more influential in listening than in reading. In other words, reading is more ‘stimulus-bound’ than listening (Horowitz & Berkowitz, 1967).

Listeners, in general, rely heavily on the use of top-down processing for meaning and hence they are more vulnerable to misinterpretation. Readers, on the other, are able to construct meaning with top-down processes and confirm it by attending to the verbatim written text explicit in the text through bottom-up decoding. Walker concluded that the process difference in the two modalities was not absolute but merely relative, in the sense that reading comprehension is a precise process whereas listening comprehension of spontaneous speech (discussion) is a less precise process.

Caution is needed in evaluating Walker’s study. As stated earlier in this section, Walker did not differentiate between two sets of listening contexts. Instead, he equated audiovisual listening with audio-only listening. The former involves audio and visual channels at the level of
perception, while the latter involves the audio channel only. This difference affects how information is processed which, in turn, influences the choice of strategies employed by the two groups of learners in Walker's study. A clear differentiation should be made between audiovisual and audio-only listening contexts.

The study conducted by Townsend et al. (1987) reinforces the unitary position of the comprehension process. This study reported that native speakers of English whose reading proficiency levels were classified as skilled and average, at two different age groups, performed the reading and listening tasks in a similar way. These researchers compared the performance by college and high school students' ability in propositional and thematic processing of story reading and listening tasks. Their data indicated that less-skilled readers were also relatively less skilled in listening and the skilled and average readers differed in both reading and listening performance: high school students showed stronger sensitivity to the clause levels (propositional processing level) while the college students showed stronger sensitivity to the thematic relations in these two modalities.

In the area of adults learning L2, Lund (1991) replicated the study conducted by Hildyard and Olsen’s in L1. Lund investigated whether repetition of the task helps listeners more than readers, since listeners are able to add detail to the central meanings they have recalled in the first trial. The participants of this study were English-speaking students of German and the variables in this study were: course level; modality; and repeated measure. One group from each level listened to, while the other

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Many studies used chronological age or a limited age range.

These researchers claim that the initial difference of the modalities, whether it is due to listeners’ tendency to recall more main ideas or readers to recall more details, will be neutralised by repetition of the task.
group read the same texts. Later their comprehension was measured by recall summaries written in their L1 and their recall protocol was scored by propositional analysis.

Contrary to Lund’s expectations, readers recalled more propositions at all levels and also recalled comparatively more details than did listeners. Listeners, on the other hand, recalled a greater proportion of higher level ideas than did readers, but they produced more idiosyncratic constructs for the text. This result indicated readers’ greater reliance on the use of active top-down and bottom-up processing. In general, Lund reported that his proficient listeners differed from less-proficient listeners in the same ways as readers differed. He attributed the observed differences not to the course levels but to modality-specific effects.

These empirical studies reviewed here verify that reading and listening make use of similar strategies and modality has little effect on comprehension processes. Moreover, a majority of L1 researchers currently support the unitary model of comprehension that listening skills are related to reading skills (Perfetti & Goldman, 1977; Sticht & James, 1984). At the same time, researchers acknowledge that the nature of the modality causes listeners and readers to approach a comprehension task differently (Hildyard & Olsen, 1978; Lund, 1991; Kintsch & Kozminsky, 1977; Townsend et al., 1987; Walker, 1975/76). Danks and End (1987:291) summarised reading and listening comprehension processes thus:

Neither listening nor reading is a homogeneous process that functions the same way in all situations. Rather, they are amalgamations of sub-processes that are adapted by the comprehender to accomplish a specific task.

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In this section of the present study, LLSs were defined from the perspective of cognitive psychology. The early studies on 'good language learners' served as a reference point for researchers who conducted studies on learning strategies in a more scientific manner. A general learning strategy classification scheme which contained three general categories - cognitive, metacognitive, and social and affective strategies - developed by Chamot and Kupper (1989) was presented as the most useful tool for studies in this area of enquiry. Empirical studies which investigated the effect of modality on comprehension processes in reading and listening were included to demonstrate the position currently taken by the majority of L1 researchers. This position claims the comprehension processes involved in these two modalities are the same at some deeper level.

2.5 The Use of Strategies in Reading

Researchers working within cognitive psychology in L1 and L2 have identified variables that affect learners' strategies involved in the reading process. One group has adopted a schematic view on comprehension and examined how readers' prior knowledge may interact with their choice of strategies (Carrell, 1987; Chiang & Dunkel, 1992; Davis & Bistodeau, 1993; Hammadou, 1991; Horiba, 1990; Olson et al., 1984). Others have investigated the use of metacognitive strategies exclusively (Block, 1986, 1992). Still others have attempted to identify general reading strategies used by individuals or a certain group of learners (Abraham & Vann, 1987; Dobson, 1995; Hosenfeld, 1979a, 1984; Olshavsky, 1976/77; Vann & Abraham, 1990). Most of these studies have followed a procedure where readers were required to think aloud after reading each clause or passage of a short story, together with comprehension test measures such as recall summary and multiple-choice testing.
2.5.1 The Effects of Prior Knowledge on Reading Comprehension

The powerful role played by readers' prior knowledge or schema has been well acknowledged and the effect of schema on reading comprehension has been the most extensively researched area in L2. Reading researchers have identified two types of prior knowledge that influence learners' comprehension: content and formal schema or discourse organisation of text structure (Carrell, 1992; Meyer & Freedle, 1984). The prior knowledge a reader uses in interpreting texts is usually assessed by self-reported data such as recall summaries and questionnaires.

Content schema relates to the subject matter or topic of a text. This knowledge base helps a learner to make a linkage between textual information and what they already know about the topic in question (Tudor & Tuffs, 1991). A number of empirical studies have demonstrated how readers utilise their content schema when they attempt to comprehend reading texts in L1 (Anderson et al., 1977; Marr, 1983; Steffensen et al., 1979) and L2 (Carrell, 1987; Hammadou, 1991; Horiba, 1990,1993; Hudson, 1982; Johnson, 1982; Lee, 1986; Pritchard, 1990). Readers' summary protocols usually reveal two types of modification. The facts are elaborated or typically distorted by including additional materials or deleting some of the facts in the text to make the story conform to the readers' existing schematic knowledge (Anderson et al., 1977; Carrell, 1987; Mander & Johnson, 1977; Steffensen et al., 1979). These researchers claim that texts whose contents are familiar to the reader are easier for the reader to comprehend than equivalent texts whose contents are less familiar.

A study by Steffensen et al. (1979) shows the effect of culture-specific schema on reading in L1 and L2. These researchers investigated
comprehension and recall of letters about American and Indian weddings by adult American and Indian readers. They found the readers produced more culturally appropriate elaborations of the letter written in their L1, and more distortions for the letter written in their L2. Similar findings were reported by Johnson (1982) whose analysis was based on the recall performance of advanced-level ESL college students who read a passage on Halloween celebrations.

A more recent study by Pritchard (1990) demonstrates how different cultural knowledge and education practice have an effect on a reader's strategy choice and level of comprehension. American and Palauan students read two letters on American and Palauan funerals. Both groups recalled more idea units and produced more elaborations on the familiar passage and more distortions on the unfamiliar passage. When the type and frequency of strategy use were compared by passages, Pritchard found no significant differences between the two groups but the Americans employed a wider range of strategies and used them more often than the Palauans. Interestingly, in reading the familiar text, most students followed a similar sequential pattern: first identifying the genre and then relating the text to personal experience, followed by making a concluding statement. However, when they read the unfamiliar passage, the Americans followed the same genre-experience-conclusion pattern but the Palauans did not make a concluding statement. Instead, the Palauans, when they encountered a comprehension problem, focused on each stimulus word and sentence almost exclusively, and their reported strategies became increasingly text-based. Pritchard explained that this strategy use may have been influenced by readers' prior educational practice: Americans are generally encouraged to exhibit flexibility and risk-taking behaviour, while the Palauan culture focuses on rote-learning. Similar results are reported from cross-cultural studies that investigated
use of strategies amongst Asian students (Hyland, 1993; LoCastro, 1994; Tinkham, 1989).

Content knowledge is also used to remove ambiguity from ambiguous passages. The widely cited study by Anderson et al. (1977) demonstrated how college students' special topic knowledge of their degree major (physical education major and music major) guided readers' understandings of ambiguous passages. They reported that more than half (about 60 per cent) of the students were not aware of the existence of another interpretation. This indicates the strong initial influence of high-level schema on a student's comprehension, which provides the preliminary framework for comprehending texts. It also demonstrates the persistent role played by schema preventing students from alternative interpretations. Although the contributing role of schema on comprehension has been acknowledged widely in the literature, a heavy reliance on schema can have drawbacks as well: useful data may be filtered out as a result of using inappropriate schema since use of inappropriate schema may often continue to work by default (Howard, 1985).

The facilitating effects on comprehension of explicit, externally inducing content schema through pre-reading activities (and with vocabulary activity) was reported by Hudson (1982), especially for readers at the beginning and intermediate levels of language proficiency. He claimed that learners' ability to activate appropriate schemata overrides their low level linguistic competence. The evidence of whether strategy choice is related to or determined by the level of language proficiency is far from conclusive.

The 'short-circuit' hypothesis claimed by Clarke (1980) predicts that the
protocols of L2 learners whose linguistic proficiency is limited would contain more bottom-up strategies than those reported by L1 speakers. In contrast, when these learners read in their L1, they would be likely to make more top-down comments because of their higher proficiency in L1.

Davis and Bistodeau (1993) investigated the difference in strategy use between adult English and French speakers reading in their L2. The variables involved in this study were: participants' age; educational level; and language proficiency level. The participants read two different types of newspaper articles (familiar and unfamiliar texts) in their L1 and in L2. Strategies were categorised into top-down strategies, bottom-up strategies, and metacognitive strategies. The results confirmed Clarke's hypothesis. When L1 speakers read in their L1, they used top-down strategies (for example, evaluative comments) and made comments related to story level significantly more often than when they read in their L2. In contrast, when they read in their L2, they used bottom-up strategies and made comments on individual words significantly more often than when they read in their L1. Thus exactly the opposite pattern was observed. Davis and Bistodeau noted that the L2 readers actively used various strategies to offset their low level in linguistic proficiency. This finding was also verified by Hudson (1982) and coincides with the viewpoint proposed by Stanovich's compensatory model (1980). Metacognitive comments, however, did not differ significantly across these variables.

Another type of schema is known as formal schema. This is a knowledge structure relating to the way in which textual information is organised and presented. For the purpose of analysis, texts may be classified according to their structural organisation (for example, narrative or expository), coherence of the text (well structured or loosely structured) or genre. Each text type within this classification system has its own conventional
structure and organising principles.

Among the various text structures, story schema and expository schema have been studied extensively in L1 and L2 reading (and to a lesser extent in listening). The relationships that form the text structure are divided into various categories. However, classification into different discourse types is difficult and varies among researchers and across disciplines, since most discourses will contain more than one of these organisational types (Meyer & Freedle, 1984).

Story schema has been characterised as a grammar that generates a tree-like structure consisting of nodes (like a phrase structure rule), which form the constituents of a story. A well formed simple story consists of a 'setting' and 'event', each of which consists of a series of 'episodes'. Each episode has a 'beginning', 'cause', 'development', and 'ending' (Carrell, 1984a; Kintsch, 1977, 1998; Mandler, 1978a). The episodes are ordered temporally as well as causally. When a reader reads a story, s/he approaches it with a story schema that is a set of expectations about stories. This knowledge of general sets of structural rules directs a reader to how the story should be composed and permits her/him to expect the ways that incoming propositions are likely to be sequenced while reading a story (Mandler & Johnson, 1977). Superior comprehension or capacity to recall text information by a reader/listener is predictable when episodes relate closely to each other.

Meyer and Freedle (1984) identified five basic types of expository

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32 The classification may be based on criteria external to the texts (Kinneavy, 1971; Britton, Burgess, Martin, McLeod, & Rosen, 1975) or within the texts (Bain, 1966; Dry, 1981).

33 Mandler and Johnson (1977) hypothesise that two events that are connected by 'cause' would be better recalled than those connected by 'and' and 'then' event.
discourse: 'description'; 'causation'; 'problem'; 'solution'; and 'comparison'. This classification was based on the degree of association between subcomponents among the passages written in different discourse types. They explain that description provides more information about a topic by presenting detail about an attribute or setting. These subcomponents have no relationship with each other and hence it is regarded as the least organised structure. Causation presents causal relationships by connecting each element temporally or causally while the problem/solution structure has all the organisational components of causation discourse with the overlapping content between propositions in the problem and solution. Thus the discourse type constitutes a continuum, with the description being the least organised and the problem/solution the most organised while causation falls between these two. Comparison is different from these three discourse types. It is organised on the basis of similarities and differences, but its subcomponents are related in specified ways as in causation and problem/solution types. This claim was verified by the study conducted by Carrell (1992) who investigated the relationship between the college-level ESL students' awareness of text structure and their summary recalling. This study used a design similar to that developed by Meyer and Freedle (1984), and the text types used for this study were comparison/contrast and description. Carrell reported that her readers exhibited superior top-level recall of ideas (main ideas being compared/contrasted) for comparison/contrast passages but this was not the case for the description passage. She noted that recalling two central ideas being contrasted was easier than recalling three ideas being described collectively. This result was due to the lesser degree of association among the sub-components (in this case three ideas describing

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These researchers hypothesise that well organised discourses such as comparison, causation, and problem/solution would be better recalled than loosely organised description (Meyer & Freedle, 1984).
the topic) in the description passage and hence they were more difficult to recall (Meyer & Freedle, 1984).

To comprehend the passages, readers must make associations or establish cohesive ties from what they have read and what they will read. If they fail to do so, comprehension will become less effective. Reading researchers investigated the effects of different structural sequence (tightly structured text and loosely structured text) on readers' comprehension. The study conducted by Carrell (1984a) demonstrated the recall effects of scrambled story sequence on ESL readers' comprehension. In this study, Carrell used a research design similar to that developed by Mandler and Johnson (1977) and the story sequence was scrambled by sentence rather than by paragraph. Half of her college ESL students read three standard versions and the other half read three interleaved (or scrambled) versions. Carrell reported that her readers recalled a greater number of nodes for the standard story but the sequence of recall was in the order of the input for both groups. Moreover, Kintsch and van Dijk (1975 cited in Carrell, 1984a) compared the processing time of tightly structured stories and scrambled stories. As predicted, their readers took less time to read tightly structured stories. They also found that scrambling the order of paragraphs in a well structured story affects readers' comprehension remarkably less than scrambling the order of sentences in a paragraph. These pieces of empirical evidence suggest that formal schema plays a powerful role in the sense that even the scrambled or interleaved versions of a simple story were recalled according to the ideal order, but not in the order in which the versions were presented to the readers.

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53 See Kintsch and van Dijk (1975) for the differential effects by various methods of scrambling.
Olson et al. (1984) have examined the comparative effect of story and essays on readers' comprehension. This study focused on the group use of strategies (rather than idiosyncratic use of strategies by individuals). The data obtained in this study indicate that readers used different types of strategies in roughly the same way regardless of the different types of text they read. Strategies used frequently by the readers included inferencing, prediction and commenting relating to the previous selection of text. When the prediction strategies used for the stories and essays were contrasted, the readers made remarkably specific predictions for the stories but much more general predictions for the essays. The readers approached the two types of texts differently due to the influence of their existing knowledge of formal schema. The researchers reported that the readers' basic orientation for the story was 'prospective': the readers made forward linkages mentally by trying to anticipate where the story was heading. In contrast, readers adopted 'retrospective' orientation for the essay by relating each new element to earlier elements with little anticipation of what was coming up, except at the most general level.

Following the classification scheme developed by Olson et al. (1984), Horiba (1990) investigated readers' responses to causal factors in narrative story. The participants were native Japanese speakers (L1 group) and English-speaking American students of Japanese as a L2 (L2 group). In this study, the L2 group repeated read-recall sessions but the L1 did not. The think-aloud protocols revealed that the two groups differed significantly in the categories such as inferences, prediction, and general knowledge and associations. To reconstruct cognitive schema, the L1 group paid more attention to filling in gaps between information in the text (use of top-down processing) while the L2 group commented more frequently on their self-monitoring of vocabulary and sentence comprehension. The latter group made inferences and elaborations based
on association with their general knowledge more frequently than the L1 group. Further analysis of the data suggested that the L2 group's mental representations of the causal factors in the text were less coherent than those of the L1 group and the L2 group were not aware of hierarchical antecedent-consequence connections. Horiba claimed that this was due to the L2 group's low level of linguistic skills (here, word-decoding skill) which inhibited them from using effective strategies associated with high-level processing (Anderson, 1991; Bernhardt, 1983; Clarke, 1980; Cziko, 1980; Davis & Bistodeau, 1993; Koda, 1992; McLeod & McLaughlin, 1986).

Carrell (1983) investigated the interactive effects of content and formal schemata. This cross-cultural study examined reading comprehension of ESL learners with Muslim and Roman Catholic backgrounds. The learners read two religion-related texts with four different combinations of content and form: 1) culturally familiar content with familiar rhetorical form; 2) unfamiliar content with familiar rhetorical form; 3) familiar content with unfamiliar rhetorical form; and 4) unfamiliar content with unfamiliar rhetorical form. The data indicated that reading familiar content in an unfamiliar rhetorical form was relatively easier than reading unfamiliar content in a familiar rhetorical form. However, when the use of higher-level idea units was examined, Carrell found that the form played a significant role in reading an unfamiliar rhetorical form: the readers could not separate episodes and tended to recall the text as one single episode. They appeared to have no sensitivity to the time differences of the episode. When a number of culturally appropriate elaborations and distortions were compared, the researcher reported that content was a stronger source of elaborations and distortions for the readers than was rhetorical form.

Despite some methodological problems, Kaplan (1966) demonstrated the
effects of formal schema on both the comprehension and production of written texts in L2 and discussed issues concerning the negative transfer of L1 rhetorical pattern to L2 composition. A cross-cultural study by Hinds (1983a) pursued this line of enquiry further. Hinds contrasted the expository text style of Japanese and English, and examined how Japanese rhetorical style, commonly known as the ki-shoo-ten-ketsu\textsuperscript{38} may influence English-speakers’ comprehension (translation) of Japanese. Although this style is generally evaluated highly by the native Japanese speakers, the English speakers of this study evaluated this style negatively and exhibited difficulty in translating Japanese texts into English. This was due to the absence of an equivalent pattern in English.

A growing body of empirical research attests to the effect of the role of both content and formal schemata in ESL/EFL reading comprehension and to the potential cultural specificity of both types of schemata (Carrell & Eisterhold, 1983). Readers’ prior knowledge usually varies according to age, personal experience, cultural and/or educational background, level of interest in the text, and belief system (Anderson \textit{et al.}, 1977; Block, 1992). Consequently, readers’ failure to comprehend texts may often result from not knowing which schema they should activate, particularly when the first one they have tried has proved to be inadequate. Some researchers expect that content schema more than formal schema affect language comprehension and that content schema is a strong predictor of overall comprehension since it has become more general and necessarily more universal than the formal schema (Anderson \textit{et al.}, 1977; Carrell, 1987; Chihara, Sakurai, & Oller, 1989; Hudson, 1982; Oller, 1995).

2.5.2 The Role of Metacognition in L2 Reading

\textsuperscript{38} This style originated in classical Chinese poetry.
Alongside the importance of cognitive strategies in reading, research also acknowledges the important role played by metacognition, particularly in the case of adult L2 learners (Vann & Abraham, 1990; Barnett, 1988; Block, 1986, 1992; Carrell, 1989; Hosenfeld, 1977).

O’Malley & Chamot (1990) refer to language learners who do not utilise metacognitive strategies as learners without direction. Vann and Abraham (1990:191) explained that “[metacognitive strategies] would enable [learners] to assess the task and bring to bear the necessary strategies of its completion”. Wenden believes that L2 learners use these strategies to make learning effective through: focusing attention on aspects of incoming information; making input comprehensive; retaining or storing for future use what they have understood; and developing facility in the use of what they have learned (Wenden, 1985:4). These researchers view knowledge of metacognition as a prerequisite for a learner performing any language task and especially for taking steps to meet the demands of a situation more effectively.

Block (1986) examined how L1 and L2 readers differ in their use of metacognitive strategies. Participants in her study were Spanish, Chinese, and native speakers of English who were designated as non-proficient readers. These readers read one passage in English and one passage translated into their L1 (Spanish and Chinese). Later they undertook retelling and multiple-choice tests. For data analysis, Block applied what she called ‘extensive’ and ‘reflexive’ mode dimensions to describe the ways in which readers approached the text. Strategy type was categorised by two levels: general comprehension strategies (for example, 39)

39 In the reflexive mode, readers directed their attention toward themselves rather than to the texts, whereas in the extensive mode they focused on understanding the ideas of the text author.
comprehension-gathering and comprehension-monitoring strategies) and
local linguistic strategies. She found no specific pattern of strategy use
across measures and readers’ language background did not account for the
difference in the strategy use between the L2 readers and the L1 speakers
of English. However, she identified two unique types of readers from the
way they applied strategies. One group called ‘integrators’ integrated
incoming information with their prior knowledge. They were aware of text
structure and monitored their comprehension consistently. This group
responded in the extensive mode only. On the other hand, the ‘non-
integrators’ group failed to recognise text structure and tended to make
fewer attempts to connect text information with their schema.

The success of integrators appears to lie in their ability to focus
consistently on newly learned information from the text while integrating
this with their schema. The non-integrators also referred to their schema
but they did so without connecting the two sources of information. As a
result, their comprehension process became one way only. The behaviour
pattern exhibited by the integrators was in accordance with the view
proposed by cognitive psychologists who assume learning occurs as a
result of integration of two types of information (schema and textual
concluded that the readers who participated in the study had all developed
strategies but only the integrators were able to plan and control their
learning. The non-integrators, although they were strategically active,
applied strategies sparingly and unsystematically on most occasions.

A more recent study by Block (1992) contrasts the use of comprehension-
monitoring strategies by proficient and less-proficient L1 and L2 readers
of English at three different phases of comprehension: the evaluation
phase; the action phase; and the checking phase. Participants read the
expository text which was used in her 1986 study. Block reported that monitoring was most thorough on the referent problems but the process was somewhat truncated with the vocabulary problems. Despite this problem, she found correlational patterns amongst these groups: the proficient L2 readers performed similarly to proficient L1 readers and the less-proficient L2 readers performed similarly to less-proficient L1 readers.

From the findings of her 1986 and 1992 studies, Block concluded that L2 readers used the same strategies as L1 readers despite different L1 backgrounds. This led Block to speculate that strategy use may be a stable phenomenon that is not tied to readers' specific language background. Although she focused on the comprehension-monitoring process exclusively, her concluding remark is in accordance with the claim that there is some connection between L1 strategy use and the ability to learn L2 (Cummins, 1980; Goodman, 1973). Others view that reading ability is heavily dependent on proficiency level in L2 (Clarke, 1980; Cziko, 1980; Davis & Bistodeau, 1993; Koda, 1992; McLeod & McLaughlin, 1986; Yorio, 1971). These different viewpoints have pedagogical implications for whether strategy intervention is conducted in learners’ L1 or L2.

As stated earlier, L2 learners' perception, philosophy and beliefs about L2 learning influence the learning outcome (Abraham & Vann, 1987; Wenden, 1986b, 1987). The specific studies (Barnett, 1988; Carrell, 1989) concentrate on investigating the relationship between a reader's perceived strategy use and level of comprehension in L1 and L2.

Barnett (1988) examined the relationships among perceived strategy use, strategies actually used, and level of comprehension by English speakers of French as a FL. Comprehension was measured by recall summary in
their L1 (English) and the learners selected only one strategy from among several choices which were predetermined by the researcher. Barnett found strong correlation among three variables; students who read better through context are more likely to perceive that they use effective strategies and they also comprehend better. In other words, as their strategy use increased, students’ perception of their strategy use also increased, which in turn resulted in a significantly higher level of comprehension. She suggested that L2 teachers place more pedagogical emphasis on reading strategies in their teaching.

With some modification to the design of Barnett’s study, Carrell (1989) examined metacognitive awareness of silent-reading strategies by ESL and FL learners. She was interested in their confidence as readers, their evaluations of effective/efficient strategies, their evaluation of what makes a text difficult and how they perceived their use of repair strategies. The proficiency level of the ESL group was more advanced than that of the FL group. After reading the text in L1 and L2, learners responded to a metacognitive questionnaire concerning their reading behaviour in L1 and L2.

For reading in L1, Carrell found a negative correlation between reading performance and the use of bottom-up strategies: the ESL readers tended to use more top-down or global strategies in their perceptions of effective and difficulty-causing reading strategies, while the FL readers used more bottom-up strategies. This indicates that with low proficiency in FL, learners depend on bottom-up decoding skills. However, for reading in their L2, more readers from both groups disagreed with the statement that when they do not understand something they give up and stop reading.

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40 Carrell focused on learners’ own judgement rather than using pre-determined questionnaires as in the Barnett study.
Consequently, Carrell could not find any correlational pattern between learners' proficiency level and language background. Nevertheless, she observed that an important factor influencing reading comprehension in her study was 'persistence', although this variable is assumed to be a characteristic of reflective learners (Hewett, 1986) or highly motivated learners (McMeniman, 1989, 1994).

### 2.5.3 Strategy Choice and Group Differences

The initial work conducted by Hosenfeld (1977) which investigated the general reading strategies of successful and unsuccessful readers from European language backgrounds (French, Spanish, and German), indicated that successful readers read the passage in broad phrases focusing on the meaning of the passage. When they encountered unfamiliar words, the successful readers used context to induce word meaning or skipped inessential words. On the other hand, the unsuccessful readers seldom skipped words and, instead, read word-by-word. As a consequence, they lost the meaning of sentences and/or passages very easily. Hosenfeld's subsequent studies (1979a, 1984) produced similar results: successful readers were highly sensitive to the grammatical aspects of text and used all available textual information such as illustrations and titles to make inferences. Furthermore, when these successful readers encountered unknown words, they kept reading without giving up.

One of the earlier studies (although in L1) conducted by Olshavsky (1976/77) on adult speakers' reading strategies reported a similar finding: good readers used context to define a word meaning and responded to the text by adding information. In contrast, poor readers focused their attention on word level and experienced difficulty in decoding word meanings. In general, readers with high levels of interest and proficiency
used strategies significantly more often for the abstract-style text but they did not use specific strategies. Although Olshavsky included only strategies that occurred at least five times in the analysis, her data indicated good readers were mentally active and used more strategies associated with higher-level processing than poor readers.

These early studies on LLS reported similar findings in general. A later study conducted by Anderson (1991), however, demonstrates that strategy choice is a matter for the individual and there is no single set of strategies which significantly contributes to improving reading comprehension. His Spanish-speaking learners of ESL at various proficiency levels read academic passages and undertook standardised reading comprehension tests. Anderson identified forty seven strategies which were grouped into five categories: supervising strategies; support strategies; paraphrase strategies; strategies for establishing coherence in text; and test taking strategies. Anderson reported that learners who used more strategies on each of these measures tended to score higher than those who did not. However, learners who scored in the high and in the low ranges in the comprehension test used similar types of strategies and did not differ from each other in any significant way. Consequently, Anderson could not identify a particular set of strategies that significantly enhance readers' comprehension. He concluded that strategic reading is not only a matter of knowing what strategy to use, but a reader must know how to orchestrate different strategies together. In analysing the data, Anderson noticed that the beginning-level students who lacked linguistic foundations could not apply certain strategies. Other researchers (Clarke, 1980; Wenden, 1987) also observed similar behaviour.

Two case studies conducted by Abraham and Vann (1987), and Vann and Abraham (1990) demonstrate individual differences in the use of reading
strategies. Their first study (1987) compared the reading behaviours of two individual ESL learners (the successful and the unsuccessful) on grammar-related tasks and a composition. The readers' strategies were classified according to the taxonomy developed by Rubin (1981) with some modifications. The major differences found in this study were the range and the frequency of strategy use. The successful reader used a variety of strategies more often than the unsuccessful reader. Another difference was readers' approach to L2 learning: the successful reader took a more flexible view and considered that language learning requires attention to both function and form. In contrast, the unsuccessful reader appeared to think of language as primarily a set of words and attempted to string them together to communicate. In other words, the unsuccessful reader attended to individual words that resulted in the frequent use of bottom-up strategies. Abraham and Vann (1987:96), like Wenden (1986a, 1987), found through think-aloud methodology that a reader's implicit philosophy of how L2 is learned guided the approach of the two ESL learners in their study regardless of whether the strategy was observable or unobservable.

The second study by Vann and Abraham (1990) focused exclusively on the use of strategies by less-effective ESL learners. This study investigated the differences in strategy use by two Arabian females enrolled in an intensive English program (IEP) who were making slow progress. Contrary to the researchers' expectation, the result provided counter-evidence against the commonly perceived view that unsuccessful learners are 'inactive' (Block, 1986; Wenden, 1985). The quantitative data indicated that these two readers were in fact active strategy users: they used relatively many strategies in a manner similar to that of successful readers. However, qualitative data revealed that these learners, although they appeared to be remarkably similar to successful readers in their
repertoire of strategies on the basis of simple frequency of strategy use, they had fundamentally different approaches to problem solving. Because their metacognitive level was not sufficiently advanced, these readers were unable to apply task-specific strategies appropriately.

Vann and Abraham's 1990 finding demonstrates convincingly that a research design which adopts simple strategy counts is not appropriate for studies that investigate differences in the use of strategies. Less-proficient readers may use more strategies based on their erroneous interpretation of texts, or use strategies less frequently for more difficult texts. In the opinion of researchers, to conduct valid research, the research design should include analysis of both qualitative and quantitative results (Personal communication with Chamot in July 1998).

Dobson (1995) also focused on individual differences among Australian English-speaking learners of Japanese and native speakers of Japanese. L2 learners with different proficiency levels read three texts with differing levels of difficulty. Although the number of participants was small (n=5), Dobson reported that the L1 readers used cognitive strategies most and rarely reported the use of metacognitive strategies. They used a limited range of strategies and used them less often than the L2 readers. Contrary to the findings by Hosenfeld (1979a, 1984) and Olshavsky (1976/77), L2 readers in Dobson's study used strategies relating to clause/sentence/text level more than those relating to word level.41 L2 readers at higher proficiency (and L1 readers) used strategies such as elaboration and personal reaction to the texts by interacting often with the texts. Furthermore, the L2 readers used more strategies when they read the easier texts than when they read more difficult texts. Finally, Dobson

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41 Dobson analysed her data in word-level and clause/sentence/text-level.
observed based on her data that L2 readers' use of strategies becomes more like the strategies used by L1 readers as their proficiency level in the target language increases. This finding verifies the automatic processing used by L1 readers and proficient L2 readers (to a lesser degree).

In summary, the results of reading studies reviewed in this section are somewhat inconsistent. This may be attributable to the differing instrumentation used by these studies. Lee (1986), for instance, replicated Carrell's 1983a experiment by allowing students to recall in their L1 (Carrell used readers' L2 for recall writing) and reported that L2 readers showed more interaction between background knowledge, and both top-down and bottom-up processing modes. Another influencing factor that relates to cross-cultural studies was the manner in which prior knowledge was measured. For example, in Hammadou's 1991 study, the participants were requested to rate their knowledge of topics from a list of thirteen topics selected but they were unable to assess their own ability to comprehend objectively what they read about the topic.

The L1 literature indicates that learners use cognitive strategies to solve learning problems. If they find reading materials very easy to comprehend, they will use few strategies. On this ground, the frequent use of strategies by Dobson's L2 readers for the easier text and their less frequent use of strategies for more difficult texts conflicts with the findings of many studies in the cognitive literature. This relates to the question of the readability level of test texts or alternatively, to difficulty in determining an adequate level of reader proficiency in L2. Another issue raised by Anderson (1991), is that to have valid protocol data, readers must be equipped with a minimum level of decoding skills and they should be well trained so that they are able to talk about their mental processes freely (Clarke, 1980; Wenden, 1987). These factors should be considered in
conducting strategy studies since they can skew the research data. Other major factors include the type of text presented to participants to read, the language task assigned to readers to elicit their strategies, and the level of text difficulty. These variables interact with each other and with readers' proficiency level in L2 and ultimately influence readers' choices of strategies.

2.6 Use of Strategies in Listening

2.6.1 Defining 'Listening Comprehension'

Researchers working within a cognitive-psychology perspective describe the act of listening and understanding a spoken language as “a series of processes through which the sounds associated with a particular utterance are converted into meaning” (Call, 1985:766). A review of literature defining the term, 'listening comprehension', however, indicates difficulties in establishing a definition agreed to by researchers since listening involves a personal and multi-dimensional construct (Barker, Barker, & Fitch-Hauser, 1987 cited in Witkin, 1990). Glenn (1989) found fifty different definitions: twenty nine from studies which focus primarily on the listening process; and thirty one taken from studies on speech communication. To establish a universally acceptable definition, Glenn extracted a list of seven common core concepts amongst these definitions which were drawn from studies relating to a cognitive psychology perspective. These concepts are: perception; attention; interpretation; remembering response; spoken sound; and visual cues. Berko et al. (1995) also found similar components. They considered listening as a process which involves: reception; perception; attention; the assignment of meaning; and responses, by the listener, to the message received (p.80). Attending and responding are applicable only in some listening situations, but both perceiving and interpreting are central to a definition of listening. Some definitions that are helpful within the context of the present study
are:

- the process of receiving, attending to, and assigning meaning to aural stimuli (Wolvin & Coakley, 1985:77).
- a process that includes hearing, attending to evaluating, and responding to spoken messages (Floyd, 1985:9).
- detection, discrimination, recognition, or comprehension of speech through audition, vision, or both in combination (Berg, 1987:65).
- receiving and attending to a message, interpreting a message (assigning meaning), evaluating the message, and responding to the message (Sayre, 1987:35).

These definitions link to the cognitive dimension of learning described by O'Malley et al. (1989:418) that "[listening comprehension is] an active process in which individuals focus on selected aspects of aural input, construct meaning from passages, and relate what they hear to existing knowledge". These researchers consider the process of aural comprehension is a highly active meaning-getting activity using both decoded language and the comprehender's prior knowledge, which is analogous to that involved in reading (Anderson & Lynch, 1988; Bacon, 1992a, 1992b; Byrnes, 1984; James, 1984; Long, 1990; Lund, 1991; Berko et al., 1995).

2.6.2 The Effects of Prior Knowledge in L2 Listening
A number of studies from the previous section have demonstrated how readers utilise their prior knowledge when they comprehend reading texts in L1 (Anderson et al., 1977; Bransford & Johnson, 1972; Steffensen et al., 1979) and L2 (Carrell, 1983a, 1987; Hammadou, 1991; Hudson, 1982; Johnson, 1982; Lee, 1986).
These research findings led L2 listening researchers to investigate the same process in the L2 contexts. A handful of empirical studies have explored the potential relationship between listeners' prior knowledge and their listening comprehension (Bacon, 1992a, 1992b; Chiang & Dunkel, 1992; Long, 1990; Markham & Latham, 1987; Schumidt-Rinehart, 1994). The studies of listening in L2 reported results similar to those reported from the studies of L2 reading. They also used similar comprehension measures such as recall/summary and recognition test.

Markham and Latham (1987) demonstrated that culturally specific religious knowledge significantly influenced adult ESL students' listening comprehension. These researchers examined the influence of two passages describing the prayer ritual of Islam and Christianity on students' comprehension. They reported that the students recalled more information and provided more elaborations and fewer distortions for the passage that related to their own religions. On the other hand, when the students lacked religious knowledge, they relied heavily on their limited linguistic knowledge or bottom-up information processing. The recall protocols obtained through unstructured interviews revealed that when the students experienced lexical difficulties, the interactive combination of prior knowledge with the existing knowledge base enabled them to understand and recall the passage more effectively. This finding verifies the claim made by Stanovich (1980) that a deficit in any knowledge source results in a heavier reliance on other knowledge sources. Similar findings were reported by the empirical studies conducted by Long (1990) and Schumidt-Rinehart (1994).

In Long's study, English-speaking college students of Spanish language listened to two different Spanish newspaper passages of equal length: one with a topic familiar to them (U2); and the other with a topic unfamiliar to
them (Goldrush). Long found no significant differences in dealing with
the familiar and unfamiliar passages for the recognition measure but her
protocols data revealed a higher proposition of content idea units for the
familiar topic than for the unfamiliar one. This suggests that when
listeners have relevant schema, they abandon linguistic knowledge in
favour of familiar schema. On the other hand, when appropriate schema is
not available to listeners, linguistic knowledge plays a prominent role in
comprehension (Long, 1990). This finding is analogous to that reported by
reading scholars (Clarke, 1980; Davis & Bistodeau, 1993; Horiba, 1990),
as well as the findings of several listening studies (Bacon, 1992a;
O'Malley et al., 1989).

Adding proficiency level as a variable, Schumid-Rinehart (1994)
replicated Long’s 1990 study. Her participants comprised English-
speaking first, second, and third-quarter university students. They listened
to two passages of a familiar topic (Hispanic universities) and a novel
topic (going for a walk in the park). Similar to the result reported by Long,
the students’ background knowledge in the form of topic familiarity
emerged as a powerful factor in listening, and similar results held across
course levels. Listening comprehension in this study was assessed by
immediate written recall procedure in students’ L1 (English).

Chiang and Dunkel (1992) investigated listeners’ prior knowledge
combined with speech modification and listening proficiency. High
intermediate and low intermediate proficiency EFL learners who were
native speakers of Chinese listened to a lecture on a familiar topic
(Confucianism) and an unfamiliar topic (Amish people). After listening to
the lecture, students’ comprehension was measured by a multiple-choice
test that contained both passage-dependent and passage-independent items.
They found significant interaction between prior knowledge and test type
(passage-independent and passage-dependent items) for both groups. The students from the two groups who listened to the familiar topic lecture scored higher on the passage-independent items than on the passage-dependent items, but no difference was found in the performance on these two items when they listened to the lecture on an unfamiliar topic. This suggests that the EFL learners' listening comprehension is enhanced when the lecture content is familiar to them. This study lends additional support to the notion that schema plays a vital role on listening comprehension.

The L2 reading studies reviewed in 2.5.1 in this chapter indicated that readers' knowledge of text organisation played a powerful role in reading comprehension. By analogy, L2 researchers speculate that listeners' familiarity with structural organisation of texts may also influence the comprehension process in listening (Long, 1989; Weissenrieder, 1987). In listening contexts, unlike reading, listeners must process information quickly and at the same time they must make some judgement about the logical relationship between what they have heard and what will come next. Thus, knowledge on discourse organisation of text helps listeners to anticipate an incoming segment of text information that they have not yet heard.

Weissenrieder (1987) highlighted the importance of text schema (as well as content schema) in L2 listening to news broadcasts. News broadcasts adopt a highly specialised register for structural economy and its structural sequence is considered a 'description' based on the model of written news broadcast (van Dijk & Kintsch, 1983) and hence the most difficult text genre for a listener to comprehend (Shohamy & Inbar, 1991).

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Footnote: In case of Japanese language learners, the basis of judgement may be from linguistic factors (conjunctions; particles; verb inflections), and/or from non-linguistic factors (tone of voice; intensity; rate of speech; facial expressions; body movement; eye gazing), and/or the use of discourse knowledge.
Similarly, listeners may have different listening approaches according to different situations. For example, understanding the gist of a story line may be appropriate in listening to a soap opera for many listeners. In contrast, listening to news broadcasts is a specific type of listening which demands a higher level of language proficiency from listeners. It is important to note that different listening situations and listening tasks (as well as text type) may force listeners to have a specific listening purpose for each listening occasion (O’Malley et al., 1989; Richards, 1990).

Richards (1990) differentiates between interactional and transactional purposes of communication. Interactional use of language is socially oriented and the goal of participants is to effect social interaction (for example, greetings and small talk). Under this situation, accurate information is not a primary purpose. A transactional use of language, on the other hand, is message oriented and a flow of accurate coherent information is necessary to effect the correct message by a receiver. This use of language includes situations like listening to news broadcasts, lectures, or instructions of some kind.

Richards provides a quadrant in which the listening situation reflects the different processes (bottom-up and top-down) and purposes (interactional and transactional) as a framework for comparing the different demands of different listening activities. In his framework, the communicative purpose of a given context will determine which process a listener uses to construct meaning most effectively. For example, listening for detailed information will involve bottom-up processing, while listening for gist will involve top-down processing. Similarly, Wiksell (1989:58) lists

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40 See Brown & Yule (1983) for more details.
various types of listening situations. These situations form a continuum extending from the least cognitively demanding situation to the most demanding situation:

1. Exploratory listening: an alert, easy type of listening situation suitable for most situations.
2. Listening casually, with the listening act secondary in importance.
3. Listening casually, yet with evident interest, for the purpose of entertainment.
4. Listening in a purely authentic situation where the type of listening varies from highly critical to evident casualness.
5. Listening to obtain an answer to a general question or for an understanding of one or more broad statements.
6. Listening intently for specific, detailed, and exact information.

Under the four-part classification of Richards, listening situation 1 proposed by Wiksell is considered to be the most interactional while Situation 6 the most transactional. The models of listening described by Richards (1990) (and Wiksell’s listing) consider the interaction between task difficulty and use of cognitive strategies. It is, however, necessary to conceptualise listening as a cognitive process and hence to incorporate dimensions such as attention, perception, and memory as major elements as included by the L2 listening model proposed by Nagel and Sanders (1986).

To test the hypothesis of whether ‘description’ is the most difficult text type to comprehend, Meyer and Freedle (1984) undertook an experiment to see if well organised discourses such as comparison; causation; problem; and solution would be better recalled than a loosely organised
discourse such as description." Adult students listened to each of the four passages read to them. A written test of their ability to recall was administered immediately after listening and one week later. As predicted, recall of causation and comparison passages was superior at both the immediate and delayed testings, and recall of description was weakest. Meyer and Freedle indicated that knowledge of conventions for organising and signalling the organisation of texts is a part of what distinguishes expert from novice listeners (and readers). To the investigator's knowledge, there has been scant research conducted to date that has examined the effect of this important variable on listening. More empirical data are urgently needed.

2.6.3 The Effects of Visually Comprehension

A multimedia listening situation involves both listening and viewing. Results of empirical research in both L1 (Bransford & Johnson, 1972; Omaggio, 1979) and L2 (Hanley, Herron, & Coles, 1995; Herron, Hanley, & Coles, 1995; Herron, Coles, York, & Linden, 1998; Kubota, 1999; Mueller, 1980; Secules, Herron, & Tomasello, 1992) reported that the use of visuals has positive benefits on encoding and retention of aural information. These researchers claim that visuals serve as advance organisers and help a listener to make comprehension easier. Ausubel (1968:148) defines the advance organisers as "appropriately relevant and inclusive introductory materials ... introduced in advance of learning ... and presented at a higher level of abstraction, generality, and inclusiveness".

Features offered by Mayer (1979:382) that are characteristic of advance

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4 See 2.5.1 in this chapter for the five types of expository discourse identified by Meyer and Freedle (1984).
40 See Ausubel (1961) for more details.
organisers are: 1) expresses a short set of verbal or visual information; 2) is presented prior to learning a large body of information to be learned; 3) contains no specific content from the to-be-learned information; 4) provides a means of generating the logical relationships among the elements in the to-be-learned information; and 5) influences the learner’s encoding process.

In the language learning situation, advance organisers include video, picture, key words, verbal description, and/or pre-questioning (Hanley et al., 1995; Herron, 1994; Herron et al., 1998; Secules et al., 1992). The function of the organiser is to provide learners with ‘ideational scaffolding’ or an organisational framework of the passage by enabling them to limit the number of possible text interpretations. As a result, learners are less likely to formulate wrong hypotheses. An additional benefit of using advance organisers in a language classroom is a possible increase in learners’ level of interest which causes them to pay close attention to the passage (Mueller, 1980).

Earlier studies of the effects of advance organisers on listening comprehension concentrate on what type of visuals (static or dynamic; pictorial or written form) and what sequential order of presentation are most effective for language learners.

An empirical study conducted by Bransford and Johnson (1972) verified the characteristic features proposed by cognitive psychologists. In their study, the high school students listened to the passage under five different conditions: 1) without a context picture; 2) after seeing the appropriate context picture; 3) before seeing the context picture; 4) with a partial context (objects under discussion are rearranged); and 5) with no context (but heard twice). Bransford and Johnson reported that those who viewed
contextual pictures prior to listening to the test passage had significantly better comprehension ratings and recall scores than those who were not provided with a context or who were provided with a context after hearing the passage. Accordingly, these researchers claimed that relevant context knowledge was a prerequisite for high school students to comprehend prose passages in L1. The researchers stressed the importance of providing learners with suitable advance organisers when the learners face difficulties in comprehending a prose passage, in that:

If one generally characterises comprehension as a process requiring appropriate semantic contexts, then the conditions under which existing structures become activated are extremely important. If a passage does not provide sufficient cues about its appropriate semantic context, the subject is in a problem-solving situation in which he[sic] must find a suitable organisation of his store of previous knowledge (Bransford & Johnson, 1972:721).

Inspired by Bransford and Johnson’s work, L2 researchers began to investigate the effects of visuals on listening. The findings of these studies indicate a tendency for beginning-level L2 learners to rely on visual information (Grimes, 1990; Mueller, 1980) and its facilitative effects on listening comprehension have been acknowledged (Hanley et al., 1995; Herron, 1994).

Omaggio’s study (1979), although it was a reading study, demonstrates how the choice of visuals (stick figures) was important in reading passages in L2. She compared the visual effects on reading comprehension performed by native speakers of English (L1 group) and English-speaking adult learners of French (L2 group). The L1 group read the English version translated from French and the L2 groups read the text
in French under the following conditions: 1) without picture; 2) with a picture depicting a single object related to the theme of the passage; 3) with a picture depicting a scene from the beginning of the story (pre-thematic context); 4) with a picture depicting a scene from the main portion of the story (thematic context); 5) with a picture depicting a scene from the end of the story (post-thematic context); and 6) with a series of three pictures (multiple context). Comprehension of the text by the groups was measured by the resume passage written in their L1 and a twenty-item recognition test. Omaggio found that a pre-thematic picture presentation was the best condition for the L2 group but this condition did not differentially affect the reading comprehension of the L1 group members. The no-picture condition drew the lowest score. The empirical data presented by Bransford and Johnson, and by Omaggio confirm the hypothesis that the advantages of having illustrations of a general nature are that these serve as advance organisers through the hypothesis-testing process. For this reason, presenting a thematic context picture before listening is most helpful for learners.

A study conducted by Mueller (1980) investigated the effects of visuals on comprehension in L2. This study provides an insight into how the different proficiency level of L2 learners interacts with visual material. The participants were beginning-level college students of German language. One group had little or no previous knowledge of German, while the other group had studied the language for four to six semesters. Prior to testing, contextual visuals were presented to the students on an overhead projector for thirty seconds. Later, the students from the two groups listened to the taped passage under three conditions: 1) visual before hearing the passage; 2) visual after hearing; and 3) without visual. Comprehension was measured by a written summary in their L1.
Similar to results reported by Bransford and Johnson (1972), and Omaggio (1979), the visual-before and the visual-after conditions were more effective than the non-visual condition for the first group. However, no significant differences in the test scores were found for the second group. Mueller concluded that appropriate contextual visuals can enhance listening comprehension recall for beginning-level students and the effects of contextual visuals were related inversely to students' level of language proficiency. This finding relates to the issue of visual and auditory processing and is discussed in 2.6.4 in this chapter.

With the increased availability of media technology, video has the potential to provide rich content and an ability to render information that is more meaningful to listeners. Herron and her colleagues have studied use of video as an advance organiser extensively in recent years. Students' listening comprehension in these studies was evaluated by the use of various tests such as summary writing and/or multiple choice tests written in their L1.

The results of these studies indicate that the use of authentic video/radio have positive effects on listening comprehension by adult learners of French (Herron, 1994; Herron et al., 1995; Herron & Seay, 1991; Secules et al., 1992) and the English-speaking fifth-grade children retaining information on French culture in their reading classes (Hanley et al., 1995; Herron & Hanley, 1992).

One study conducted by Herron and her colleagues (1995) compared the effectiveness of two different types of advance organisers (aural only and aural plus visual) on adult English speakers' listening comprehension of French videos. One group listened to the teacher's verbal summary of the upcoming video segment prior to viewing. The other group listened to the
teacher's summary and pictures which were textually related to the sentence but not a pictorial translation of it. Thus, students from the two groups heard exactly the same amount of spoken information but their circumstances differed with the presence or absence of the visual advance organiser.

The students viewed twelve videos through the course of the semester and written comprehension tests (discrete point items) were administered after each viewing session to measure their level of comprehension. As predicted, the group who was provided with both the description and the pictorial information benefited significantly more than the group who was provided with an aural description only. However, the researchers noticed substantial differences in students’ performance under the two conditions. Analysis of data and the types of pictures used in the experiment indicated that the effective pictures as advance organisers had the following characteristics: 1) they provided rich contextual support to the information; and 2) they offered a good match between the imagery (which was evoked by the picture) and the subsequent video text. The previous study conducted by Hanley et al. (1995) also confirmed the superior effect of video as an advance organiser over still-pictures (plus teacher narrative). The improved performance may have related to the ability of a contextualised video to provide a more memorable background of information than static pictures and/or a teacher narrative (Hanley et al., 1995).

To explore the depth of processing theory, Herron et al. (1998) presented two different types of advance organisers (declarative condition and interrogative condition) to beginning-level college students of French. The two experimental conditions were the declarative condition (AO) under which the teacher read summaries of the major scenes in the upcoming video and the interrogative condition (AO?). Under the AO? condition,
the teacher read the same summaries in interrogative forms. Under the latter condition, students were expected to search for possible answers by processing information more actively and deeply than the declarative condition. The control group watched the same videos in AO, and AO? conditions without advance organisers. Contrary to the researchers’ expectation, the students in the AO, and AO? condition scored significantly higher on the discrete-point memory tests. These researchers attributed the result to the AO, and AO? conditions being less distractive to students’ overall comprehension because students were not required to search for possible answers.

As demonstrated by a series of studies conducted by Herron and her colleagues, the use of video as advance organisers enhanced students’ listening ability. One of their studies (Secules et al., 1992), however, indicated that the use of authentic materials did not have significant effects on acquisition of vocabulary and grammar items. Despite video being rich in contextual clues, the ‘fleeting nature’ of video presentation seemed to cause students difficulties in isolating and identifying these grammatical items.

In conducting this line of enquiry, it is important to note that reading skills and listening skills should be investigated as separate skills. One of the studies (Herron, 1994) used a set of sentences written on the board to evaluate students’ listening ability. Another point of issue was the amount of information presented to the control and experimental groups. Sherwood and his colleagues (1987) were critical of the research design adopted by Herron (1994). Sherwood et al. maintained the improved performance in the experimental condition may have been the result of double exposure to the same information (redundancy hypothesis). The third issue relates to the proficiency level of L2 learners, which considers
that visual may be more effective for beginning-level learners. If this is the case, findings from a number of studies by Herron and her colleagues cannot be generalisable to listener groups with different proficiency levels.

In general, the findings from these studies further strengthen the view that provision of additional contextual information facilitates comprehension of authentic video texts. Such an information source provides not only L2 learners with a rich context but also enables them to make connections between the new information and information retrieved from prior knowledge through the process of elaboration (Gagné & Driscoll, 1988). Herron and her colleagues did not address the issue of why the video/pictorial medium as a source of language input is effective for the L2 learner. Scant research has been conducted to date to examine listeners’ comprehension processes under audiovisual and audio-only listening contexts in L2. The results from the synthesis of study findings on memory, which compare the processing priority of auditory and visual input, may provide in-depth information on how listeners comprehend under the two different listening contexts.

2.6.4 The Relationship between Visual Processing and Auditory Processing

When we listen to (and view) television or video, visual and auditory/factual information compete with each other for entry into our information processing system. A majority of studies whose focus is on encoding and retention of visual and auditory information considers that visual message has priority in entering in our processing systems. Baggett and Ehrenfeucht (1983), for example, examined the difference in encoding and retention of information from educational movie by college students. The movie was presented in aural and visual modes in students’ L1. The
specific focus of this study was to discover whether simultaneous presentation of information (listening to a sound track while reading a written text) led to poorer encoding of information than sequential presentation of information from the two media sources (either listening to the film’s sound track only or reading the written text only), and whether the order of presenting information (visual first and sound second, or vice versa) affects students’ ability to encode and retain information. Such findings contribute to the debate over whether, when a person is encoding information from one source, s/he may be hindered in encoding information presented simultaneously from another source.

Baggett and Ehrenfeucht found no evidence of competing resources in students’ encoding or retention for visuals and narration in synchrony. This finding fits with the single memory, dual-processing hypothesis. Baggett and Ehrenfeucht supported the visual-priority position, claiming that “auditory processing occurring later than visual brings in the earlier visual component in forming concept” (p.31). When a person uses the same processing unit (as in text/visual and visual/text), effective associations are created independent of the order of presentation. Reese (1982 cited in Grimes, 1990) demonstrated that when documents were summarised verbally and shown verbatim simultaneously, viewers inevitably read the document and ignored the verbal summary.

Some researchers offer as reasons for the primacy of visual encoding that pictures may access semantic codes more quickly than do auditory messages (Baggett & Ehrenfeucht, 1983) and/or visuals do not require

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46 The information was presented to the students in three different orders: 1) in synchrony, as in an intact movie with sound track; 2) as the movie’s visual content only, played with the soundtrack turned off; and 3) as the auditory content only with visual content turned off, followed immediately by the visual content shown in silence.

47 This claims that visual information is processed by one unit and auditory information by a separate unit (Paivio, 1986b).
much attention to process even when pictures and words have no semantic relationship (Grimes, 1990). For these reasons, it may be that visual signals may go through less extrapolation than auditory signals before they result in memory codes.

Audio processing and visual processing may interact with each other in distinctive ways and affects the listener’s comprehension level. Grimes (1990) investigated how college students’ comprehension is accomplished under different types of audiovisual presentation and its role in attention and memory. The three testing conditions are: 1) high correspondence where picture and word match each other; 2) medium correspondence where the two information sources are thematically related but their messages do not correspond; and 3) no-correspondence where the video does not match the audio. Grimes found no significant difference between students’ factual memory scores in the high and medium correspondence conditions, but their factual recognition scores declined to the lowest level in the no-correspondence condition and their attention to the visual channel overrode the auditory channel. However, auditory probe reaction times remained unchanged. This suggests that the students were paying attention to the auditory channel but did not remember much of the factual information they derived from it. The findings of this study also indicate that the more attention the students pay to the narration, the better they are able to use their remaining attention to integrate what they have seen with what they have heard.

Listeners’ mental effort may influence their level of comprehension. Cennamo (1993) reviewed several studies which investigated the relationship between mental effort and achievement. She found no consistent results across these studies. She hypothesised that mental effort devoted to searching memory for related knowledge may result in
increases in the effort to make sense of the new information. However, expending effort for these purpose may result in a breakdown in comprehension. On the other hand, when additional effort is devoted to the process of elaboration and creating meaning from the content, parallel increases in achievement scores. She concluded that the conscious, non-automatic processing that has resulted from increased mental effort is assumed to create greater activation of learners' mental schemata.

The amount of mental effort that listeners exercise may be related to intervening variables such as level of interest and the incentive variables. Shellén's study (1989) indicated that the university students who perceived the text message as interesting scored significantly higher in the listening test than those who rated the message uninteresting. Furthermore, the students who were informed that their test results would be graded scored significantly higher than those who were told that the results would not be graded. The positive result of this study was attributable to the more positive attitudes toward the test-taking situation itself and the higher level of interest. These factors call for a listener to increase attention to the message that results in active processing of the information. With attention, a listener can concentrate on specific words or visual cues, but with less or no attention, input may never go through the perceptual filter\(^4\) and consequently never be processed in STM (Berko et al., 1995).

Salomon and Leigh (1984) investigated another variable that may impinge on the level at which students exercise their efforts. They reported that sixth-grade students' general perception of learning media determines the amount of effort the students invested. These students were presented with

\(^4\) Perceptual filter separates what makes sense to a listener from what does not (Berko et al., 1995:82).
a television version (television group) and a printed version (print group) of the same story. Contrary to the findings reported by some studies (Herron et al., 1998), the amount of mental effort reported by the television group was significantly lower than that reported by the print group. Furthermore, the higher-ability group of students invested significantly less effort than the lower-ability group of students in processing the television story. Correspondingly, the former group recalled significantly less than the latter group when they viewed the same television story. On the other hand, when the two groups read the printed version, the former group recalled significantly more than the latter group did. The researchers explained the conflicting result was due to the higher-ability group of students perceiving the act of learning from television media to be much easier than the lower-ability students perceived it. As a result, the higher-ability group expended less effort in learning through television.

Despite the increasing numbers of studies on the use of multimedia in language teaching as an instructional source, this does not necessarily translate into more effective learning. MacWilliam (1986), for instance, in reviewing some of the research findings from educational broadcasting and communication studies presented evidence counter to these research findings. He reported that adults learning L2 lost auditory information when the television program accompanied visual information of a non-linguistic nature. He claimed that the increased visual movement on the television program caused this detrimental effect on adults’ listening comprehension. It was found that the learners lost a greater amount of information in news stories accompanied by pictures than from those presented by the news reader alone (Gunter, 1980).

The purpose of viewing multimedia texts in the L2 classroom may vary
according to the proficiency level of learners. Video texts commonly used for beginning-level learners focus on interactional use of language (Richards, 1990). They are often valued for their 'information' content rather than 'linguistic' content. This means 'a lot of viewing' and 'little comprehension'. On the other hand, texts prepared for more advanced learners generally focus on transactional use of language (Richards, 1990) which result in 'a lot of comprehension' and 'little viewing'. Most empirical studies discussed in this section have focused on the beginning-level learners' comprehension. Consequently the testing instruments tend to measure the 'viewing' aspects (which involve surface processing) more than the 'comprehension' aspects (which involve deep processing). L1 literature claims that the audiovisual task requires less cognitive load and hence involves surface processing, but the audio-only listening task demands a high degree of concentration from listeners which contributes to higher level processing (Pezdek, Kehrer, & Simon, 1984; Salomon & Leigh, 1984).

The results of the studies reviewed here generally support the argument for the beneficial effects of visuals in aiding comprehension. They also indicate that visuals themselves do not necessarily lead to better comprehension. Beginning-level learners in these studies, due to their limited ability in the language tested, may have understood surface meanings conveyed by pictures. Additionally, due to the primacy of visual encoding (Baggett & Ehrenfeucht, 1983; Grimes, 1990; Reese, 1982), factual information presented through aural channels may never get enough of these learners' attention to instantiate messages into memory. For these reasons, students at the beginning level may be simply viewing without being involved in comprehension. On the other hand, the more advanced learners appeared to be comprehending. They are able to extract underlying meaning by connecting auditory information with visuals.
simultaneously without relying solely on visual clues. In other words, for the advanced listeners, auditory processing drives visual processing which, in turn, enables them to better comprehend.

It is important to note that studies on listening comprehension which employ recall and/or response measures to test comprehension of passages are to a large extent testing memory capacity more than comprehension (Myers, 1990; Witkin, 1990). As such, these studies reviewed here did not deal with the relationship between 'comprehension' and other variables. To understand listening 'comprehension' in real terms, it is mandatory for L2 scholars to conduct fundamental studies to deepen their knowledge base. Mueller (1980:340) expresses the importance of conducting fundamental studies as follows:

Future research studies directed specifically at identifying how visuals affect the language learning processes may be far more fruitful than past research efforts on visual aids have been. Such research may help, moreover, to clarify the inconclusive results of previous studies and provide the basis for a clearer understanding of the potential benefits and limitations of visual support in language learning.

2.6.5 Strategy Choice and Group Differences

Prior to conducting the major review of literature on listening strategies used by two major groups of listeners (the proficient and less-proficient groups), a brief review on listeners’ perceived strategies, and the use of top-down and bottom-up strategies is included to provide further information relevant to listening in L2 situation.

Vogely (1995:47) asserts that, "in order to be good listeners, the learners
must feel good about themselves”. The basic tenet of studies addressing the relationship between ‘real’ and ‘perceived’ strategies is that, if the listeners are aware of what strategies help them to comprehend a task, they will adopt these strategies (Brown & Palincsar, 1982; Baker & Brown, 1984; Flavell, 1979). Vogely investigated the relationship between use of metacognitive strategy and level of listening performance in the recall task. Participants in this study were adult English-speaking students of Spanish language enrolled in first, second, and third/fourth semester. These students listened to the three authentic texts of different length and later responded to questionnaires similar to those used by Carrell in her reading study (1989) which addressed the four specific areas of effectiveness, confidence, difficulty, and repair. The students reported the strategies that they actually used after each listening task. These strategies were then compared with those strategies they reported before undertaking the task: in effect, a prospective/retrospective analysis.

The data indicated that a great gap existed between what students perceived to be effective strategies and the actual use of their strategies: more students recognised top-down strategies as effective but fewer students reported that they actually used these strategies. A parallel relationship existed with bottom-up strategies. On the matter of difficulty, the students perceived their ability in text-related elements (vocabulary and syntax) to be more accessible than their ability in listener-based elements. Other researchers (Bacon, 1992a,1992b; O’Malley et al., 1989), also reported similar behaviour. In the area of repair, when students encountered comprehension problems, they listened to the texts passively, but at other times, they became active and used effective strategies. The

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*The four areas of enquiry in Vogely’s study were: 1) strategies that participants perceived to be effective and the strategies they reported actually using; 2) participants’ evaluation of their own strategy use; 3) aspects that made a listening comprehension task difficult; and 4) participants’ perceived use of their own repair strategies.*
types of repair strategies the students perceived they used most commonly were context-based bottom-up strategies such as listening closely to the coming segment and guessing the missed words or phrases based on the context.

Overall, the first-semester students outperformed the second-semester students on the three recall tasks and they perceived themselves to be the most strategic listeners. The second-semester students produced the lowest score on the comprehension test and they perceived themselves to be the least strategic listeners. This behaviour exhibited by the second-semester students was contrary to the findings of the two L2 reading studies by Carrell (1989) and Barnett (1988). Vogely explained the inconsistent pattern of her data with “[The second semester students’] focus seemed to be on reacting to lack of comprehension rather than on preventing loss of comprehension by engaging in effective listening strategies” (p.48). This suggests that students of different proficiency respond differently to the loss of comprehension in listening and reading. When strategy use was compared between FL listeners and FL readers, the FL readers perceived themselves to be bottom-up in their strategies for repair and difficulty. This was consistent with results reported by reading studies. However, the results for FL listeners were different from those for FL readers in that the FL listeners perceived their listening strategies and confidence to take effect top-down. This finding was contrary to the widely acknowledged view that FL readers perceive top-down strategies to be more effective, while FL listeners tend to use more bottom-up strategies (Carrell, 1989).

Finally, Vogely observed that the students perceived that as their language experience increases, the type of bottom-up strategies they used shifted from categorical (for example, vocabulary to syntax) to more global and
the frequency of strategy use also increased. The most effective strategy identified in this study was relating text content with listeners’ prior knowledge, followed by knowledge of vocabulary (p.48).

A series of listening studies conducted by Voss (1984 cited in Long, 1990) and Conrad (1985) investigated the use of top-down processing and bottom-up processing by ESL learners with various language backgrounds. Studies whose major focus is the use of top-down processing and bottom-up processing usually adopt miscue analysis.

Voss (1984) examined the listening strategies used by German-speaking learners of English. The students listened to the passages in English (L2) repeatedly and then transcribed the content of the tapes in their L1 and L2. The transcriptions were analysed by miscue for three different types of perception errors: acoustic, linguistic, and content. The data revealed that in students’ perceptions of their successful speech, they relied heavily on top-down processing which governed the decoding process. As acknowledged by the literature on reading (and listening), bottom-up processing started with lower-order acoustic segments and identified segments of increasing size sequentially. Voss concluded that both processes were at work, but more importantly, overreliance on bottom-up processing was the characteristic of unsuccessful speech perception in both L1 and L2 conditions. Similarly, Conrad (1985) focused on the listening strategies used by native English speakers (L1 group) and by adult ESL listeners with various language backgrounds (L2 group), based on a post-listening comprehension test and a cloze test. The learners in the L2 groups were subdivided into two further groups: the intermediate subgroup and advanced subgroup according to the scores they obtained on their admission test to the English language course. The three groups listened to the short lecture tape and answered the tests. Conrad’s data
indicated that the L1 listeners and the advanced-level L2 groups relied mainly on semantic cues, while the intermediate-level L2 groups directed an increasing amount of attention to syntactic features or phonological cues of the text. Furthermore, Conrad observed that the use of strategies by the advanced L2 group became increasingly similar to those used by the L1 group. On this basis she speculated that a similar processing procedure operates for the L1 and the advanced-level L2 learners. Parallel findings were also reported in reading studies based on miscue analysis (Cziko, 1980; Devine, 1987). Finally, Conrad stated that “Like second language readers, they [the intermediate-level L2 group of listeners] seemed to be faced with so much new information at the syntactic and phonological levels that they were unable to retain and integrate all of this and additionally direct attention to the semantic cues.” (p.68). This comment summarises the general circumstances of the intermediate-level (and the beginning-level) L2 listeners whose linguistic skills, particularly their decoding skill, is limited. Despite the limited number of listening studies available in L2, the findings from these two empirical studies accord with those reported by reading studies in L1 and L2.

Currently only a handful of studies has been published which investigates listening strategies as mental processing in L2. Major contributions have come mainly from dissertation studies as this area of inquiry develops (Fujita, 1984; Laviosa, 1991; Murphy, 1985; Vandergrift, 1992). However, the methodologies and instruments used by these studies vary widely. For example, although the researchers claimed that they used think-aloud procedures for data collection, the procedures vary from immediate introspection to retrospection. The study conducted by Murphy (1985) used an immediate introspection method which is congruent with the procedure used by the present investigation.
An early exploratory study conducted by Fujita (1984) provides information on listening strategies employed by the two groups of English-speaking students of Japanese at the Department of Foreign Languages in the United States Air Force (n=12). The students were divided into two groups, the successful group and the unsuccessful group, according to their listening test scores. The test passages used for this study were two narrative passages and think-aloud data were collected through semi-structured interviews which were performed retrospectively and introspectively (Fujita calls the latter contemplation) with the use of questionnaires. The first task assigned to the two groups was to listen to one narrative passage in Japanese twice and then write a summary of the passage in English (L1). Students then were interviewed retrospectively. The second task was to listen to the other passage only once and then give a brief oral summary of what they understood. After completing these tasks, the students listened to the same passage again, but this time sentence by sentence. They were then questioned on how they determined meaning from what they had heard.

Fujita reported that the major difference between the two groups of students was the degree of ability to process meaning and form. The successful group attended to meaning (top-down processing) and form (bottom-up processing) together, performing both tasks simultaneously. The unsuccessful group, on the other hand, were unable to attend to both meaning and form. They attended only to form. The successful group focused on the main topic, remembered unclear areas from the first task and prepared mentally for the second task. They reaffirmed what was heard in the second playing. In contrast, the major concern of the unsuccessful group was unknown words and details; they relied on familiar words and tried to put these words together to work out the meaning of the passage without use of context. They hung on to the
unknown words too long and they were left further behind. Consequently, this group did not get the gist of the passage at all after the first listening. During the second task, the successful group not only had the gist of the passage but they comprehended supporting information as well. Since the group were able to check their comprehension again, they filled in the missing gaps in the second listening where they had failed to comprehend during the first attempt. The major concern for the unsuccessful group was what they had not comprehended. As a result, they attempted to construct meaning relying heavily on their schema and ended up guessing in most places. Another difference found in this study was in the degree of metacognitive ability. The successful group were active participants and reviewed their mental or written notes often to monitor their comprehension. The unsuccessful group did not set themselves an objective before performing the tasks or they were not self-confident. However, both groups of listeners had self-developed strategies.

Fujita reported that contrary to his expectation, the predominant strategies used by his students were translation and note-taking, either mentally or using written notes. The L2 literature has shown translation was a strategy used commonly by beginning-level learners. The listeners of Fujita’s study relied on their L1 knowledge and transferred it to L2 in processing text information. Overall, the strategies employed by the successful group were similar to those reported by Hosenfeld (1977) in her reading study.

O’Malley et al. (1989) were interested in identifying listening processes of ESL high school students of Hispanic background. The students who were classified as effective and ineffective listeners according to their teachers’ assessment (n=8 effective; n=3 ineffective) were presented with three academic listening activities and they were interrupted for verbalisation at the imposed pauses during listening comprehension. Their
protocols were analysed according to the three stages of the comprehension process proposed by Anderson (1983): the perceptual processing stage; the parsing stage; and the utilisation stages.

These researchers reported that the sequential patterns of strategy use by the two groups of listeners contrasted sharply: during the first stage, the effective listeners were aware of their attention problems and redirected their attention consciously to the task. The ineffective listeners, on the other hand, were unaware of their inattentiveness and could not manage to redirect their attention to the task. At the parsing stage, the effective listeners used more top-down processing and relied on bottom-up processing only when they encountered problems. The ineffective listeners, on the other hand, used bottom-up strategies and consistently focused primarily on words. In the final phase, the effective learners related text information to their prior knowledge by making use of elaboration in three major ways: world knowledge; personal knowledge; and self-questioning. The effective listeners made critical judgements and were able to invoke multiple strategies to construct meaningful sentences from the input. Elaboration strategy was used to support inferring unknown words.

O’Malley and his colleagues reported that the three predominant strategies which differentiate the effective listeners from the ineffective listeners were self-monitoring, elaboration and inferencing. Elaboration was a basis for schema activation and this knowledge is vital in effective comprehension as it guides listeners to make predictions and inferences to construct meaning from orally presented material (Long, 1990). It was one of the most frequently used strategies by the effective group and this group had rich schema structure. The data from this study verified that listeners differentiated their use of strategies according to the phases of
the listening task which is in agreement with the three stage model of listening proposed by Anderson (1995). These two earlier studies by Fujita (1984) and O'Malley et al. (1989) did not consider the inclusion of frequency of strategy use in data analysis.

The study conducted by Murphy (1985) provides an insight into how listeners construct the meaning of oral texts by examining the sequential pattern of strategy use. Two groups of college ESL students (n=12) who were classified as either more-proficient or less-proficient, listened to six expository texts with different topics. The six topics were culturally neutral regarding the students' language backgrounds but they were of general interest to college-age students. Listeners' individual responses were categorised into six general categories which encompass a total of seventeen individual listening strategies.

When the types of strategies used by the two groups were contrasted, the more-proficient group activated a greater number and a wider variety of individual strategies than the less-proficient group. The former group relied heavily on the personalising strategy. They also inferred, made connections, self-described, and anticipated more often than the less-proficient group of listeners. Murphy found that the two groups of students did not use recognisably different listening strategies. These results led Murphy to speculate that individual listeners may interpret what they hear by relying on different kinds of strategies. Thus making it difficult to identify group-specific strategies.

In analysing the conventions of language, Murphy obtained results similar
to those of studies reviewed earlier in this section (Fujita, 1984; O'Malley et al., 1989): the more-proficient group were more likely to focus their attention on broader issues such as probing the ideas and textual features. They did so by creating a written record of their developing interpretations. The less-proficient group, on the other hand, focused their attention at the individual word level and were concerned with definition, pronunciation, and spelling.

The most frequently used strategies by the two groups were recalling strategies. Among recalling strategies, paraphrasing was the first major strategy. The second major strategy used by the groups was speculating strategy. For this strategy, listeners complemented the information presented to them by introducing schema-based information. The four strategies under this heading include inferring, connecting, personalising, and anticipating. The use of these strategies demonstrates that prior knowledge plays a crucial role in the listening process.

The more-proficient group used personalising responses more than four times as often and anticipated more than twice as often as the less-proficient group. The third major category was probing strategy. More than half of those who analysed the topics belonged to the more-proficient group. Moreover, this group had a high level of metacognition: they evaluated their responses and produced self-describing responses more than twice as frequently as the less-proficient group. The more-proficient group also used an extensive number of recording strategies while listening to the selections.

Depending on the source of information the two groups derived from the texts, the protocols of the more-proficient group indicated that they used listener-based information most of the time. They extensively based their
interpretation on their prior knowledge. Consequently, they were more successful than the other group in making connections between what they listened to and what they already knew. These listeners therefore were able to integrate two sources of information more effectively to create coherent meaning from what they heard. In contrast, the less-proficient group relied on text-based information heavily and they followed this pattern most of the time. In this pattern, the listeners depended primarily upon the paraphrasing strategy.\(^5\)

A wider distribution pattern of inter-weaving strategies exhibited by the more-proficient group indicated that they were open and flexible in their use of strategies. This behaviour also indicated that the group were relatively more resourceful and as a consequence of their large strategy repertoire, they were more often able to respond to the selections of texts than the less-proficient group. This discovery of numerous strategies that emerged from the listeners’ protocols supports the interactive description of listening which has been suggested by both cognitive psychologists and schema theorists. The distinctive features of listening as a language process paralleled those of the processes reported by researchers in reading and writing.

As acknowledged widely by L2 listening researchers, one of the major problems in comprehending aural texts is the word knowledge that listeners possess (Lund, 1991; Long, 1990). Although her study orientation was quantitative, Laviosa (1991) was interested in the types of listening strategies used by American English-speaking learners of advanced Italian (n=5) as they attempted to solve lexical problems associated with radio broadcasts (news, interviews, and commercials). She

\(^5\) Murphy classified 'paraphrasing' strategy as one of the bottom-up strategies.
used Færch and Kasper's (1980) model of intellectual behaviour to investigate the students' problem-solving processes in L2 listening. The model identifies four steps/stages: stage one involves the identification of problems; stage two is the planning process during which subjects devise strategies; stage three is the operation of selected mental strategies; and stage four is solving the problems (Laviosa, 1991:75). An immediate retrospective technique was used to collect data and students' comprehension was measured by retelling and multiple-choice questions. The correlation between types of problems and strategy use was examined statistically by students' levels of comprehension.

Laviosa identified three inter-connecting taxonomies of: nine problems, three planning processes, and seven strategies. Within Færch and Kasper's model (1980), the selected strategies are viewed as the product of the processes and stage four was used as a measure of accurate comprehension of aural stimuli. For this reason, stage four was not relevant to the study and excluded from the final analysis. Although she successfully classified the strategies involved in a radio listening context, Laviosa reported that there was a certain degree of overlap across the stages. She acknowledged that these stages were all inter-related processes. Moreover, she reported that all students in her study did not follow the steps proposed by Færch and Kasper: some abandoned the message at a very early stage, while some identified a problem but failed to select strategies. Murphy (1985) also made a similar observation.

The most frequent problem type reported by the students was 'new word'. This problem was solved by strategies such as using cognates, contextual inferring, and vocalisation/visualisation. The problem of 'proper names' was solved by the contextual inferring strategy, 'word heard wrong' was assisted by vocalisation/visualisation, and 'known word/unfamiliar topic'
was dealt with by the associating strategy. 'Unknown word/familiar topic' was solved by a contextual inferring strategy. The problem of 'known words/no connection to the topic' was dealt with by the associating strategy. The strategy using background knowledge was, however, the least employed which accounted for only 1 per cent of the total occurrence of strategies. The strategy type most favoured by the students was contextual inferring. Laviosa reported that although all her students translated, summarised, or paraphrased whenever their comprehension was immediate, they could not use the context to draw inferences when they had a limited knowledge of the topic or of linguistic items. Additionally, although the statistical analysis suggested a significant degree of association between the problem type and the strategy chosen, the scores of performance on retelling and on the multiple-choice listening tests did not produce a consistent pattern: some who had performed poorly on the retelling did just as well on the multiple-choice tests. She reported that previous knowledge of the topic, the ability to decode words and identify meanings, and flexibility in establishing the relationship between word meaning and main topic were important variables in the comprehension process.

The important role played by topic familiarity has been widely acknowledged by reading researchers in both L1 and L2 (Carrell, 1987; Hammadou, 1991; Steffensen et al., 1979). In this area of L2 listening, to the investigator's knowledge, only one empirical study is available.

Descriptive studies conducted by Bacon (1992a, 1992b) provide further information on how listeners vary their strategies depending on the difficulty of the text. The participants were first-year college students who had completed one year of Spanish language courses (19 males; 31 females). These students listened to two short expository texts from
American radio broadcasts in Spanish (L2) concerning mobile homes (MH) and electric converters (EC). The MH passage was more accessible to the students than the EC passage because of the slower speed, greater salience of the topic, and familiar vocabulary. The EC passage, on the other hand, discussed a less salient topic using more technical terms than the MH passage. The data were collected during semi-structured interviews conducted immediately after students had finished listening to one text. Students were also asked what they perceived to be their level of background knowledge on the topic, their level of confidence, and their affective response. Their score on a comprehension test determined the comprehension level of successful and less-successful listener groups by counting the number of idea units. The strategies reported were then coded according to the three major categories identified by O'Malley et al. (1989): metacognitive, cognitive, and affective/social categories.

Bacon reported that students used more cognitive strategies than metacognitive strategies to comprehend both texts. For cognitive strategies they used bottom-up strategies more often than top-down strategies. Many students reported that they used English (L1) to comprehend the more difficult EC passage when their comprehension began to break down. The parallel findings were reported by other listening researchers (Chamot, 1987; Fujita, 1984). Slightly more students connected text information to their world knowledge to comprehend the easier MH passage than they did to comprehend the more difficult EC passage. Students transferred their discourse knowledge to comprehend the more difficult passage but only one student did this while listening to the easier passage. The students used more summarisation strategies to comprehend the more familiar/salient passage which indicates that their comprehension is in progress.
In an attempt to identify characteristic features of the strategies used by the successful and less-successful groups, Bacon focused on several variables that appear to influence L2 learning and comprehension. These variables are: 1) flexibility; 2) use of English; 3) understanding of optimum conditions for listening; 4) motivation; 5) detail; 6) effective use of background knowledge; 7) self-control and autonomy; and 8) monitoring. His data indicated that the successful group combined a variety of background knowledge (personal, world, and discourse knowledge) and anticipated clause boundaries effectively. On the other hand, the less-successful group either focused too much on their background knowledge or ignored it altogether. As a result, their interpretation of the passages was often erroneous. This behaviour exhibited by the less-successful group relates to their use of metacognitive strategies. In fact, the most frequently used metacognitive strategy by the successful group was monitoring. This strategy was used most effectively for evaluating hypotheses and/or connecting information to the central topic of the passage.

The superior monitoring ability of successful listeners was also acknowledged by O’Malley et al. (1989). These researchers explained that the behaviour patterns of the less-successful listeners resulted from their failure to monitor and pay attention to the text information. Although L1 and effective L2 listeners use elaboration strategies, the use of these strategies sometimes produces negative effects if the listeners do not monitor their attention. The idiosyncratic behaviour pattern of Laviosa’s learners of Italian language may be attributable to their inability to monitor comprehension. Observing the frequent use of summarisation strategies by the successful group, Bacon (1992a:408) paraphrased the characteristic behaviours exhibited by the two groups of her study:
... this cognitively demanding activity (summarisation) in which listeners rearrange information and restate it in their own words distinguishes between those who hear 'shreds and details' and those who hear 'ideas and concepts'.

2.7 Summary

The findings of existing empirical studies underscore the importance of examining language strategies and extend understanding of how L2 listeners process aural input. The literature reviewed in this chapter establishes the theoretical basis of listening comprehension processes and also verifies the critical role of listening comprehension in L2 learning. Despite the small number of empirical studies published and the variation in research design, a synthesis of these research findings confirms the distinctive features of listening as a language process similar to the language process of reading. There are seven key findings in the literature concerned with proficient and less-proficient groups that are relevant to the theoretical framework of this study. These seven characteristic features of the proficient group of listeners are that they: 1) possess a wide strategy repertoire and are more flexible in the use of strategy; 2) orchestrate strategies in a task-specific way; 3) interact and connect text information with their schematic information by simultaneous use of top-down and bottom-up processing strategies; 4) frequently use elaboration and inference strategies in an integrated manner; 5) have a high level of metacognition to monitor their comprehension; 6) are tolerant in working out the meaning of unknown words; and 7) are able to process visual and auditory input simultaneously.

The variation includes: 1) target languages investigated and whether they are L2 or FL; 2) the number of participants and their language learning experience, and proficiency levels; 3) types of test texts and comprehension; 4) testing conditions (listen to text once or repeatedly) and testing contexts (audiovisual listening or audio-only listening); 5) data collection procedures (retrospective interviews or introspective verbalisation)
Other significant findings include: 1) schematic knowledge, similar to reading, plays a significant role in the listening process; 2) L2 learners use different strategies depending on the phase of the listening task and the overall difficulty of the task; 3) as a learner's language level increases, their use of processing strategy as a L2 listener shifts from bottom-up to top-down strategies; and 4) strategy use is related to personal factors and hence differs across individuals.

2.8 Research Questions

This review of literature shows that the majority of studies on listening strategies have focused on learners of Indo-European languages such as English, French, Spanish, Russian, and German languages whose own L1 is also Indo-European. To the best of the investigator's knowledge and on the basis of this literature review, there is no listening study of L2 which uses a cognitive approach to test strategies of Australian English-speaking learners of Japanese under an audiovisual listening context. Furthermore, studies of reading processes indicate that the strategies used by advanced-level learners of L2 become similar to those of L1 speakers as learners increase their proficiency level (Cziko, 1980; Conrad, 1985; Dobson, 1995). On this basis, L1 participants have been included in the present study to test such an hypothesis in the case of listening strategies.

This study takes up the L1 and L2 language combination to examine two key areas of L2 listening. One is the strategic difference between listening strategies of L1 speakers of Japanese and L2 learners of Japanese. The other, based on findings from L2 reading studies is that we can reasonably

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53 Conrad (1985) investigated listening strategies used by English native speakers and learners of ESL to comprehend academic lectures. The L2 participants were of different language backgrounds and their comprehension was measured by the scores of the cloze test.
speculate that L2 learners' knowledge of structural organisation as a general concept may influence their listening comprehension (Long, 1989; Weissenrieder, 1987) through the effect of the genre of the voice medium on the comprehension process as these two groups listen to the texts.

More importantly, findings from the literature reviewed in this chapter not only provide valuable information on listeners' comprehension processes, but also indicate pedagogical implications for teachers (and learners) on how to utilise this valuable information source to enhance learners' proficiency in L2 listening. McMeniman (1994:6), for example, advocates inclusion of teaching strategic skills in the classroom, recognising that:

... good teaching includes teaching students how to gain control over their own learning, including how to motivate themselves, indeed, how to become strategic in their own learning.

This exploratory study is conducted in two stages. Study 1 pursues refinement of a listening strategy classification scheme for use in Study 2. Study 2 seeks to develop, administer, and evaluate the efficacy of a listening strategy intervention program. Specifically, the study seeks to answer four research questions:

1) What are the listening strategies used by native speakers of Japanese (L1) and above-average proficiency (AAP) and below-average proficiency (BAP) tertiary-level learners of Japanese as a foreign language who are Australian-English speakers, in audiovisual (AV) and audio-only (A) listening contexts?
2) How does the voice medium in different genres (television news broadcasts and television family dramas) influence these speakers' listening strategies in AV and A listening contexts?
3) What are the similarities and differences in strategy use in AV and A listening contexts between the L1 group and the AAP and BAP L2 subgroups?; what are the effective strategies used by these speakers?; and what types of strategies then should be included in an instructional package for an effective intervention program?

4) Does the listening strategy intervention program developed in this study result in more strategic listening in Japanese?

The following chapter will describe the research design considered appropriate for the data collection in order to answer these research questions.
CHAPTER 3: RESEARCH DESIGN - STUDY 1 AND STUDY 2

Research questions detailed in Chapter 2 indicate that the study should be conducted in two sequential stages: Study 1 and Study 2. Study 1 will provide data to answer questions 1, 2 and 3, and Study 2 will be designed to answer question 4. Specifically, the first study has, at its core, the refinement of a listening strategy classification scheme that is, in its turn, utilised in the second study. This latter study then seeks to develop, administer and evaluate a listening strategy intervention program. Study 2 is thus dependent on the findings of Study 1.

3.1 Study 1 - Development of a Listening Strategy Classification Scheme

Study 1 consists of a pilot study and a main study. The data for the L2 students in the pilot study were collected over four weeks at the beginning of the first semester in 1995 (the 1995 cohort) while those for the main study were collected at the beginning of the first semester in 1996 (the 1996 cohort). The data for the L1 speakers in the pilot and main studies were collected in Japan during September 1995 for the pilot study, and December 1996 for the main study. The research was conducted in the course of running the intermediate-level Japanese language subject offered at a metropolitan university in Brisbane, Australia.

The pilot study with seven students was conducted in order to ascertain the validity and reliability of the instruments to be used subsequently in the main study. The more specific objectives of conducting the pilot study were: 1) to provide an opportunity for the students to become familiar with the data collection procedure (think aloud); 2) to train the students to verbalise their thoughts during the listening task; 3) to test the adequacy of text types and their level of difficulty; and 4) to develop a preliminary strategy classification scheme to validate the results of the main study.
The pilot study and the main study were identical in procedural aspects relating to selection of participants, choice of test texts, and training and testing sessions, unless otherwise stated. Thus, only the design of the main study will be described in detail below.

3.1.1 Data Collection Methodology – Think Aloud

The shift from a long tradition of studying product analysis to an emphasis on studying complex mental processes has resulted in, at times, dramatic changes in data-collection methodologies. The conventional methodologies used in reading comprehension studies include the use of recognition tests, recall-summary, or other memory-related tests. Although these types of measures are appropriate for contexts that identify what learners learn and remember from their reading, they do not always provide insights into learners’ underlying mental processes.

Other procedures commonly used to elicit information about learning strategies include the use of questionnaire surveys (Anderson, 1991; Block, 1986; Raimes, 1985; Vann & Abraham, 1990) and interviews (Chamot, 1987; Chamot & Kupper, 1989; O’Malley et al., 1985a). The data obtained by these procedures are usually related to specific learning outcomes. These procedures are often administered retrospectively and the data can be subject to alteration due to learners’ memory decay and loss, and, at times, variations in their level of motivation (McMeniman, 1989).

To identify the various levels of analysis involved in comprehension, it is necessary to collect ‘on-line’ information or data about learners that articulate what they do during performance of a given task. Currently, two major on-line procedures that are capable of measuring the different aspects of comprehension involved in language use have been developed.
These procedures are based on a computer simulation model of memory and problem solving. They are the monitoring procedure and the interruption procedure. In the former approach, the learners' reaction time is taken as a measure of determining how quickly s/he detects a pre-specified target. This task includes the measurement of eye gaze duration, eyeball movement, and rapid sequential visual presentation (Just & Carpenter, 1984; Mitchell, 1984; Potter, 1984). In the latter approach, a learner is interrupted by a researcher during the presentation of test material and then asked to perform a memory-related task such as recall, miscue analysis, or think aloud (Anderson, 1991; Flower & Hayes, 1981; Horiba, 1990, 1993; Hosenfeld, 1977; Olshavsky, 1976/77; Olson et al., 1984; O'Malley et al., 1989; Vann & Abraham, 1990). Some researchers combine one or two of the above methods, depending on the purpose of the study. These methods are, however, not capable of revealing all of the processes that a learner undertakes during reading or listening.

Whether it is in reading or listening, language-related tasks are considered a problem-solving activity that is determined by consecutive planning processes (Anderson, 1995; Ericsson & Simon, 1980, 1984, 1993; Kavale & Schreiner, 1979). One method frequently used to gain insights into this course of problem solving is to probe learners' internal states by verbal methods. Ericsson and Simon (1980, 1984) developed a systematic data collection and analyzing procedure called 'think aloud' (or 'talk aloud') which embraces the assumptions of an information processing theory (the multiple-memory model), particularly relevant in the context of problem solving. It assumes that the structure and content of knowledge in memory are reflected in the ways that people use that knowledge to solve problems. In this approach, a cognitive process is seen as a sequence of internal states successively transformed by a series of information processes.
Use of 'think aloud' over the 'recall' procedure was recommended by Olson et al. and they state thus (1984:257):

[Think aloud] data … should reveal the kinds of strategies used by readers … the kinds of knowledge sources employed, and the kinds of representations constructed. While memory measures like recall have provided useful information about the knowledge sources and representations used in text comprehension, they tell very little about the strategies employed or about the sentence-by-sentence interactions among the knowledge sources and representations.

This approach collects data from the students as a verbal protocol and the data are used by a researcher to infer underlying processes and are therefore subject to the researcher’s interpretation.

The time of verbalisation is important in determining whether the information is likely to be drawn from either short-term memory (STM) or long-term memory (LTM). Ericsson and Simon (1980) differentiate between two types of verbalisation: concurrent verbalisation and retrospective verbalisation depending on the time lapse between the main task performed and the reporting of it.

Concurrent verbalisation takes place while performing a main task and thus processing and verbal reporting are performed simultaneously. The report describes successive states of heeded information (see 2.3.1 in Chapter 2 for the information-processing model of comprehension). However, some highly practised processes are carried out without being interpreted and do not enter into STM (McLaughlin et al., 1983; Schneider & Shiffrin, 1977) and hence they are not available for verbalisation. Concurrent verbalisation is often used in studies that attempt to distinguish
between experts' and novices' performances of tasks in order to access information about their cognitive processes and organisation of knowledge. Due to the experts' highly automated skill performance, the verbalisation by the experts is assumed to be less complete than that of the novices for the same task. Retrospective verbalisation, on the other hand, is usually conducted after a task. Durable memory trace is accessed from STM or retrieved from LTM for verbalisation. Information from LTM requires additional processes of retrieval so, over a longer duration, recall becomes increasingly difficult and displays some errors and incompleteness. For this reason, the data from concurrent verbalisation are assumed to be more complete than those obtained from retrospective verbalisation.

In the last two decades, in particular, the think-aloud approach has been used by an increasing number of researchers of both L1 (Marr, 1983; Martin, 1988; Meyer, Gelzheiser, & Pruzek, 1989; Olshavsky, 1976/77; Winser, 1988) and L2, including reading and composition researchers (Arndt, 1987; Block, 1986; Dobson, 1995; Flower & Hayes, 1981; Hosenfeld, 1976,1977,1984; O'Malley et al., 1989; O'Malley & Chamot, 1990; Vann & Abraham, 1990).

For the purpose of the present study, concurrent verbalisation is considered most appropriate since these data are assumed to be more reliable than those obtained from retrospective verbalisation. Other advantages of using this method include the provision of significant data on a wide range of naturally occurring stage-by-stage decision-making processes.

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54 Ericsson and Simon's protocol analysis is often referred to as 'trace analysis' (Chi, 1992).
Despite the think-aloud method being generally recognised as a major source of data collection procedure on learners' cognitive processes (Anderson, 1995), however, the use of introspective (and retrospective) data as a tool of inquiry into on-line mental processing is a subject of controversy (Chi, 1992; Dobrin, 1986; Ericsson & Simon, 1980, 1984, 1993; Nisbett & Wilson, 1977; Smagorinsky, 1989; Steinberg, 1986).

3.1.1.1 Strengths and Limitations of Verbal Protocols

To collect verbal protocols using the think-aloud procedure, a researcher records on a tape-recorder all events that occurred during the session. The researcher then transcribes the content of the tape and segments all the protocols or a chosen subset of protocols. The boundaries of a unit of segmentation can be based on syntactic features (syntax; words; sentence connectors), structural features (pauses; turn taking; changing activities) or semantic features. As a general rule, the coarser the segment content, the less information the data yield. Each segment is then analysed for coding categories following a theoretical framework selected by the researcher. The data are presented in a variety of formats such as taxonomies, semantic networks, or argument chains (Voss, Tyler, & Yebgo, 1983). It is important to note that the framework selected determines coding categories. These protocols and categorisations are then subject to assessment by two (at least) independent assessors to establish inter-rater reliability.

A great diversity in modes and procedures exists among studies that use think-aloud methods. These variations lead to procedural deviations which influence the sequence of students' thought processes (Ericsson & Simon, 1980, 1993). Some concerns voiced by researchers relating to the use of think-aloud methods include: 1) effects of overt verbalisation on the main task; 2) completeness of verbal reports; and 3) consistency of verbal
reports with other empirical data on behaviour. The present study employs concurrent verbalisation only and hence the final point will not be addressed in this study.

**Effects of Overt Verbalisation on the Main Task**

To collect verbal protocols, a researcher assigns his/her students various tasks under particular instructions or procedures. The students are required to perform at least two tasks: the main task (here, listening in L2) and the reporting task. When people are engaged in a certain task under normal situations, they are not required to make overt verbalisation their thoughts about their mental processing. Therefore, this additional verbalising task raises questions as to the validity of using verbal reports because of the possibility that they might impact upon a naturally occurring process. Points of clarification here include: 1) what type of instructions and probes should be given to learners; and 2) the nature of the task to be performed by the learners.

Learners receive instructions/training before, during, or after the experiment. They can be general or specific depending on the purpose of the investigation. General instruction is considered to affect the learners' thought processes to a lesser extent than specific instruction. For example, an initial instruction indicating that questions will be given at the end is recognised for its potential to distort results because of the possible induced effects on task performance. Such instruction encourages the learners to speculate on and theorise their thoughts.

When learners become silent during the task, researchers may use various probes to stimulate their verbalisation (Block, 1986; Cohen & Hosenfeld, 1981; O'Malley et al., 1989; Vann & Abraham, 1990). The common types of verbal probes used by researchers are “keep talking” or “tell me what
you are thinking” or “tell me how you did it”. Some probes such as the second and the third should be avoided as they encourage the students to engage in social interaction or force them to undertake intermediate inferential processes before verbalisation.\footnote{Hosenfeld (1984) discusses the sensitivity of probing and emphasises the importance of indirect questioning to avoid direct influence on students’ thought processes.} Any probing can be considered intrusive and should be kept to a minimum since the students must focus on completing a given task and any instruction to think aloud must be considered secondary. Ericsson and Simon (1993) recommend that timed probing be given if silence continues for more than ten to fifteen seconds in order to minimise the risk of disruption.

Likewise, the students’ reporting of their thoughts may have some effect on their performance of the main task. Studies that deal with this form of investigation usually compare task performance time of a verbalising (think aloud) group against a control (silent) group. Horiba (1990) formally investigated the possible effects of using the think-aloud method in her reading study and found that in this group comparison, the difference between those who read with the think-aloud method and those who did not was marginal. She concluded that the think-aloud task neither distracted from, nor impeded the comprehension of the narrative passages by both L1 and L2 readers.

Another issue relating to the use of verbal protocol as data relates to the type of task assigned to learners. Characteristics of the task performed may interfere with reporting and can influence the nature of the data (Afflerbach & Johnston, 1984). Ericsson and Simon (1980) distinguish three levels of verbalisation based mainly on recording processes from original input sources:
Level 1: when information is reproduced in the form in which it was acquired from a central processor without any intermediate processes.

Level 2: when the internal representation in which the information is originally encoded is not in verbal code but has to be translated into that form, though it does not require interpretive processes.

Level 3: when a subject is asked for verbalisation of only a selected type of attended content and explanation of thought processes which require additional interpretive processes.

Level 1 and Level 2 verbalisations involve verbalising thought per se, while Level 3 involves verbalisation of specific information such as reasons and explanations. Think-aloud protocols of reading or writing processes, for example, consist of Level 2 verbalisation since the learners are not required to explain their thoughts, although it involves intermediate processes. Therefore, Ericsson and Simon predict that the level 1 and level 2 verbalisations do not change the course and the structure but they may decrease the speed of performing a task. The task of summarising, on the other hand, (Level 3 verbalisation) imposes considerable cognitive demand on STM when compared to reading a simple coherent text. By the same token, to process well adapted written text that is compatible with readers' existing knowledge may demand less cognitive capacity than processing a text dealing with content that is unfamiliar to the readers. Since verbalising one's thought processes requires the accessing of previously tacit knowledge, processing difficult text (or verbalisation of reasons, justifications, and elaborations) requires learners to make extra efforts because of the additional processing involved. This additional process involved in Level 3 verbalisation
changes their cognitive processes, which results in the alteration of overall performance.

The classification proposed by Ericsson and Simon is based on L1. As such, it does not accommodate the more complex nature of encoding processes involved in L2 learning. Their level 1 classification suggests that when information from input is in verbal code, it does not require an intermediate process. Beginner-level L2 learners, whether they read or listen, often translate text information into their L1 before constructing a mental representation of text. The learners' use of translating strategy was verified empirically by the studies reviewed in Chapter 2. More advanced-level L2 learners may adopt different processing strategies.

The translating process from L2 input in verbal form into L1 by the L2 learners, requires more than a single set of intermediate processes as stipulated in Ericsson and Simon's model. Moreover, such processes would decrease the speed of task performance since they require additional intermediate processes (encoding L2 input followed by translating into their L1 before comprehension takes place). Thus, caution is needed in interpreting data if one adopts the L1 model of verbalisation level to analyse L2 protocol data. Moreover, empirical evidence is needed to develop a L2-specific classification particularly for learners whose L1 involves an ideographic writing system.56

Text comprehension involves rapid processing from one segment (or sentence) of the text to the next. To slow down the rapid process, researchers deliberately create breaks in the text (for example, at sentence level) and provide pauses at predetermined positions so that current

56 See Sayeg (1996) for strategies used by learners of Japanese language to encode kanji or Chinese characters.
information stored in the STM can be verbalised. To signal a pause interval to students, a dot may be placed at the end of the sentence or a sentence presented on separate cards (Block, 1992; Davis & Bistodeau, 1993; Horiba, 1990; Marr, 1983; Olshavsky, 1976/77; Olson et al., 1984; O'Malley et al., 1989).

The aim of these studies referred to here is to compare particular sentences (or structures) identified from the texts with those identified from readers' recall protocols. However, the research in the present study (Study 1) is not concerned with these aspects of text comprehension. Rather it focuses on what learners do to aid their comprehension of texts and hence adopts a whole-text comprehension approach. Therefore, no specific instruction or probe was given to the students.

**Completeness of Verbal Reports**

The second major issue relating to the validity of verbal protocols is whether the protocols reflect a complete record of learning processes. Many verbal report procedures rely directly on learners' ability to process sensory information selectively. A criticism put by Nisbett and Wilson (1977) questions learners' ability for introspection. The argument of these researchers was based on their analysis of a number of empirical research projects in insufficient-justification studies and attribution studies, including the findings from their own studies which focused on people's ability to introspect. They claimed that any introspective reports are not generally reliable since they are based on a priori causal theories that consider the existence of causal connection between stimulus and response, and participants have no direct access to higher-order mental processes such as those involved in evaluation, judgement, problem solving, and initiation of behaviour. Since participants have little ability to introspect on their cognitive process, they cannot be at all aware of the fact that such
a process has occurred (p.236). Nisbett and Wilson strongly reject the traditional assumption about the conscious, verifiable nature of cognitive process that was adopted in Ericsson and Simon's model (1980).

Ericsson and Simon dismissed the claims made by Nisbett and Wilson on the grounds that the data presented were not sufficient to draw valid conclusions and, in addition, these studies had methodological problems (for example, use of inadequate procedures). Smith and Miller (1978) investigated the conditions under which people report their processes and concluded that people in fact do have access to some higher level of mental processes for verbalisation and dismissed the arguments presented by Nisbett and Wilson on the grounds that the statistical measures used by these researchers in their analysis of the data were inappropriate and overstated.

Verbal protocols which follow the information-processing model produce at least a subset of the thoughts heeded while completing a task and they do not seek to describe the details of the information or the reasons why particular information is heeded. Consequently, verbal protocols contain disjointed sequences lacking in coherent interpretation. They display only those strategies of which learners are aware (Ericsson & Simon, 1980:235).

As described in 2.3.3 in Chapter 2, when people perform the same task many times, the processes involved become highly automated (McLeod & McLaughlin, 1986; Schneider & Shiffrin, 1977) and they no longer enter STM. Since these processes are performed so quickly, people are not aware of their existence and they are therefore not available for introspection.

The notion of consciousness and unconsciousness is also controversial in the field of L2 acquisition (McLaughlin, 1990). O'Malley et al.
(1989:424) sustain their position clearly in the debate on the dichotomy between conscious and unconscious learning by stating that “a cognitive theory based on memory organisation, schemata, and spreading activation, avoids an imposed dichotomy on conscious and unconscious mental processing”. From the perspective of the present study, this issue is not a concern since strategies recorded in listeners’ protocols are those that students are aware of, and hence they are ‘teachable’.

Ericsson and Simon (1984:236) summarised the three instances where people fail to report: 1) if the information is not heeded, hence not stored in the STM, and not accessible for verbalisation; 2) if not all the information which is available in the STM at the time of the reporting is actually reported; and 3) when not all information that was previously available in the STM has been retained in the LTM, or is retrievable from the LTM. Generally, poor protocol data are often the result of poor methods of reporting.

Despite these caveats, the think-aloud method has been used not only in reading and composition studies but also has been extended to the areas of listening and translation studies. Students involved in some of the L1 reading studies (Meyer et al., 1989; Winser, 1988) were as young as seven years old. Currently, the think-aloud method is considered the most powerful data collection procedure currently available which can provide direct evidence of processes that are otherwise unobservable (Cohen, 1984,1990).

Poulisse, Bongaerts, & Kellerman, (1987:217) provided valuable summary information on collecting verbal protocol: 1) the data should be collected immediately after task performance when students’ memories are still fresh; 2) students should be provided with contextual information to
activate their memories; 3) all information asked must be directly retrievable (it must have been heeded during task performance) so that students are not induced to generate responses based on inferences and generalisation; 4) for the same reason, information that is sought should relate to a specific problem or a specific situation; 5) no leading questions should be asked, in order to minimise the effects of 'researcher bias'; and 6) students should not be informed that they will be asked for comments until after performance of the task so as not to affect their performance of the task.

The procedural guidelines recommended by Poulisse et al. (1987) and Chi (1992) were followed: neither specific instructions nor probes were given to the students to minimise the danger of induced effects on their comprehension process. In authentic listening situations, learners monitor and control their comprehension process. Therefore the students of this study had full control of designating when and where to stop and the amount of verbalisation. This participant-centred approach was thought appropriate and less intrusive when compared with other methods where a researcher pre-sets tasks. The only instruction given to the students was an initial request that they verbalise all thoughts that came to their consciousness level, and information on the type of texts (news texts and drama texts) and availability of visual information. They were also informed that the investigator was not concerned at all with their comprehension ability.

Levels of verbalisation involved in this experiment are level 1 and level 2 as the original information is in verbal and visual codes. The classification by Ericsson and Simon predicts that if information is presented in verbal and visual codes, verbalisation should be more difficult and take more time than information presented in verbal code or visual code alone. This
is because the former situation requires an additional encoding process. That is, visual information must be transformed into verbal form.

3.1.2 Participants in the Main Study

Fourteen students were invited to participate in the main study from both L1 and L2 groups. Both members of the L1 group who participated in the pilot study (two female university students of 21 and 22 years) agreed to participate in the main study. The L2 group consisted of twelve monolingual Australian-English speaking university students (non-indigenous Australians)\(^{57}\) - six males and six females - who were enrolled in the third-year level Japanese language subject.\(^{58}\) This group was further divided into two subgroups: students who were above average ability (n=6) and those who were below average (n=6) according to the listening test scores on The 1994 Japan Foundation Japanese Language Proficiency Test (see 3.1.2.1 in this chapter). Most students were majoring in Asian studies courses, except one whose major was Law with Japanese language. All students from the L2 group had successfully completed the first and second-year Japanese language subjects. Their age ranged from 20 to 39. No students had learning, visual, speech or hearing disabilities.

All members of the above-average proficiency (AAP) group had spent some time in Japan after completing the second-year Japanese language subjects. Their periods of stay varied from four weeks to eleven months. Two students from the below-average proficiency (BAP) group had never been to Japan, although one of them had studied junior-level Japanese language at high school for three years (from Year 8 to Year 10). The

\(^{57}\) This term is defined as the language of those speakers who were born and bred in Australia or who migrated to Australia in early childhood (Dabke, 1976:9). In this definition, Aboriginal languages are included but speakers of those languages were excluded in this study to minimise the cultural effects on comprehension.

\(^{58}\) The composition of L2 students in this study was kept relatively homogeneous in terms
profiles of the L1 and the L2 students who were identified by pseudonyms are shown in Tables 3-1, 3-2, and 3-3. At the time of the experiment, the classroom was the major source of target language input for all L2 students.

Table 3-1: Profile of L1 Group

<table>
<thead>
<tr>
<th>L1 group</th>
<th>Gender</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yasuko</td>
<td>F</td>
<td>21</td>
</tr>
<tr>
<td>Yoko</td>
<td>F</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 3-2: Profile of L2 Above-Average Proficiency (AAP) Group

<table>
<thead>
<tr>
<th>AAP group</th>
<th>Gender</th>
<th>Age</th>
<th>Test score*</th>
<th>Duration of stay in Japan</th>
<th>Previous study at high school</th>
</tr>
</thead>
<tbody>
<tr>
<td>David</td>
<td>M</td>
<td>22</td>
<td>26</td>
<td>8.5 months</td>
<td>Nil</td>
</tr>
<tr>
<td>Breanna</td>
<td>F</td>
<td>21</td>
<td>24</td>
<td>11 months</td>
<td>Nil</td>
</tr>
<tr>
<td>Gary</td>
<td>M</td>
<td>26</td>
<td>21</td>
<td>7 months</td>
<td>Nil</td>
</tr>
<tr>
<td>Jenny</td>
<td>F</td>
<td>21</td>
<td>21</td>
<td>4 weeks</td>
<td>Nil</td>
</tr>
<tr>
<td>Tony</td>
<td>M</td>
<td>20</td>
<td>20</td>
<td>4 weeks</td>
<td>Nil</td>
</tr>
<tr>
<td>Belinda</td>
<td>F</td>
<td>22</td>
<td>20</td>
<td>6 weeks</td>
<td>Nil</td>
</tr>
</tbody>
</table>

* Maximum score possible = 28.

Table 3-3: Profile of L2 Below-Average Proficiency (BAP) Group

<table>
<thead>
<tr>
<th>BAP group</th>
<th>Gender</th>
<th>Age</th>
<th>Test score*</th>
<th>Duration of stay in Japan</th>
<th>Previous study at high school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill</td>
<td>M</td>
<td>35</td>
<td>16</td>
<td>10 months</td>
<td>Nil</td>
</tr>
<tr>
<td>Bret</td>
<td>M</td>
<td>23</td>
<td>14</td>
<td>4 weeks</td>
<td>Nil</td>
</tr>
<tr>
<td>Sharon</td>
<td>F</td>
<td>21</td>
<td>14</td>
<td>6 weeks</td>
<td>Nil</td>
</tr>
<tr>
<td>Laticha</td>
<td>F</td>
<td>20</td>
<td>13</td>
<td>0</td>
<td>3 years at junior level</td>
</tr>
<tr>
<td>Alicia</td>
<td>F</td>
<td>20</td>
<td>13</td>
<td>5 weeks</td>
<td>Nil</td>
</tr>
<tr>
<td>Mick</td>
<td>M</td>
<td>39</td>
<td>12</td>
<td>0</td>
<td>Nil</td>
</tr>
</tbody>
</table>

* Maximum score possible = 28.

When the standardised test was administered, the total class contact time over the two years of language study at the university was 276 hours (120 hours during the first year and 156 hours during the second year). The investigator had not previously taught the L2 group. To operationalise the students' proficiency levels and to fine-tune the differences between the AAP and BAP groups, an internationally standardised listening test, The 1994 Japan Foundation Japanese Language Proficiency Test for Level 3 was used.59

of their linguistic, cultural, and educational backgrounds.

59 The pilot study and the main study used The 1994 Japan Foundation Japanese Language Proficiency Test. This was because The 1995 Japan Foundation Japanese Language

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3.1.2.1 Procedure for Selecting Participants

The 1994 Japan Foundation Japanese Language Proficiency Test was devised by the Japan Foundation and the Association of International Education in Japan. The test has been administered both in Japan and abroad since 1984 in response to requests from the rapidly increasing number of people overseas studying Japanese language to establish a system through which their proficiency can be certified. To the investigator's knowledge, this was the only available test battery at the time the study was conducted.

The 1994 Japan Foundation Japanese Language Proficiency Test has four different proficiency levels (Levels 1, 2, 3, and 4) consisting of three sections: writing-vocabulary (100 points); listening (100 points); and reading-grammar (200 points). The passing test scores were about 70 per cent or higher for Level 1, and about 60 per cent or higher for Levels 2, 3, and 4. Marking criteria for each question and level are pre-determined each year by the Japan Foundation and the Association of International Education in Japan. For this study, only the listening section of the test was used.

The listening test contains 28 multiple-choice questions (the total score for the test was 28) with three different sections. Question 1 contains 10 questions and the listener must identify a picture (out of four alternatives) which corresponds to an aural description. Question 2 and Question 3 contain nine questions each without pictures. To answer these questions, one taking the test must listen to the description on a tape and select an appropriate answer (out of four alternatives) which corresponds to the

Proficiency Test was not available at the time when the pilot study (for L1 group) was conducted in September 1995. The test became available in December, 1995.
description. Thus Questions 2 and 3 are cognitively more demanding tasks than Question 1.

Twelve L2 students were identified for the study from the test scores. Table 3-4 shows the results of The 1994 Japan Foundation Listening Test scores achieved by the L2 students.

Table 3-4: Test Scores of The 1994 Japan Foundation Japanese Language Proficiency Test

<table>
<thead>
<tr>
<th>Student name</th>
<th>Question 1 (out of 10)</th>
<th>Question 2 (out of 9)</th>
<th>Question 3 (out of 9)</th>
<th>Total (out of 28)</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>David</td>
<td>10</td>
<td>8</td>
<td>8</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>Breanna</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>Gary</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>Jenny</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>Tony</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>Belinda</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>Bill</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>Sharon</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>Bret</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>Laticha</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>13</td>
<td>46%</td>
</tr>
<tr>
<td>Alicia</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>13</td>
<td>46%</td>
</tr>
<tr>
<td>Mick</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>12</td>
<td>43%</td>
</tr>
</tbody>
</table>

N.B. Average test score: 763/12=64%

The AAP group obtained above-average (71 per cent to 93 per cent) and the BAP group below-average (43 per cent to 57 per cent) scores on the test. The average score of twelve L2 students was 64 per cent. Several students obtained below 42 per cent range scores. These students were not included in the experiment because of their limited linguistic ability and because their scores could have been obtained by chance. Research findings from reading studies indicate that to comprehend a text, top-down and bottom-up processes operate as complementary processes. This occurs only when a learner reaches the level where processes involved in decoding a word require minimum effort. Therefore, it was necessary for students to be able to comprehend texts with some proficiency.
The 1994 Japan Foundation Test was administered at the university (First university) in the second week of semester one in March in 1996 (n=59). The test was also administered to intermediate-level students of Japanese language attending two other universities: one in Brisbane (Second university; n=30) and one in Tasmania (Third university; n=40). These students shared similar language backgrounds with those tested at the university. All three universities conducted the tests on their students at the same time in 1996. The purpose of conducting this test at other universities was to identify whether the language proficiency level of the intermediate-level students in this study was similar across other Australian universities in order to determine the generalisability of the listening strategy intervention program (Study 2). For the purpose of this study, students who had been to Japan for more than one year, those who had prior learning experience at high school, and those who were not native speakers of Australian English were excluded from the analysis to minimise confounding variables. The test results of the three universities are shown in Tables 3-5, 3-6, and 3-7.

Table 3-5: Test Scores - First University (under Investigation)

<table>
<thead>
<tr>
<th>Student</th>
<th>Score</th>
<th>Percentage correct</th>
<th>Student</th>
<th>Score</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>43%</td>
<td>16</td>
<td>9</td>
<td>32%</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>43%</td>
<td>17</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>43%</td>
<td>18</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>71%</td>
<td>19</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>50%</td>
<td>20</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>39%</td>
<td>21</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>54%</td>
<td>22</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>8</td>
<td>13</td>
<td>46%</td>
<td>23</td>
<td>9</td>
<td>32%</td>
</tr>
<tr>
<td>9</td>
<td>14</td>
<td>50%</td>
<td>24</td>
<td>15</td>
<td>54%</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>32%</td>
<td>25</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>11</td>
<td>15</td>
<td>54%</td>
<td>26</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td>39%</td>
<td>27</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>71%</td>
<td>28</td>
<td>21</td>
<td>75%</td>
</tr>
</tbody>
</table>

The other two universities do not offer a separate Japanese language subject for those who have prior Japanese as L2 learning experience. Those who have no prior exposure and those who have studied Japanese language at high school are placed in the beginner-level Japanese language subject.
N.B. Average test score: 1461/29=50%

<table>
<thead>
<tr>
<th>Student</th>
<th>Score</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17</td>
<td>61%</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>64%</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>*8</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>*9</td>
<td>23</td>
<td>82%</td>
</tr>
<tr>
<td>*10</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>*11</td>
<td>28</td>
<td>100%</td>
</tr>
<tr>
<td>*12</td>
<td>28</td>
<td>100%</td>
</tr>
<tr>
<td>*13</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>*14</td>
<td>22</td>
<td>79%</td>
</tr>
<tr>
<td>*15</td>
<td>25</td>
<td>89%</td>
</tr>
</tbody>
</table>

N.B. Average test score: 1496/21=71%

* Students with an asterisk were not included in the analysis. They have been to Japan for more than one year.

Table 3-6: Test Scores - Second University

<table>
<thead>
<tr>
<th>Student</th>
<th>Score</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17</td>
<td>61%</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>64%</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>*8</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>*9</td>
<td>23</td>
<td>82%</td>
</tr>
<tr>
<td>*10</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>*11</td>
<td>28</td>
<td>100%</td>
</tr>
<tr>
<td>*12</td>
<td>28</td>
<td>100%</td>
</tr>
<tr>
<td>*13</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>*14</td>
<td>22</td>
<td>79%</td>
</tr>
<tr>
<td>*15</td>
<td>25</td>
<td>89%</td>
</tr>
</tbody>
</table>

N.B. Average test score: 1496/21=71%

* Students with an asterisk were not included in the analysis. They have been to Japan for more than one year.

Table 3-7: Test Scores - Third University

<table>
<thead>
<tr>
<th>Student</th>
<th>Score</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11</td>
<td>39%</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>54%</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td>68%</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td>79%</td>
</tr>
<tr>
<td>6</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>61%</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>43%</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>10</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>11</td>
<td>19</td>
<td>68%</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>43%</td>
</tr>
<tr>
<td>*13</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>*14</td>
<td>23</td>
<td>82%</td>
</tr>
<tr>
<td>*15</td>
<td>21</td>
<td>75%</td>
</tr>
<tr>
<td>*16</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>*17</td>
<td>12</td>
<td>43%</td>
</tr>
<tr>
<td>*18</td>
<td>18</td>
<td>64%</td>
</tr>
<tr>
<td>*19</td>
<td>23</td>
<td>82%</td>
</tr>
<tr>
<td>*20</td>
<td>18</td>
<td>64%</td>
</tr>
</tbody>
</table>

N.B. Average test score: 1570/27=58%

* Students with an asterisk were not included in the analysis. They have been to Japan for more than one year.
These tables indicate the average test scores obtained by students of the university under study was 50 per cent (Table 3-5) while those by students of the second and third universities were 71 per cent (Table 3-6) and 58 per cent respectively (Table 3-7). Thus the students of the second university performed exceedingly well.

Community perception of these universities is that the second university is more academically oriented while the first and third universities are more community oriented. This perception is generally reflected in the minimum entrance scores required by these institutions: the second university requires the highest score of the three. On this basis, the investigator of this study predicted that the students from the second university would obtain significantly higher scores than those from the other two universities. The scores obtained by the students from the other two universities are, however, comparable.

The investigator approached the prospective candidates identified by the results of The 1994 Japan Foundation Japanese Language Proficiency Test with an invitation to participate in the main study. An information handout (Appendix 3-A) with details of this study were distributed to these candidates. All agreed to participate in the study and verified the transcriptions of their verbal protocols at the end of the testing session (see 3.1.4.2 in this chapter).

3.1.3 Authentic Test Materials

Since the emergence of Communicative Language Teaching (CLT)\(^6\) in the early 1970s, the basic aim of language teaching has shifted from

\(^6\) The relative emphasis in classroom interaction toward meaning-based or form-based orientation is measured by the Communicative Oriented Language Teaching (COLT) Observation Scheme (Allen, Fröhlich, & Spada, 1984). However, the scheme has been criticised for its lack of definition.
promoting knowledge of the target language system to promoting communicative competence.\(^6^2\) This shift has stimulated the interest of L2 educators to include authentic materials in their classroom.\(^6^3\) Since the ultimate goal of L2 instruction is to prepare learners to interact with native speakers of the target language, many educators agree that the use of authentic materials in the classroom promotes communicative competence more than the use of traditional materials that have been specifically prepared for L2 classrooms (Bacon, 1989, 1992b; Long, 1989, 1990; Rubin, 1995; Thompson, 1995). Rivers (1981:168), for example, recommended the use of authentic materials and suggested that “All materials used for listening comprehension, even in the earliest lessons, should be authentic”. Bacon (1989:545) endorsed Rivers’ view and advised language educators that “In order to prepare students for listening in the real world, the teacher must provide students with language that is intelligible, informative, truthful, relevant, and sociolinguistically appropriate”. Such materials enrich not only the cultural aspect of the target language but also reflect real language use. More importantly, Swaffar (1988) argued convincingly that the use of authentic texts helps alter students' traditional views on comprehension (comprehension is a function of understanding every word) to that of developing strategies for selecting and identifying multiple verbal and non-verbal cues. Use of authentic materials from multimedia sources, in particular, has become very common in proficiency-oriented L2 classrooms (Bacon, 1992a, 1992b; Hennessey, 1995; Herron & Seay, 1991; Rose, 1995; Rubin, 1995).\(^6^4\)

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\(^6^2\) Other aims include self-expression, verbal thinking, problem solving, and creative writing (Canale & Swain, 1988).

\(^6^3\) Authentic materials are those created by, and for, native speakers of the language in which the materials are produced.

\(^6^4\) Ur (1984), on the other hand, argues non-graded authentic listening texts cause listeners undue frustration. Such materials should be reserved for listeners at an advanced level.
Comprehending multimedia texts usually involves not only using the ears (comprehension of linguistic aspects of text) but also using the eyes in order to register non-acoustic visual features of a text such as facial expressions, body movements, the setting of the action and so forth (Feyton, 1991; Rubin, 1995). Visual information plays an important role in facilitating L2 learners’ text comprehension. However, it is vital to consider that test materials for investigating strategy use under audiovisual contexts must measure learners’ listening abilities, and visual information should not obviate the need for listening (Thompson, 1995).

The pilot study used four different texts: two from Japanese satellite television programs (Text 1 and Text 2) and two from commercially available video sources (Text 3 and Text 4). The latter two texts were less authentic than the first two. Text 1 and Text 2 were used again in the main study. The less-authentic texts (Text 3 and Text 4) were, however, judged as inadequate for two reasons. First, one of the texts lasted for more than five minutes. As a result, some students demonstrated boredom or ‘fatigue effects’ during the data collection. This factor influenced the data significantly. Second, to investigate the effects of different text genres on the listening comprehension process, controlling text type and length of texts from the same source was considered to be more appropriate than using text from different sources. On this ground, Text 3 and Text 4 were replaced by two other different texts (Text 5 and Text 6). The investigator produced Text 5 by shortening the pause interval of one satellite news text to a minimum level to retain its authenticity. Its visual mode was kept in the original form. One Japanese language staff member who was trained as a radio announcer read the text. She read it carefully by matching her speech delivery with visual information. Text 6 was a dialogue segment taken from

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64 Thompson (1995) recommends the use of oral passages of two to three minutes for L2 learners.
the satellite program. All four texts were selected from the Television Oceania satellite program which was broadcast directly from Japan to the Oceania region. The university language laboratory staff had been taping the program daily for L2 classroom use.

These four test texts consisted of a set of monologues and dialogues. The two monologue texts were news broadcasts (Text 1 and Text 5) and the two dialogue texts were conversation segments taken from a popular family-drama series (Text 2 and Text 6).

The choice of information source was based on the structural organisation or genre criteria proposed by Beile (1980) which favours a combination of tightly structured texts (such as news broadcasts) and loosely structured texts (such as television dramas). For the purpose of this study, the author extrapolated from available literature the major genres in listening and their characteristic features. These are detailed in Table 3-8.

Table 3-8: Classification of Genres and their Characteristic Features

<table>
<thead>
<tr>
<th>Genre</th>
<th>Acoustic feature</th>
<th>Syntactic feature</th>
<th>Formality feature</th>
<th>Paralinguistic feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily conversation/chat</td>
<td>5 (highest in variation)</td>
<td>5 (highest in variation)</td>
<td>5 (least formal)</td>
<td>5 (most abundant)</td>
</tr>
<tr>
<td>Semi-formal discussion/interview/ demonstration talk</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Formal debate/ workshop seminar</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Public lecture on specialised topic</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>News broadcast</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3-8 places drama and news broadcast at opposite ends of the genre continuum, with drama texts heavily contextualised, and news broadcasts context-reduced. The reading studies reviewed in Chapter 2 indicated that L2 learners’ knowledge of structural organisation as a general concept influences their comprehension. This study therefore takes up two genres
of satellite television programs as the information sources to examine variations in L2 listeners' responses to audiovisual listening contexts. The differences between these two genres in their content and discourse organisation enabled examination of the differences in listeners' strategies according to different genres of information.

Another important consideration in selecting text was that the content of text must be neutral in terms of learners' experience, but still be of interest to the learners. Such texts are expected to elicit more responses from students due to their enhanced level of motivation. There was however no intention to provide texts which were in parallel in focus. To avoid the intrusion of reading effects on the listening process, key terms (words and phrases) which were written in Japanese scripts (kanji and kana) were removed from the screen by reducing the screen length. The transcription and the English version of the test texts (Texts 1, 2, 5, and 6) are found in 4.1.2.2 in Chapter 4. The characteristics of the two text genres are described in the following section.

**News Broadcast (Text 1-Panda; Text 5-Siberian tiger)**

Text 1 contains 329 syllabic units\(^{66}\) and Text 5 contains 338 syllabic units. The former text was delivered at the rate of approximately 313 syllabic units per minute over one minute and three seconds, and the latter was delivered at the rate of approximately 290 syllabic units per minute over one minute and ten seconds. A professional Japanese female broadcaster who was trained in standard Japanese read both texts. Since these texts were taken from a news program, they contain features characteristic of news broadcasts. For instance, their delivery is well rehearsed and the

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\(^{66}\) The number of syllabic units indicated here is for the guidance of English-speaking readers only. The notion of 'syllable' is rarely used among Japanese linguists in describing
hesitation pauses common in spontaneous dialogues are absent. The speech contains formal registers (Sino-Japanese words or kango) which were not taught comprehensively to the students in this study since classroom teaching usually focuses on language for semi-formal settings because of its utility (the wider application of semi-formal language). Students can, however, infer the meaning of unknown words from the textual content.

The content of Text 1 concerns the recent death of a panda. After announcing the panda's death, the text adds detailed information (for example; how the panda came to Japan, how he died; how many offspring he produced). This information was available only in audio mode. Moreover, because of the formality level involved in news broadcasting, many of the words used in this text are kango - words that often convey abstract meanings (for example, mimei - early morning; tanjoo - birth; chiryoo - treatment). These circumstances make it difficult for students to comprehend auditory information. Text 5 was presented in audiovisual mode and its content concerns the threatened extinction of the Siberian tiger in China. This text explains the attempt by Chinese safari park zoo officials to train the tigers to catch their own prey in a less natural environment. Similar to Text 1, its register was specific to a news broadcast.

Drama (Text 2-Haru yo koi; Text 6-Kanamono ya)

Text 2 and Text 6 are segments of dialogue exchanges selected from two popular home drama series Haru yo koi and Kanamono ya. Text 2 contains 420 syllabic units and Text 6 contains 279 syllabic units. The former text was delivered at the rate of 349 syllabic units per minute over

standard Japanese today. Instead, they use 'mora' as the unit of length for languages such as Japanese (McCawley, 1968).
one minute and twelve seconds, and the latter was delivered at the rate of 274 syllabic units per minute over one minute.

The dialogue in Text 2 is an exchange between two female characters who spoke in standard Japanese. This drama deals with the life of a young Japanese female who encounters many hardships but is prepared to challenge them. The chosen text involves a young girl and her mother discussing the girl’s missing father. The girl’s father has objected to her entering university and has left the family home in anger. Despite her father’s response, the girl is keen to go to university and her mother is supportive. Meantime, the girl’s greatest concern is how to pay for her university tuition if her father did not come home. Her mother has no capacity to pay and failure to pay would result in automatic cancellation of her enrolment. Comprehension clues from this text derive mainly from paralinguistic sources such as performers’ facial and gestural cues, vocal cues including intonation range and hesitation pauses. Since the two females are mother and daughter, they spoke naturally using a contracted speech style which is characteristic of informal speech.

The dialogue in Text 6 is an exchange between two females and one male. This drama deals with the rural life of a young Japanese brother and sister who inherited a small hardware shop from their parents. With the creep of urbanisation, they have to face competition from a huge supermarket they have never seen before. Their aunt, who has visited a large supermarket in Tokyo, attempts to explain what a supermarket looks like. This text contains no visual clues but vocal cues are abundant in indicating these performers’ reaction to the event. It is important for the students to identify the relationships among the people involved from the aural source only.
These two dialogue texts involve dynamic natural speech. Therefore, word boundary is not so clear (due to assimilation, vowel reduction, syllable contraction etc.) when compared to the news broadcast texts. Students may experience difficulty in identifying citation forms, particularly if one is unable to segment a word. However, the dialogue texts, by comparison with the news broadcast texts, contain more redundant information and frequent pause intervals which are beneficial for L2 listeners at a low proficiency level (Chaudron, 1983; Chiang & Dunkel, 1992).

3.1.3.1 Order of Presenting Texts

These four texts were presented to the students under two different media conditions: viewing with sound and picture (the audiovisual conditions), and viewing or listening to sound without pictures or other visual supports (the audio-only conditions). The presentation order of the four texts was:

1. Text 1 - News (Panda) under audio-only conditions
2. Text 2 - Drama (Haru yo koi) under audiovisual conditions
3. Text 5 - News (Siberian tiger) under audiovisual conditions
4. Text 6 - Drama (Kanamono ya) under audio-only conditions

Sequencing the texts in a counter-balanced order allows the investigator to examine a wide range of effects which these two different media texts may have upon students’ listening comprehension. Research on listening comprehension in L1 indicates that the audio-only listening task demands of a listener a high degree of concentration, which contributes to higher-level processing, while the audiovisual task requires less cognitive load of the listener and hence involves surface processing (Pezdek, Kehrer, & Simon, 1984).

3.1.3.2 Listenability Level of Texts
To claim that a test text is adequate for identifying cognitive processes, it has been proposed that the threshold level for comprehension must be 60 per cent - 70 per cent or 'i+1' (Krashen, 1982; Pienemann, 1985), that is, slightly above the average students' current level. It was, however, not possible to select level-appropriate texts suitable for both groups for two key reasons. First was the variation in the students' listening abilities given that they were drawn from a normal classroom sample, and second was that the nature of this study required at least two groups to enable comparison of students' strategies according to their L2 proficiency.

Two native Japanese-speaking teachers at the university rated the listenability level\(^e\) of the chosen texts. The teachers ranked news broadcasts at 70 per cent and dramas at 80 per cent for the AAP group, and for the BAP group, at 60 per cent and 70 per cent respectively. They indicated that they thought the four texts were adequate for the purpose of the study.

Nevertheless, the investigator acknowledges a biasing difficulty in this assessment approach. This is because the 'think-aloud task' makes further processing demands on the participant than simply listening to the text. Consequently, listeners struggling to decode the input will have fewer cognitive/memory resources to report on their strategy use via think alouds. Thus, if test materials are pitched at the appropriate level of difficulty ('i+1') for the AAP group to report their strategy use, the demands of those same test materials may be too great to allow the BAP group to report their strategies as easily.

3.1.4 Procedures

\(^e\) See Brown (1995) who discusses the dimensions of difficulty in listening comprehension.
To facilitate each student's understanding of the think-aloud procedure, the investigator produced a demonstration video. This video contains a think-aloud session performed by an Australian female student who was well trained in the methodology. She verbalised her thoughts while listening to the texts under audiovisual conditions. The content of the demonstration video was translated into Japanese for conducting the training session for the L1 speakers in Japan.

All L2 students undertook three 30-minute group-training sessions to help them become familiar with the think-aloud procedures and two 30-minute testing sessions. The L1 and the L2 groups followed the same procedures. These sessions for the L2 group were conducted outside class hours in the Multimedia Language Laboratory at the university. The training and testing sessions for the L1 group were conducted in Japan, while those for the L2 group were in Australia. The language used for verbalisation was Japanese for the L1 group and Australian English for the L2 group. Details of the procedures during the training and testing sessions follow.

3.1.4.1 Training Sessions

The First Training Session

Prior to the L2 group training, a handout containing detailed information on the experiment was distributed to the students. The investigator explained the purpose and the procedures of the experiment to the students in English. She emphasised to them that they were to report what they were thinking (the content of their thoughts) but not to give reasons or explanations for their behaviour. Since this method was unknown to the students, it was necessary to provide them with some idea of what think-aloud data are like. The reading protocols for *Lentil* collected by Olsen *et al.* in their 1984 study and for the *fish* passage by Scardamalia and Bereiter in their 1984 study were typed out for the students with
recommendations made by Perkins (1986). These were distributed to each student for their reference. The students then received a brief session explaining how to operate the audiovisual equipment and they viewed the demonstration tape. They were told that the strategies used by the female student performing the think aloud on the videotape may differ from their own strategies and that they pay particular attention to the kind of comments she had produced. The students then listened to and watched the demonstration video. The demonstration videotape was played twice and some questions were clarified.

Immediately after viewing the video, some students made comments like "as soon as I heard a door-bell ringing, I visualised the entrance of the house I visited", "I put the words used together and guessed the meaning of the sentence" and "I think the content of the video that the screen performer is watching is about an exchange student". The students were very curious about think aloud and the session became lively as each individual expressed different reactions. At the end of the session, the students were reminded to be aware of their comprehension behaviour.

**The Second Training Session**

The students viewed the demonstration videotape again to ensure that they were comfortable with the procedure. They were given one tape with content and one blank tape for verbalisation. As the students listened to the tape, they made pauses in order to verbalise their thoughts and record them on the blank tape. They were allowed to take notes and stop the tape at any point for verbalisation. Although many students were initially sceptical about verbalising their thoughts, they seemed to enjoy mastering the procedure. Two students who had experienced difficulty in verbalising their thoughts were given extra time to practise the procedure with the investigator. At the end of the session, the students' recorded tapes were
collected. Those who wanted more practice were given another new blank tape so that they could practise at home using the same tape that was used in the session. They were advised before the next training session, to read the handouts again containing the sample protocols for Lentil and the fish passages which were distributed in the previous session. The students' tapes revealed that most students had become familiar with the think-aloud procedure with the exception of only two students. One student translated all Japanese utterances into L1 and the other produced only two externalised thoughts.

The Third Training Session
This session followed the same procedure as in the second training session. The students were given another tape with content and one blank tape for further practice. The students' tapes were collected at the end of the session for analysis. The tapes containing the students' verbalisation confirmed that all students except one managed to verbalise successfully. One student who had experienced difficulty in the second session decided not to participate in the study.

Collecting students' verbalised tapes enables the investigator to monitor the students' ability to verbalise and also to identify those who may have difficulties verbalising their thoughts and if so, to judge whether they should be excluded from the experiment. An audiovisual tape was not used during the practice sessions since the main purpose of training was to have the students master the think-aloud procedures.

3.1.4.2 Testing Sessions
The first testing session was conducted one week after the last training session. A one-week lapse was judged to be appropriate to minimise priming effects on the students' memory of the strategies they had used
during the training sessions. The second testing session was conducted one
week after the first testing. All L2 students attended the two sessions that
were conducted individually.

Before beginning the first testing, students were asked whether they were
familiar with the use of the equipment. All of them knew its operation
thoroughly. A remote control was placed on the desk so that students were
able to pause the tape at will. They were allowed to take notes if they so
wished, but no vocabulary list was provided. They were also told of the
type of texts they would listen to (news or drama), the testing conditions
(audiovisual conditions or audio-only conditions), and the exact length of
each text. They were advised to listen to the tape once only. Each student
then performed the think-aloud task and verbalised their thoughts in their
L1. In the session, the news text (Text 1) under the audio-only conditions
and the drama text (Text 2) under the audiovisual conditions were tested.
After the session ended, the students were questioned about whether they
had listened to these tapes before. All students confirmed that they had
never heard these tapes.

The second testing session followed the same procedure as in the first
testing session. However, the testing condition for the texts was reversed:
the news text (Text 5) under audiovisual conditions followed by the drama
text (Text 6) under audio-only conditions.

One of the language laboratory technicians performed all the recording
procedures involved in the testing. The visual output channel from the
television monitor was removed to create the audio-only conditions but it
was not removed for the audiovisual conditions. This arrangement was
effective in maintaining a high level of acoustic quality as well as making
text selections easily segmented with a minimum ‘lag’ after each pauseal
interval. The investigator sat silently at the corner of the room during the
two testing sessions until all students had completed the task. All testing
sessions and the interviews were video taped for later analysis. The
equipment used for recording these sessions included a Panasonic M45,
VHS camera and Panasonic AG1000 VHS player, a NEC N3453 TV, and
a Sony TCM818 tape recorder. The investigator transcribed the data and
the students verified their verbal data.

After the training and the testing sessions ended, the L2 students were
interviewed individually to collect their perceived level of text
comprehension. These will become additional information when read in
conjunction with the participants’ protocol data presented in 4.1.2.2 in
Chapter 4. Findings are shown in Tables 3-9 in on a scale of 1 per cent –
100 per cent.

<table>
<thead>
<tr>
<th>Table 3-9: Students’ Perceived Level of Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Bret</td>
</tr>
<tr>
<td>Mick</td>
</tr>
<tr>
<td>Bill</td>
</tr>
<tr>
<td>Laticha</td>
</tr>
<tr>
<td>Alicia</td>
</tr>
<tr>
<td>Sharon</td>
</tr>
<tr>
<td>Tony</td>
</tr>
<tr>
<td>Belinda</td>
</tr>
<tr>
<td>Gary</td>
</tr>
<tr>
<td>Jenny</td>
</tr>
<tr>
<td>David</td>
</tr>
<tr>
<td>Breanna</td>
</tr>
</tbody>
</table>

3.1.5 Development of a Strategy Classification Scheme

Spoken language is generally delivered one clause at a time (Chi, 1992;
Pawley, cited in Richards, 1983). It is appropriate therefore to consider a
basic unit of conversational discourse as a clause. With this assumption,
the students’ protocols from the pilot study were segmented according to
"intonation units" recommended by Chafe and Danielewicz (1987) and Thompson (1995).

The schemes developed by O'Malley and Chamot (1990), Bacon (1992b), and Murphy (1985) guided the establishment of a classification scheme. However, to encompass specific strategies used in audiovisual listening contexts, some modifications were necessary to the existing schemes. In this study, one of the three major categories, ‘social and affective strategies’ used by some listening (and reading) researchers was not included considering the nature of the listening situation investigated by this study (non-interactional listening). The strategy classification scheme followed criteria and guidelines that were established specifically for this study to differentiate strategy type and frequency count of strategy use.

To increase the reliability of the data across texts and students, two independent raters were given 10 per cent of the randomly selected students’ verbal protocols together with definitions and examples of each strategy. After each rater completed classifying data in the ten think-aloud protocols, their classifications were compared with those of the investigator and the percentage of inter-rater agreement was calculated. The rate of agreement across the two raters was 89.5 per cent.

3.1.5.1 Criteria for Differentiating Strategy Type

Due to discrepancies found among researchers in the area of L2 learning strategies in differentiating strategy type, this study established the following guidelines and criteria in determining strategy differentiation:

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68 It is a prosodic unit of spoken language. The majority of intonation units are clauses and it is limited in size due to the capacity of STM processing.
1. 'Identifying key terms' strategy refers to both words and phrases/sentences. When a student identifies a phrase only, it is included under 'identifying key terms' and it is not classified under 'translating'. This is because his/her responses are usually fragmented and do not indicate any connection between preceding and subsequent parts of the text information.

2. Strategy categories of 'visualising', 'transfer of acquired knowledge', and 'analysing language element' are not under 'elaborating'. O’Malley and Chamot (1990:138) classified 'imagery' ('visualising' in this study) under 'elaboration'. These three strategies indeed relate to a listener’s prior knowledge but they differ in terms of processing levels: 'visualising' and 'transfer of acquired knowledge' strategies do not require a high level of cognitive processing capacity and in most cases they come to a listener’s mind instantly. The 'analysing language element' on the other hand, is a more demanding strategy (though it is related to ‘bottom-up’ strategy) by which information is processed through an elaborated cognitive network system. For these reasons, the three strategies are given independent categories in their own right.

3. The distinction between 'translating' and 'summarising' strategies is that, in 'summarising' a listener uses his/her own words to express interpretation of text information, while 'translating' is a word-to-word equivalence of text in a verbatim manner.

4. 'World knowledge' and 'academically acquired knowledge' strategies may overlap with each other according to listeners' backgrounds. Some listeners' 'world knowledge' could be others' 'academically acquired knowledge'. To make the overlap minimal, the 'academically acquired knowledge' refers to specific knowledge acquired through tertiary-level educational settings.
5. 'Summarising' strategy often starts with a comment beginning with 'Basically they're saying ...'. Sometimes these comments are very short and consist of only one sentence. As a consequence, this strategy resembles the 'identifying key terms' strategy. The former strategy, however, contains a student's own words while the latter contains words extracted strictly from the text.

6. The distinction between 'inferencing word meaning' and 'analysing language element' strategies is that the former strategy results from association of text information while the latter involves activation of a student's prior linguistic knowledge stored in the LTM. In general the 'analysing language element' strategy contains more analytic comments than does the 'inferencing' strategy.

7. Such a comment as 'they seem to be pretty close' is categorised as 'inferencing' rather than 'responding/evaluating text information'. This is because this type of comment occurs as a result of synthesising a student's interpretation based on textual information alone, rather than bringing to bear her/his own schematic knowledge source.

8. Both 'self evaluating' and 'identifying problems that relate to the texts' are interrelated. The former strategy focuses on a student's specific skills that s/he perceives to be important in performing the listening task while the latter focuses on characteristic aspects of textual information itself which may influence a student's completion of a task. These two strategies appear to occur in sequence and are used in most cases when a student experiences comprehension problems. They may be causally related.

9. Chamot (1987:77) classified 'question for clarification' as a social and affective strategy requiring interaction with another person and it does not relate to direct operation on the learning task. Due to the nature of this study (non-interactive listening), the strategies 'responding to text information' and 'evaluating text information' were combined and classified as a cognitive strategy. 'Responding to text information' is indeed an automatic
response process but ‘evaluating text information’ requires a high level of cognitive operation.

10. The protocol data obtained from the pilot study contained such comments as ‘I’m skipping ...’ and ‘I listen to individual words’. These are categorised under ‘describing comprehension behaviour/strategies’ which is one of the metacognitive strategies. The students often control their behaviour and describe what they are doing or what they usually do in order to comprehend given texts. Cohen (1984)\(^6\) categorises these behaviours as ‘self-report’ or retrospective ‘self-observation’. Strictly speaking, verbal protocols collected through the concurrent think-aloud procedures should not contain such behaviours. However, as acknowledged by Cohen and others, it is very difficult to separate out these individual behaviours as these processes are interwoven. The investigator of this study considers these behaviours to be naturally occurring strategies as an extension of conscious mental process stored in STM. On these grounds, these behaviours are included as data.

3.1.5.2 Criteria for Counting Strategy Occurrences

In determining the frequency of strategy use within each category, this study adopts the following guidelines and criteria. In general, triggering factors are not counted as a strategy since they act only as a source of activating a specific schema.

1. When a student identifies a key term followed by ‘visualising’ without occurrence of a pause interval, this is counted as one ‘visualising’ strategy. In this case, a key term acts as a triggering force in activating the

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\(^6\) Cohen (1984:102) differentiates three basic categories of mental processes involved in language learning. They are: 1) ‘self-report’ which is a general statement on learning behaviour; 2) ‘self-observation’ which refers to the inspection of specific language behaviour; and 3) ‘self-revelation’ which consists of an unanalysed stream of conscious thought processes.
'visualising' strategy. By the same token, when a student identifies a key term followed by 'inferencing' without occurrence of a pause interval, this is counted as one 'inferencing' strategy. If there is a pause interval after identifying a key term followed by 'visualising' or 'inferencing', they are considered two separate strategies.

2. Similarly, 'analysing language element-genre' followed by 'elaborating' without occurrence of a pause interval is counted as 'elaborating' strategy. In this case, formal schematic knowledge is a triggering factor in activating 'elaborating' strategy (for example, 'News ... just as it would normally be the six o'clock news in Brisbane').

3. When 'visualising-script' and 'visualising-picture' are reported together without any pause interval, this is regarded as one strategy, 'visualising-script/picture'.

4. Some students often commented 'I really don't know what she's saying' at the beginning or at the end of an excerpt. This is not considered a specific strategy. These comments are regarded as an indication of habitual behaviour although they may serve the function of facilitating the processing of information.

5. Comments such as 'I'm looking for the information regarding that', 'I start thinking it's a wedding or something like that ... anything that falls in that age bracket' or 'So I'm ready for something associated with daily life' are categorised as 'selective attention' strategy since a student focuses in advance on a specific aspect of text information.

Tables 3-10, 3-11, and 3-12 list the categories identified from the protocol data of the pilot study. There are eleven 'cognitive' strategies, seven 'metacognitive' strategies and one 'other' strategy. These categories will be modified and validated according to the results of the main study to be presented in the next chapter. The definitions of the categories and their
example excerpts are shown in the list. These categories are indexed in the brackets.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying key terms (IKEY)</td>
<td>Listeners identify (either correctly or incorrectly) and select some of the familiar words or phrases/sentences that generate interpretation of the text. These terms are extracted from the text and are expressed either in Japanese or in listeners' L1. -word -phrase/sentence eg., ‘...talking about China...’; ‘umm...they said nijuu nana sai which is twenty seven...’</td>
</tr>
<tr>
<td>Translating (TRANSL)</td>
<td>Listeners translate a selection of text word-for-word or its equivalence in a relatively verbatim manner using their L1 to demonstrate their comprehension of the text. -word (+ or -) -phrase/sentence (+ or -) eg., ‘...when’s father coming back...’</td>
</tr>
<tr>
<td>Summarising (SUM)</td>
<td>Listeners mentally summarise or paraphrase their interpretation of the text using their own words to demonstrate their comprehension of the text. The interpretation may be based on the use of linguistic clues, paralinguistic clues, mixing of these two sources, or creative/unknown sources. -linguistic clues -paralinguistic clues -mixing of these two sources -creative/unknown sources eg., ‘Basically he’s saying...I think he wants her to be home before ten’</td>
</tr>
<tr>
<td>Transfer of knowledge (TKNOWL)</td>
<td>Listeners use already acquired knowledge to comprehend the text. The sources of this knowledge come from: -L1 (eg, loan word) -L2 (eg, use of similar sounding word) eg., ‘It sounded like supaa, like supermarket’; ‘She’s talking...there’s an English word rush-hour, Japanese rass/wawaa’</td>
</tr>
<tr>
<td>Analysing language elements (ALAN)</td>
<td>Listeners analyse conventions of language element which help them comprehend the text information -sound (suprasegmental features such as articulation; accent; intonation; tone) -language form (eg, particle; conjunction; adjective; verb form; tense; polarity) -level of speech (formal vs informal vernacular) -genre of text eg., ‘...it’s delivery as a statement...so definitely a fact, not a question...’</td>
</tr>
<tr>
<td>Elaborating (ELAB)</td>
<td>Listeners make comments by relating text information to their prior knowledge. -personal knowledge -world knowledge -academically acquired knowledge eg., ‘...it made me remember the part of the town I lived in...that did have that sort of thing all over the walls where you could just go along to see what’s happening’</td>
</tr>
</tbody>
</table>
### Visualising (VIS)

Listeners relate text information to prior knowledge by using mental imagery.
- picture
- scripts (kanji/kana)
- picture & scripts

*eg., when they said *konsaato*...umm...I visualised a large place with heaps of people and a stage*

### Inferencing (INF)

Listeners synthesise and/or fill in missing gaps by relating two or more ideas that are expressed in the text. The gap can be a word or a selection of the text they have heard.
- word meaning
- text meaning

The sources of inferencing are:
- linguistic features
- paralinguistic features (tone of voice; body movement; facial expression; setting; human relationship of the characters; background noise)
- mixing the two information sources
- creative/unknown sources

*eg., I caught 'university'...so obviously I think she would be a student*

### Anticipating (ANTC)

Listeners anticipate what may come in the following selection of text by bringing their imagination to bear on what they have heard. The sources of anticipation are similar to those used for inferencing, but they go beyond the textual information.
- schema triggered by linguistic features
- schema triggered by paralinguistic features (tone of voice; body movement; facial expression; setting; relationships between the characters; background noise)
- combining linguistic and paralinguistic information
- creative/unknown sources

*eg., so maybe she's gonna come in here with a line and disprove of this in some way*

### Responding/evaluating text information (R/E-INF)

Listeners make comments or respond to text information by adding their own ideas by questioning; characterising; making affective comments; making sensory related comments; or making critical assessments.
- questioning
- characterising
- affective comments
- sensory related comments
- critical assessments

*eg., 'This one looks particularly lifeless... you would probably pass her off as a mannequin in the window'; 'Shinto temple...you can feel it...smell incense...feel the uniqueness and respect etc.'*

### Describing scene (DESS)

Describing what listeners have seen and/or what they have heard from the input source (ie., visual; audio; visual and audio).
- visual source only
- audio source only
- visual and audio sources

*eg., you can see they're in some gallery looking at pictures*
Table 3-11: Listening Strategy Categories and their Definitions – Metacognitive Strategies

Metacognitive strategies are conscious strategies that relate to listeners' awareness of how to regulate, plan and monitor their cognition, and their ability to evaluate their comprehension.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying problems that relate to the texts (IDP-TXT)</td>
<td>Listeners identify aspects of the text that may hinder their success in completing the task.</td>
</tr>
<tr>
<td></td>
<td>- word recognition/meaning</td>
</tr>
<tr>
<td></td>
<td>- speed of delivery</td>
</tr>
<tr>
<td></td>
<td>- background sound</td>
</tr>
<tr>
<td></td>
<td>- manner of articulation (contracted natural speech; accent)</td>
</tr>
<tr>
<td></td>
<td>- mode of delivery (lack of visuals)</td>
</tr>
<tr>
<td></td>
<td>eg., 'the speech...speed...that she's speaking at...or that the woman's speaking at...is quite fast'; 'what she said becomes...kind of speech moves from...some more flowing kind of formal form to much more shotgun types of form... the words themselves are often reduced to no more than one syllable and then conjugated'</td>
</tr>
<tr>
<td>Self-evaluating: expressing confidence in terms of proficiency (SE-CONF)</td>
<td>Listeners gauge their progress and make positive comments on their performance to acknowledge their high level of comprehension. The comments may relate to a level of skills that may be required in completing the task.</td>
</tr>
<tr>
<td></td>
<td>- word recognition ability (loan words)</td>
</tr>
<tr>
<td></td>
<td>- variation in speech style (formal speech)</td>
</tr>
<tr>
<td></td>
<td>- variation in articulation (accent)</td>
</tr>
<tr>
<td></td>
<td>- overall performance</td>
</tr>
<tr>
<td></td>
<td>eg., 'I find her Japanese easy to understand...I can understand everything she's saying'</td>
</tr>
<tr>
<td>Self-evaluating: expressing lack of confidence in terms of proficiency (SE-LCONF)</td>
<td>Listeners gauge their progress and make negative comments on their performance to acknowledge their low level of comprehension. Comments may relate to level of skills required to complete the task.</td>
</tr>
<tr>
<td></td>
<td>- word recognition/meaning</td>
</tr>
<tr>
<td></td>
<td>- range of vocabulary</td>
</tr>
<tr>
<td></td>
<td>- variation in speech style (formal speech)</td>
</tr>
<tr>
<td></td>
<td>- variation in articulation (accent)</td>
</tr>
<tr>
<td></td>
<td>- processing/memory capacity</td>
</tr>
<tr>
<td></td>
<td>- attentional capacity</td>
</tr>
<tr>
<td></td>
<td>- overall performance</td>
</tr>
<tr>
<td></td>
<td>eg., 'I only understood... maybe every fourth and fifth word'; 'I don't pick up a lot of what they're saying'</td>
</tr>
<tr>
<td>Comprehension monitoring (COM)</td>
<td>Listeners monitor their progress by describing their decision-making processes through hypothesising, checking, revising, or confirming text information.</td>
</tr>
<tr>
<td></td>
<td>- checking</td>
</tr>
<tr>
<td></td>
<td>- hypothesising</td>
</tr>
<tr>
<td></td>
<td>- revising</td>
</tr>
<tr>
<td></td>
<td>- confirming</td>
</tr>
<tr>
<td></td>
<td>eg., 'At first when I heard that, I thought it was a door squeaking and then kept going umm...and then I thought...oh, I wonder what that could be and because they said doobutsuen at the beginning I'm assuming some kind of animal or a bear or something like that'</td>
</tr>
<tr>
<td>Selective attention (SELA)</td>
<td>Listeners in advance select or focus on specific aspects of text information (linguistic and non-linguistic) or situational information that help them in performing tasks.</td>
</tr>
<tr>
<td></td>
<td>- linguistic (unusual word)</td>
</tr>
<tr>
<td></td>
<td>- non-linguistic (mode of delivery; theme/topic)</td>
</tr>
<tr>
<td></td>
<td>eg., 'I'm just trying to switch my audio senses on'; 'I would say something like wedding. I start to think of wedding or something like that...buying a first home...anything that falls in that age bracket'</td>
</tr>
</tbody>
</table>
Self-management (SLFM)

Listeners demonstrate the conditions that help them successfully complete the task and arrange for the presence of those conditions, eg., 'I'd have to listen to it again'; '...so I've let that go for a reasonable period to...you know, in the hope of getting a few words, but I can't let it go too long...otherwise I'll just kind of lose it all together, get right off the track and not know at all what's going on'.

Describing comprehension behaviours/strategies (DCOMB)

Listeners introspect on their behaviour and state explicitly how they comprehend textual information. This includes current behaviour that they are following as well as habitual behaviour.
- meaning creation behaviour (associating words; associating visual and auditory information; filling gaps with imaginary information)
  eg., '...so only one or two words in a sentence and just see if their facial expressions and their tone of voice are fitting the story that I've built up.'
- focus of attentional aspects (visual or auditory mode; individual word or chunk of phrases/sentences)
  eg., 'I listen to individual words'; 'I'm listening a little more carefully for unusual words'
- general
  eg., 'When I'm trying to work out what they're saying I'm just having a total blank space and then I may hear a word I understand and other blank space...but because the blank spaces out-weigh the words I do understand...I'm not able to guess what they're talking about other than the fact that it's got something to do with Ueno zoo which probably to this point is the only thing I've understood'; '...so therefore I'm having to skip lots of words and just hope that I can pick up a word every now and then that's going to give me some indication of what they're talking about'; 'My mind was blank because I didn't understand the vocabulary that they're using...so my mind skipped over it'.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidental comments (IDTC)</td>
<td>Making meaningless comments that do not lead to comprehension of text information since they do not relate to either text information or a listener's prior knowledge. eg., 'I think that I don’t know...whether...I don’t know what they have'</td>
</tr>
</tbody>
</table>

3.2 Study 2 – Listening Strategy Intervention Program

The objectives of conducting Study 2 are twofold: 1) to administer the listening comprehension strategy intervention program; and 2) to evaluate the effectiveness of the program which was administered to adult learners of Japanese language.

The intervention program was held during the course of teaching the intermediate-level Japanese language subject offered at the university where the data for Study 1 (the main study) were collected. The students in the intervention group received six explicit and intensive training sessions at one-week intervals (in Weeks 2 to 6 in Semester 1 and Week 2...
in Semester 2). Five satellite videos (including one demonstration video) were used for the training sessions. The seven post-testing sessions were administered at two-week intervals after the last training session: three in Semester 1 and four in Semester 2 (see Table 4-9 for the schedule and Appendix 3-B for the test texts). Both training and testing sessions lasted for 40 to 50 minutes and the focus given to the training sessions 1 to 6 was shifted gradually from a teacher-centred to a student-centred orientation.

After the administration of the final post-test, all students in the intervention group (IG) and the non-intervention group (NIG) responded to the Listening Strategy Questionnaire (Appendix 3-D). The questionnaire consists of three parts: Part 1 relates to the students' evaluation of the relative difficulty level of the assessment texts and reported frequency of strategy use; Part 2 relates to the students' rank order of useful strategies included in the intervention; and Part 3 relates to general questions about listening in Japanese language. Parts 1 and 2 used a Likert-type scale, while Part 3 was open-ended.

When the IG was exposed to training, the NIG received no strategy intervention but followed the normal class activities that aim to foster the development of oral interaction skills (role-playing; interview; debate). These oral activities were assumed to have least influence on the overall result of the training program. The IG students were advised not to divulge to the NIG students the content of the intervention.

In a pre-test and post-test design, the performance of the IG who received the intervention treatment before the post-tests was compared with the performance of the NIG who did not receive the treatment. The period of Study 2 was 19 weeks, extending from early March to October in 1998.
3.2.1 Participants

Ten students who had not been to Japan and did not study Japanese language at high-school level were selected from students enrolled in the intermediate-level Japanese language subject in 1998. Although the total number of students enrolled in the subject was about forty, the majority were from Asian backgrounds. To minimise confounding effects on the comprehension process, only Australian English-speaking students were included in the study. They were adult learners ranging in age from 19 to 26. The assignment of students for the IG or NIG was made voluntarily by participating students in order to avoid timetable clashes with other subjects.

The IG consisted of five students (one male and four females) and their average age was 23 years. The NIG consisted of five students (one male and four females) and their average age was 22.6 years. The students’ base-line performance in listening was assessed by their test scores on *The 1996 Japan Foundation Japanese Language Proficiency Test* for Level 3 (the listening test only) administered in February 1998.

The listening test contains 26 multiple-choice questions (the total score possible for the test was 26) with two different sections. Question 1 contains 14 questions and the student must identify a picture (out of four alternatives) which corresponds to an aural description. Question 2 contains twelve questions without pictures. Thus Question 2 was considered to be a more cognitively demanding task than Question 1. The average test score obtained by the IG was 46.15 per cent and that by the NIG was 60.77 per cent. A profile of students who were identified by pseudonyms is given in Tables 3-13 and 3-14.
The students were exposed to formal Japanese language classes approximately for five hours per week and the intervention was conducted during one of the class hours. Each semester had fourteen teaching weeks and the total instruction time per year was 140 hours. The two Japanese language subjects (one subject in each semester) in which the students were enrolled were convened and taught by the investigator and two other female native speakers of Japanese who have been teaching at the institution for nearly six years. The investigator taught one one-hour session each week. She conducted strategy training for the IG and prepared all listening exercises for the two groups.

### 3.2.2 Strategies Included in the Intervention Program

Strategy training studies in L1 and L2 usually have selected strategies guided by theoretical analysis of the processes involved in the particular domain of the researchers’ interests (Grant, Elias, & Broerse, 1989; Palincsar & Brown, 1984; O’Malley, 1987; Thompson & Rubin 1996). Palincsar and Brown (1984), for example, introduced four types of comprehension activities for fostering and monitoring of seventh-grade
students with reading problems: summarising, questioning, clarifying, and predicting. This study incorporated the notions of 'expert scaffolding' and 'proleptic teaching' (Rogoff & Gardner, 1984; Wertsch & Stone 1979; Vygotsky 1978). The same procedures were adopted and duplicated in a L1 listening study conducted by Grant et al. (1989). The strategy categories used for strategy training by O'Malley (1987) in L2 learning activities were metacognitive, cognitive, and social and affective strategies which include vocabulary, listening and speaking. Thompson and Rubin (1996) provided a strategy instruction program for their L2 listeners. These researchers’ choice of strategies were four metacognitive strategies: planning; defining goals; monitoring; and evaluation), and five cognitive strategies: predicting content; listening to the known; listening for redundancies; listening to tone of voice and intonation; and resourcing. These strategies were based on a synthesis of findings from cognitive literature which were reported to be effective in text comprehension rather than investigating the effective strategies used by their own students.

The L1 and L2 reading and listening literature reports that learners use strategies in task-specific ways and their inability to use task-appropriate strategies is one of the key reasons for their poor academic progress. In general, some strategies may be effective only for specific tasks while others may be effective for modifying overall performance (Bialystock, 1978; Chamot, 1995; Wenden, 1983,1987). It follows then that strategy intervention in design must consider the characteristic use of strategies for a specific task domain.

Unlike many previous studies, this study adopts a two-stage procedure which first identifies an instructional package of task-effective strategies for the listening intervention (Study 1). Then, based on the findings of Study 1, Study 2 attempts to examine the effects of an intervention
program designed for learners of Japanese. The specific task performed by
the students of Study 1 and Study 2 was comprehension of authentic
television broadcasts in listening mode.

3.2.3 Authentic Test Materials
The literature review in Chapter 2 indicated that the genre of texts had
significant effect on the choice of readers’ strategies. News is considered
to be a genre of great relevance to students of Japanese because it has an
immediate utility value when these students visit Japan or watch television
broadcasts of Japanese news on ethnic-focused channels such as SBS in
Australia. Therefore, seven authentic news segments were selected as text
materials for the intervention program. The presentation time of these
videos averaged about two to three minutes following the recommendation
made by Thompson (1995). These videos were judged by the two other
Japanese language teachers at the university as appropriate for the
intermediate-level students of Japanese in terms of level of difficulty,
interest, and relevance criteria. These video segments were all selected
from Television Oceania satellite programs and used for the 1997 cohort
in their class. They are found in Appendix 3-C in CD format.

The structure of a news story typically consists of attribution, an abstract,
and the story proper (Bell, 1998). Attribution includes source of
information, place and time of the event. The abstract consists of a ‘lead’
or a headline, which is then followed by a story about one or more events.
The initial headline contains general information about the news and
provides listeners with the overall theme of text and the way in which each
thematic content is ordered (Bell, 1998; Fairclough, 1995; van Dijk,
1988b; Weissenrieder, 1987). The ‘events’ element covers the main events
of the story. The events are then followed by three additional categories -
background, commentary, and follow-up. Most of these categories appear
in Japanese news broadcasts and the specific discourse markers signal the beginning and/or the end of the each content within the categories (for example, markers indicating source of information - *ni yorimasu to*; event background marker - *kore wa*; event commentary marker - *kore ni tsuite*; event follow-up marker - *mata/ippoo*). An interview or discussion are often presented as a commentary or follow-up of the events (Kaneniwa & Kawamura, 1999). Therefore Japanese news broadcasts consist of a combination of two genres: news and conversation - the genres used for Study 1. This was also one of the reasons why the news broadcast program was chosen for Study 2.

The title of the news that appeared in Japanese written script on the screen was not removed to retain authenticity of the program since some key terms in the texts are usually encoded in the headline titles. On this basis, the readings and meanings of the titles were given in English to the two groups of students immediately after the title appeared on the screen at the pre-viewing session. However, other information which appeared in Japanese scripts during the screening was not provided to either of the groups. Stopping a video tape temporarily during the screening may result in loss of information that has been stored in the STM. This process was to ensure that all students of the study were treated equally and the screen information was expected to activate students' schematic structure in their LTM.

The topics of each text varied from the application of modern technology to the reports of daily events. The contents of the videotapes were not familiar to the students but were likely to be of high interest to them. Some of the videos were pilot-tested with the 1997 cohort. These students reported that their experiences viewing authentic videos were more interesting and sustained a higher level of attention for them than viewing
traditional unauthentic ones. They also commented that practising with real data was beneficial, as they became less fearful in listening to 'real world events'.

3.2.4 Procedures

L2 researchers proposed a schedule for teaching L2 listening skills. Lund (1990), for example, suggests five stages for teaching: identification; orientation; main idea comprehension; detail comprehension and full comprehension. Chamot and others (1993) developed a model for problem solving that has four stages: planning; monitoring; problem solving; and evaluation. Phillips (1984) developed a five-stage reading plan for classroom use which included preparation stage; skimming and scanning stage; intensive reading stage; comprehension stage; and transferable and integrating skill stages. The comprehension stages proposed by these researchers share some similarities. Some are based on reading models assuming that the processes involved in listening are more similar than dissimilar at a deep level (Palincsar & Brown, 1984; van Dijk & Kintsch, 1983; Resnick, 1984).

For the purposes of this study, the strategies identified in Study 1 were organised into instructional sequences of explicit and less-explicit instructional stages. This instructional model emphasises the gradual transfer of responsibility to learners and incorporates the notions of 'expert scaffolding' and 'inter- to intra-psychological plane of functioning' advocated by Vygotsky (1978). This mode of presentation was recommended by various researchers (Collins, Brown, & Newman, 1989; Ellis & Sinclair, 1989; O'Malley et al., 1989; Palincsar & Brown, 1984; Paris, Lipson, & Wixson, 1983). In this model, the instructional orientation shifts from teacher-centred (the explicit training phase or expert scaffolding) to student-centred approach (the implicit training phase...
or reciprocal teaching) to enable students to become autonomous (and automatic) strategy users. It is also important for a teacher to ensure that students are aware of their own mental processes and existing strategies. Some may not have appropriate strategies available, or, even if they do, others may not use them. For this reason, when new strategies are introduced, teacher modeling of these strategies, provision of ample opportunities for students to practice, and evaluating the effectiveness of the use of these strategies are vital parts of the instructional program. Furthermore, under peer teaching (reciprocal teaching) conditions, students identify their source of difficulty and they are forced to respond to each other’s questions in a less-pressured way which, in turn, results in higher quality learning.

L1 (and L2) literature on strategy instruction has offered general guidelines and recommendations to teachers in planning and designing strategy training studies (Chamot, 1995; Hosenfeld, Arnold, Kirchofer, Laciura, & Wilson, 1981; Mendelsohn 1995; Paris et al., 1983; Wenden, 1991). The following list is a brief summary of considerations that accord with the principles suggested by Wenden (1991) and they were incorporated in Study 2:

1. Teachers need knowledge of the strategies that students already have before the strategy training;
2. Teachers need to make students aware of their mental processes by demonstrating how to reveal these covert activities through the use of the think-aloud procedure;
3. Teachers should demonstrate strategy use, and its utilities and value, so that students become determined strategy users;
4. Teachers should encourage students to monitor their use of strategies to enhance comprehension; and
5. Teachers need to provide students sufficient feedback to encourage them to use appropriate strategies.

Deciding what strategies should be included in the intervention program (Study 2) depends on the findings of Study 1. Therefore the detailed procedural description for the intervention appears in 4.2 in Chapter 4.

3.2.5 Test Instruments
Currently there is no general consensus on how and what is the best technique to assess listening comprehension. This state of affairs is reflected in the priorities report from the American Council for Teaching Foreign Languages (ACTFL) priorities conference (cited in Mendelsohn, 1995:32) which states thus:

We cannot adequately judge the validity of a test or the adequacy of the theoretical model underlying the test without clearly identifying the purpose and the population for which the test was designed.

This statement considers the purpose of assessment as a top priority. Similarly, a general framework provided by Dunkel, Henning, & Chaudron (1993) for listening comprehension assessment also placed this variable in the most prominent position.

The purpose of assessing the students' listening level in this study is to evaluate the effectiveness of listening strategy intervention. Therefore, the test is designed to measure specific aspects of learning which are relevant to the study (actual strategies included in the intervention which affect students' learning outcomes). This purpose places certain limitations on testing the students' general listening proficiency in real life.
To specify various purposes or goals, Lund (1990) provides a taxonomy based on listener function and the listener response matrix for teaching L2 listening. He considers the functions significant to L2 teaching as: identification; orientation; main idea comprehension; detail comprehension; full comprehension; and replication. These goals resemble those used for reading comprehension. The underlying assumption of these goals is that the processes involved in listening and reading are recognised by the majority of researchers on text comprehension as similar (see 2.4.2 in Chapter 2). It follows that the test instruments for assessing reading comprehension are also applicable to listening assessments (Glisan, 1988). Furthermore, the procedures used for the intervention study were based mainly on the findings from reading studies in L1 and L2 although the characteristic features involved in listening are taken into account.

Equally important are realistic considerations of the level of text, listeners' proficiency level, and task difficulty. In general, authentic texts are not graded and listening to satellite programs is also an authentic experience particularly for students who have not been to Japan (although the Faculty of this institution broadcasts such programs daily on a television screen in the students' foyer area of the language building to encourage authentic listening). Processing information from satellite programs demands a heavy processing load from these students. Therefore, it is appropriate to recognise that the assessment task which measures students' comprehension level should be relatively easy for them, given that authentic text is generally perceived as difficult by both teachers and learners (Ferman-Castles & Urwin, 1997).
Each of the items in the seven post-tests follows the same format relating to: 1) topic; 2) supporting ideas (to elicit realistic responses in an authentic environment expressed in general terms, so that precise answers are not expected); and 3) identification of key terms.

Question 1 concerns the topic which requires students to use a top-down processing skill. Question 2 concerns supporting details, which requires students to use a bottom-up processing skill. Question 3 was directed at an aspect of comprehension quite different from Questions 1 and 2, and related to the identification of key words or phrases. The data derived from these questions enabled the investigator to identify which of the students' listening skills benefited most from the intervention. Additionally, Question 3 - identification of key terms - was included to investigate whether listening comprehension failure relates to students' inability in word decoding.

These questions were assessed using multiple-choice and true-false question formats (excluding Question 3). The investigator's preference for multiple-choice questions was based on the following reasons: 1) all listening texts are authentic and the assessment task should not be overly demanding; 2) the amount of time the students were allowed to complete the test was limited; and 3) open-question items are difficult to assess. The seven tests for the seven videos followed the same format and the students took about 30 to 40 minutes to complete the test, depending upon the length of each video.

In summary, the evidence presented in this chapter indicates that verbal reports collected through the think-aloud procedure are considered the most powerful and legitimate data for investigating the cognitive processes used by language learners when completing listening tasks (Cooke, 1999). This chapter has presented data which show how effective
the method is in capturing students' on-line processing of authentic Japanese satellite video texts. Based on these data, an intervention program was developed and the data resulting from this (Study 1 and Study 2) will be presented in the next chapter.
CHAPTER 4: PRESENTATION OF RESULTS

This chapter presents the results from Study 1 and Study 2 as they relate to the research questions in this investigation:

(1) What are the listening strategies used by native speakers of Japanese (L1) and by above-average proficiency (AAP) and below-average proficiency (BAP) tertiary-level learners of Japanese as foreign language who are Australian-English speakers, in audiovisual (AV) and audio-only (A) listening contexts?

(2) How does the voice medium in different genres (television news broadcasts and television family dramas) influence these speakers' listening strategies in AV and A listening contexts?

(3) What are the similarities and differences in strategy use in AV and A listening contexts between the L1 group and the AAP and BAP L2 subgroups?; what are the effective strategies used by these speakers?; and what types of strategies should be included in an instructional package for an effective intervention program?

(4) Does the listening strategy intervention program developed in this study result in more strategic listening in Japanese?

4.1 Study 1

Through the extensive analysis of the main study protocols, one additional strategy was identified and classified as 'repeating' under cognitive strategies. It was defined as 'listeners repeat a word or a phrase/sentence of the text that they have just heard or mentioned in their protocols'. One of the three major categories of 'other' was, however, excluded from the final analysis of the data since it was used least often by all students of the main study: the L1 group - nil; the AAP group - once only; the BAP group - six times.
4.1.1 Analysis of Data Related to Research Questions 1, 2, and 3

Study 1 data were analysed according to three variables: proficiency level (L1, AAP, and BAP groups), testing context (audiovisual and audio-only conditions), and text type (news and drama texts). During the data-collection sessions, the investigator observed that some students were more verbose than others. In order, therefore, to provide a better perspective of their frequency count of strategy use, a proportional score was calculated by totalling the number of strategies reported by each student.

4.1.1.1 The Use of Three Major Strategies by Condition

Table 4-1 and Figure 4-1 present a profile of overall strategies used by the three groups to comprehend two different genres of satellite television programs (two news broadcasts and two drama texts) under AV and A conditions.

<table>
<thead>
<tr>
<th>Major Strategy</th>
<th>L1 Group</th>
<th>AAP Group</th>
<th>BAP Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AV condition</td>
<td>A condition</td>
<td>AV condition</td>
</tr>
<tr>
<td>Cognitive</td>
<td>41(95%)</td>
<td>33(95%)</td>
<td>162(89%)</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>2(5%)</td>
<td>2(6%)</td>
<td>19(11%)</td>
</tr>
<tr>
<td>Other</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>1(0%)</td>
</tr>
<tr>
<td>Total</td>
<td>43(100%)</td>
<td>35(100%)</td>
<td>182(100%)</td>
</tr>
</tbody>
</table>

N.B. Percentages in brackets indicate the frequency count of strategies used within each category.
When the overall distribution pattern of these categories was expressed in percentage terms, the three groups used cognitive strategies far more often than metacognitive strategies. Moreover, the students used more cognitive strategies under the AV conditions than under the A conditions, although this difference was most marked for the AAP. The metacognitive strategies, on the other hand, were used more often under the A conditions than the AV conditions by the three groups, with the greatest differences exhibited by the AAP and BAP. Preferred use of cognitive strategies over metacognitive strategies by the three groups was consonant with the findings reported by Bacon (1992a) and O'Malley et al. (1989).

When the total number of strategies used by the three groups was compared, the AAP and the BAP used 12.5 per cent and 4 per cent more cognitive strategies under the AV (162 times for the AAP and 117 times for the BAP) than the A conditions (144 times for the AAP and 112 times for the BAP). The difference for the L1 was 24 per cent (41 for the AV conditions and 33 times for the A conditions). On the contrary, the data revealed the AAP used 73.7 per cent more metacognitive strategies under the A conditions than the AV conditions (19 times for the AV conditions and 33 times for the A conditions) while the BAP, it was 30 per cent (23 times for the AV conditions and 30 times for the A conditions).

The L1 used their strategies equally under the same conditions (2 times each). Less frequent use of strategies by the L1 indicates that they did not experience comprehension difficulties in comprehending texts in their native language since their processing has become largely automatic. This finding confirms the hypothesis of cognitive psychologists that a process which has become automatic is an

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*Note that since the number of L1 and L2 participants were not identical (L1=2; AAP=6; BAP=6), proportional figures were used as a basis of group comparison.*

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unconscious mental operation since it does not involve short-term memory (STM), and hence it is inaccessible for verbalisation (Anderson, 1995; Ericsson & Simon, 1980, 1993; Schneider & Shiffrin, 1977).

In general, the data indicate the use of cognitive and metacognitive strategies used by the three groups was inversely related despite the different testing conditions, at least, in the data of Study 1. In brief, when the proficiency level of L2 students advances, they use more cognitive strategies and fewer metacognitive strategies. This finding is in conflict with the claims made by Murphy (1985) and Bacon (1992a) that the use of metacognitive strategy increases as L2 listeners' proficiency level advances. This may be due to the use of different test materials and the testing conditions adopted by these researchers. A decrease rather than an increase in the use of metacognitive strategies seems more plausible when the L1 participants in this study whose language processing was automatic used these strategies far less often. This explanation is congruent with the hypothesis verified by researchers that the use of strategies by L2 learners becomes more like that of native speakers as the learners' language levels advance (Conrad, 1985; Cziko, 1980; Dobson, 1995).

Use of Individual Cognitive Strategies

Table 4-2 and Figure 4-2 provide a profile of twelve individual cognitive strategies used by the three groups under the AV and A conditions.

<table>
<thead>
<tr>
<th>Cognitive Strategy</th>
<th>L1 Group</th>
<th>AAP Group</th>
<th>BAP Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AV</td>
<td>A</td>
<td>AV</td>
</tr>
<tr>
<td>Repeating (REPT)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>5(3%)</td>
</tr>
<tr>
<td>Identifying key terms (IKEY)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>25(15%)</td>
</tr>
</tbody>
</table>

163
When the range of strategies used by the three groups was contrasted, the L1 used six different cognitive strategies both under the AV and A conditions. On the other hand, the AAP used all twelve strategies, while the BAP used eleven strategies either under the AV or A conditions.
Figure 4-2a: Individual Cognitive Strategy Use by Group and Condition (Enlarged version)
conditions. The ‘visualising’ strategy was used by the AAP but this strategy was not used at all by the BAP.

Of the twelve cognitive strategies identified, the most dominant strategy used by the L1 was ‘responding/evaluating information’ both under the AV (49 per cent) and A conditions (36 per cent). This strategy was followed by ‘elaborating’ (24 per cent) and ‘inferencing’ (20 per cent) under the AV conditions, and by ‘inferencing’ (24 per cent) and ‘elaborating’ (19 per cent) under the A conditions. ‘Analysing language elements’ strategy was used by the L1 group under the A conditions (15 per cent) and this strategy was ranked as the fourth preferred strategy.

Similarly, the AAP used the ‘responding/evaluating information’ strategy most often under the AV conditions (19 per cent). In contrast, the most frequently used strategy by this group under the A conditions was ‘identifying key terms’ (24 per cent). This group then used ‘inferencing’ (17 per cent) and ‘identifying key terms’ (15 per cent) as their second and third preferred strategies under the AV conditions. Both ‘translating’ (12 per cent) and ‘elaborating’ (11 per cent) strategies were used to a similar extent. Under the A conditions, this group used their most frequently used strategy, ‘identifying key terms’ (24 per cent) followed by the strategies ‘inferencing’ (19 per cent) and ‘translating’ (17 per cent). However, the ‘elaborating’ strategy was used less often by this group (11 per cent under the AV conditions and 10 per cent under the A conditions) than by the L1 (24 per cent under the AV conditions and 19 per cent under the A conditions).

On the other hand, the most dominant strategy used by the BAP was ‘inferencing’ under the two conditions (30 per cent under the AV conditions and 36 per cent under the A conditions). This strategy was followed by ‘identifying key terms’ (18 per cent) and
responding/evaluating information’ (17 per cent) under the AV conditions, and by ‘identifying key terms’ (29 per cent) and ‘responding/evaluating information’ (11 per cent) under the A conditions. In comparison, the BAP used the ‘elaborating’ strategy far less often (9 per cent under the AV conditions and 4 per cent under the A conditions) than did the L1 and the AAP. Similarly, the BAP used ‘translating’ and ‘summarising’ strategies less often and did not use the ‘anticipating’ strategy at all under the AV conditions. The L1 and the AAP used the ‘anticipating’ strategy only rarely (3 per cent under the A conditions for the L1, and 4 per cent under the AV and A conditions for the AAP).

The two L2 groups used the ‘describing scene’ strategy but it was not used by the L1. The L2 groups used this strategy only under the AV conditions. On the other hand, the ‘visualising’ strategy was used by the AAP alone under the two conditions but neither the L1 nor the BAP used this strategy.

The ‘elaborating’ strategy was used by the BAP twice as often under the AV conditions than the A conditions. However, this group did not use this strategy as often as the L1 and AAP did. The ‘elaborating’ strategy is a way of relating new information to prior knowledge and plays a significant role in text comprehension. This strategy was the second preferred strategy under the AV conditions and the third preferred strategy under the A conditions by the L1. Other cognitively demanding strategies such as ‘summarising’ and ‘anticipating’ were more sparingly used by the BAP than the AAP. ‘Analysing language elements’ and ‘transfer of knowledge’ were two of the less frequently used strategies by the AAP and BAP.

The general pattern emerging from the data indicates that the use of individual cognitive strategies by the three groups was related to the
testing condition: use of cognitive strategies by the three groups was increased when information was presented accompanied by both audio and visual stimuli (the AV conditions). Specifically, all groups used strategies such as 'summarising', 'elaborating', and 'responding/evaluating information' (top-down processing strategies) more often under the AV conditions than the A conditions while those used under the A conditions were 'identifying key terms' and 'analysing language elements' (bottom-up strategies). Although the increase was minimal, it was observed across the three groups. One of the most important cognitive strategies, 'inferencing', was used more often by all groups under the A conditions than the AV conditions.

In general, the overall pattern of strategy use by the three groups under the two different testing conditions showed more similarities than dissimilarities. The three groups used more cognitive strategies under the AV conditions than the A conditions. The 'inferencing' strategy was frequently used by the three groups but the 'identifying key terms' strategy was used only the AAP and BAP. The 'elaborating' strategy was used most frequently by the L1, followed by the AAP. The BAP used this strategy to a lesser extent.

Use of Individual Metacognitive Strategies

Table 4-3 and Figure 4-3 show a profile of seven individual metacognitive strategies used by the three groups under the AV and A conditions.

<table>
<thead>
<tr>
<th>Metacognitive Strategy</th>
<th>L1 Group</th>
<th>AAP Group</th>
<th>BAP Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(IDP-TXT)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>8(24%)</td>
</tr>
<tr>
<td></td>
<td>A condition</td>
<td>A condition</td>
<td>A condition</td>
</tr>
<tr>
<td></td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td></td>
<td>AV condition</td>
<td>AV condition</td>
<td>AV condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

71 'Identifying key terms' strategy is however considered as one of the top-down strategies in terms of processing characteristics.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>AV-L1</th>
<th>A-L1</th>
<th>AV-AAP</th>
<th>A-AAP</th>
<th>AV-BAP</th>
<th>A-BAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self evaluating-expressing confidence (SE-CONF)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>7(38%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Self evaluating-expressing uneasiness (SE-LCONF)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>4(21%)</td>
<td>8(24%)</td>
<td>12(52%)</td>
<td>11(37%)</td>
</tr>
<tr>
<td>Comprehension monitoring (COM)</td>
<td>2(100%)</td>
<td>2(100%)</td>
<td>2(10%)</td>
<td>4(12%)</td>
<td>2(9%)</td>
<td>8(27%)</td>
</tr>
<tr>
<td>Selective attention (SELA)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>2(10%)</td>
<td>2(6%)</td>
<td>1(4%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Self management (SLFM)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>4(12%)</td>
<td>1(4%)</td>
<td>2(7%)</td>
</tr>
<tr>
<td>Describing comprehension behaviour (DCOMB)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>4(21%)</td>
<td>7(22%)</td>
<td>7(31%)</td>
<td>5(16%)</td>
</tr>
<tr>
<td>Total</td>
<td>2(100%)</td>
<td>2(100%)</td>
<td>19(100%)</td>
<td>33(100%)</td>
<td>23(100%)</td>
<td>30(100%)</td>
</tr>
</tbody>
</table>

N.B. Percentages in the brackets indicate the frequency count of total strategies within each category.

Figure 4-3: Individual Metacognitive Strategy Use by Group and Condition

Figure 4-3 demonstrates a contrasting pattern in the use of individual metacognitive strategies by the three groups: the L1 used only the 'comprehension monitoring' strategy (100 per cent) exclusively both under the AV and A conditions. This group used no other metacognitive strategies. In contrast, the AAP used all seven metacognitive strategies while the BAP used six strategies. The AAP indicated their confidence in performing the task by using the 'self
evaluating--expressing confidence’ strategy but the BAP did not use this strategy.

When the total number of metacognitive strategies used by the three groups was compared, the AAP and the BAP used 9.5 times to 11.5 times more strategies under the AV conditions (19 times and 23 times each) and 16.5 times to 15 times more strategies under the A conditions (33 times and 30 times each) than the L1 did (2 times). Thus the L2 groups used more metacognitive strategies in comprehending texts under the A conditions.

The most preferred individual metacognitive strategy by the AAP under the AV conditions was ‘self evaluating--expressing confidence’ (38 per cent). This strategy was followed by ‘self evaluating--expressing uneasiness’ and ‘describing comprehension behaviour’ (21 per cent each). Under the A conditions, this group used ‘identifying problems’ and ‘self evaluating--expressing uneasiness’ strategies equally often (24 per cent each) followed by the ‘describing comprehension behaviour’ strategy (22 per cent). The AAP did not use the ‘self evaluating--expressing confidence’ strategy at all under the A conditions. Other strategies such as ‘comprehension monitoring’ and ‘selective attention’ were used to a similar extent under the AV conditions (10 per cent each), as were ‘comprehension monitoring’ and ‘self management’ under the A conditions (12 per cent each). However, the AAP did not use either ‘identifying problems’ or ‘self management’ strategies under the AV conditions but these strategies were used under the A conditions (24 per cent and 12 per cent). The ‘self evaluating--expressing confidence’ strategy was not used at all under the A conditions.

In contrast, the BAP used the ‘self evaluating--expressing uneasiness’ strategy as their most preferred strategy under both the AV (52 per
cent) and A conditions (37 per cent). This strategy was followed by ‘describing comprehension behaviour’ (31 per cent) and ‘comprehension monitoring’ (9 per cent) under the AV conditions, and by ‘comprehension monitoring’ (27 per cent) and ‘describing comprehension behaviour’ (16 per cent) under the A conditions. The strategies which were not used by the BAP under the AV conditions were ‘identifying problems’ and ‘self evaluating—expressing confidence’, while those not used under the A conditions were ‘self evaluating—expressing confidence’ and ‘selective attention’. This group did not use ‘self evaluating—expressing confidence’ at all under either the AV conditions or the A conditions.

The two L2 groups used the ‘identifying problems’ strategy often under the A conditions (24 per cent for the AAP and 13 per cent for the BAP). Non-use of this strategy by the two L2 groups under the AV conditions may be due to the result of these listeners investing their attention predominantly in the visual aspect of information. The ‘selective attention’ strategy was used minimally by the BAP under the AV conditions (4 per cent) but it was not used under the A conditions. Instead, this group used ‘comprehension monitoring’ and ‘self management’ strategies more often under the A conditions (27 per cent and 7 per cent) than the AV conditions (9 per cent and 4 per cent). This behaviour illustrates the BAP’s inability to focus on auditory input. Rather, they were more concerned with testing their hypotheses and the descriptions of how they usually gather meaning from aural input.

In general, comprehending text without visuals is more difficult and, under such conditions, L2 learners become more aware of their comprehension problems. This results in increased use of metacognitive strategies. Indeed, in this study, the two L2 groups used more metacognitive strategies to comprehend the texts under the A
conditions. These behaviours were also reflected by frequent use of 'identifying problems' and 'self evaluating--expressing uneasiness' strategies. Under the A conditions, students require a high degree of attentional capacity to identify and analyse various aspects of texts without the aid of visuals. As a result, the L2 groups perceived performing a listening task under the A conditions to be more difficult than under the AV conditions. The L1 group used metacognitive strategies far less often than the two L2 groups.

4.1.1.2 The Use of Three Major Strategies by Text

Table 4-4 and Figure 4-4 display an overall use of three major categories by the three groups to comprehend two different genres of texts (news texts and drama texts) under the AV and A conditions.

<table>
<thead>
<tr>
<th>Major Strategy</th>
<th>News (L1)</th>
<th>Drama (L1)</th>
<th>News (AAP)</th>
<th>Drama (AAP)</th>
<th>News (BAP)</th>
<th>Drama (BAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>14(94%)</td>
<td>34(92%)</td>
<td>161(82%)</td>
<td>145(89%)</td>
<td>118(76%)</td>
<td>111(84%)</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>1(2%)</td>
<td>3(8%)</td>
<td>18(11%)</td>
<td>32(21%)</td>
<td>21(16%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>1(0%)</td>
<td>0(0%)</td>
<td>5(3%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41(100%)</td>
<td>37(100%)</td>
<td>196(100%)</td>
<td>163(100%)</td>
<td>155(100%)</td>
<td>133(99%)</td>
</tr>
</tbody>
</table>

N.B. Percentages in the brackets indicate the frequency count of strategies used within each category.

Figure 4-4: Major Strategy Use by Group and Text

Figure 4-4 demonstrates a contrasting pattern in the use of three major
categories by the three groups while listening to the two different genres of texts.

When the overall distribution pattern of these categories was expressed in percentage terms, the L1 used more cognitive strategies to comprehend the news (98 per cent) than the drama texts (92 per cent), and the two L2 groups used more cognitive strategies to comprehend the drama (89 per cent for the AAP and 84 per cent for the BAP) than the news texts (82 per cent for the AAP and 76 per cent for the BAP), although the difference in the use of this strategy by the two L2 groups was minimal. Conversely, the metacognitive strategies were used less often by the L1 to comprehend the news (2 per cent) than the drama texts (8 per cent) but the L2 groups used the same strategies more often to comprehend the news (18 per cent for the AAP and 21 per cent for the BAP) than the drama texts (11 per cent for the AAP and 16 per cent for the BAP). The use of these two strategies did not differ greatly across the three groups (6 per cent to 8 per cent for the cognitive strategies and 5 per cent to 7 per cent for the metacognitive strategies).

When the total number of strategies used by the three groups was examined, the AAP used 11 per cent more cognitive strategies to comprehend the news (161 times) than the drama texts (145 times). The BAP used 6 per cent more cognitive strategies (118 times for the news and 111 times for the drama). The difference for the L1 was 17 per cent (40 times for the news texts and 34 times for the drama texts). On the other hand, the data revealed the L1 used 3 times more metacognitive strategies to comprehend the drama texts (3 times) than the news texts (once only), while the AAP and the BAP used this strategy category 88 per cent and 52 per cent more often to comprehend the news (34 times for the AAP and 32 times for the BAP) than the drama texts (18 times for the AAP and 21 times for the
BAP). These data support earlier findings (see 4.1.1.1 in this chapter) that the use of cognitive and metacognitive strategies by the L1 and L2 groups was inversely related despite the use of a different text genre.

Use of Individual Cognitive Strategies

Table 4-5 and Figure 4-5 below provide a profile of the individual cognitive strategies used by the three groups to comprehend news and drama texts.

Table 4-5: Individual Cognitive Strategy Use by Group and Text

<table>
<thead>
<tr>
<th>Cognitive Strategy</th>
<th>L1 Group News</th>
<th>AAP Group News</th>
<th>BAP Group News</th>
<th>L1 Group Drama</th>
<th>AAP Group Drama</th>
<th>BAP Group Drama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeating (REPT)</td>
<td>0(0%)</td>
<td>5(3%)</td>
<td>8(7%)</td>
<td>0(0%)</td>
<td>4(4%)</td>
<td></td>
</tr>
<tr>
<td>Identifying key terms (KEY)</td>
<td>0(0%)</td>
<td>43(27%)</td>
<td>16(11%)</td>
<td>0(0%)</td>
<td>32(27%)</td>
<td>21(19%)</td>
</tr>
<tr>
<td>Translating (TRANSL)</td>
<td>0(0%)</td>
<td>18(11%)</td>
<td>25(17%)</td>
<td>0(0%)</td>
<td>14(13%)</td>
<td></td>
</tr>
<tr>
<td>Summarising (SUM)</td>
<td>0(0%)</td>
<td>10(6%)</td>
<td>15(10%)</td>
<td>2(2%)</td>
<td>10(9%)</td>
<td></td>
</tr>
<tr>
<td>Transfer of knowledge (TKNOWL)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>2(1%)</td>
<td>1(0%)</td>
<td>2(2%)</td>
<td></td>
</tr>
<tr>
<td>Analysing language elements (ALAN)</td>
<td>2(5%)</td>
<td>3(2%)</td>
<td>6(4%)</td>
<td>4(4%)</td>
<td>1(0%)</td>
<td></td>
</tr>
<tr>
<td>Elaborating (ELAB)</td>
<td>12(30%)</td>
<td>15(9%)</td>
<td>12(10%)</td>
<td>25(16%)</td>
<td>14(10%)</td>
<td>14(13%)</td>
</tr>
<tr>
<td>Visualising (VIS)</td>
<td>0(0%)</td>
<td>6(4%)</td>
<td>5(4%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td></td>
</tr>
<tr>
<td>Inference (INF)</td>
<td>3(8%)</td>
<td>13(38%)</td>
<td>32(22%)</td>
<td>35(30%)</td>
<td>40(36%)</td>
<td></td>
</tr>
<tr>
<td>Anticipating (ANTC)</td>
<td>1(2%)</td>
<td>5(3%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>1(0%)</td>
<td></td>
</tr>
<tr>
<td>Responding/Evaluating information (R/E-INF)</td>
<td>22(55%)</td>
<td>25(16%)</td>
<td>14(10%)</td>
<td>18(15%)</td>
<td>14(13%)</td>
<td></td>
</tr>
<tr>
<td>Describing scene (DESS)</td>
<td>0(0%)</td>
<td>8(5%)</td>
<td>2(1%)</td>
<td>6(5%)</td>
<td>2(2%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40(100%)</td>
<td>161(100%)</td>
<td>145(100%)</td>
<td>118(100%)</td>
<td>111(100%)</td>
<td></td>
</tr>
</tbody>
</table>

N.B. Percentages in the brackets indicate the frequency count of strategies used within each category.
Of the twelve cognitive strategies identified, the L1 used six cognitive strategies to comprehend the two genres of texts, while the AAP used all twelve strategies and the BAP used eleven strategies. The L1 did not use strategies associated with bottom-up processing such as ‘repeating’ and ‘translating’. The ‘visualising’ strategy was used by the AAP but not by the BAP.

The strategy used most frequently by the L1 to comprehend the news texts was ‘responding/evaluating information’ (55 per cent) followed by ‘elaborating’ (30 per cent). However, the ‘inferencing’ strategy was used sparingly (8 per cent). This group used different strategies to comprehend the drama texts: ‘inferencing’ (38 per cent), ‘responding/evaluating information’ (29 per cent), and ‘elaborating’ and ‘analysing the language elements’ (12 per cent each).

On the other hand, the AAP used the ‘identifying the key terms’ strategy most often to comprehend the news texts (27 per cent) followed by, in order of frequency: ‘responding/evaluating information’ (16 per cent), ‘inferencing’ (14 per cent), and ‘translating’ (11 per cent). To comprehend the drama texts, this group used the ‘inferencing’ strategy most often (22 per cent) followed by ‘translating’ (17 per cent), ‘elaborating’ (12 per cent), and ‘identifying
the key terms’ (11 per cent). The 'summarising' strategy was used moderately (6 per cent for the news texts and 10 per cent for the drama texts).

The individual cognitive strategies used frequently by the BAP to comprehend the news texts were 'inferencing' (30 per cent), 'identifying the key terms' (27 per cent) and 'responding/evaluating information' (15 per cent). The 'elaborating' strategy was used less often (10 per cent). Similarly, this group used strategies to comprehend the drama texts thus: 'inferencing' (36 per cent), 'identifying key terms' (19 per cent), and 'translating' and 'responding/evaluating information' (13 per cent each). The 'summarising' strategy was used less often (9 per cent). This group used the 'anticipating' strategy once in comprehending the drama texts but the 'visualising' strategy was not used at all for either the news texts or the drama texts. The 'translating' strategy was not used to comprehend the news texts while the 'transfer of knowledge' strategy was used once only for the news texts. The 'analysing language elements' strategy was also used once only for the drama texts.

The dominant strategy, 'responding/evaluating information' was shared by the three groups and this strategy was used more often to comprehend the news than the drama texts. The two L2 groups used this strategy to a similar extent (16 per cent and 10 per cent for the AAP, and 15 per cent and 13 per cent for the BAP).

The AAP used the 'summarising' strategy only moderately (6 per cent for the news texts and 10 per cent for the drama texts) but did not use the 'transfer of knowledge' strategy at all to comprehend the news texts. Instead, the group used this strategy to comprehend the drama texts (1 per cent only).
The ‘inferencing’ strategy was the most frequently used to comprehend both texts by the BAP. Frequent use of ‘inferencing’ and ‘elaborating’ strategies by the AAP to comprehend the drama texts parallels the use by the L1. It was also noted that the BAP used a similar range of cognitive strategies to comprehend the two texts of different genres. In contrast, the L1 and the AAP alternated their choice of strategies according to the text genre. The L1 did not use strategies associated with bottom-up processing at all.

L2 learners’ familiarity with the text structure as a contribution to their comprehension processing has been noted in the literature review section (Chapter 2). Such a knowledge base guides listeners in activating comprehension of the text content through identifying key words, hypothesising, and anticipating incoming information. Unlike the news texts, with the drama texts students are not able to predict what will follow in the coming section. As a result, they might have used ‘inferencing’ strategies more often to comprehend the drama texts than they did to comprehend the news texts. Additionally the various paralinguistic features contained in the drama texts may have helped to activate ‘inferencing’ strategies that may offset students’ low level of linguistic knowledge.

‘Translating’ and ‘summarising’ strategies were used more often to comprehend the drama texts than the news texts by the three groups (except the L1 who did not use the ‘translating’ strategy to comprehend these texts). The moderate use of the ‘translating’ strategy by the L2 groups to comprehend the drama texts may be due to the occurrence of pause intervals in the drama texts. These students attempted to use this strategy to maximise their memory retention. The ‘repeating’ and ‘identifying key terms’ strategies were used more often by the L2 groups to comprehend the news texts.
In general, the data indicate that the distribution pattern of cognitive strategy use by the L1 and L2 groups is more similar than dissimilar. The three groups used more cognitive strategies to comprehend the news texts than to comprehend the drama texts. It was also noted that the two L2 groups used the 'identifying key terms' strategy more often to comprehend the news texts than the drama texts. In contrast, they used the 'inferencing' strategy more often to comprehend the drama texts than the news texts.

Use of Individual Metacognitive Strategies

Table 4-6 and Figure 4-6 give quantified profiles of seven individual metacognitive strategies used by each of the three groups to comprehend two different genres of texts.

<table>
<thead>
<tr>
<th>Metacognitive Strategy</th>
<th>L1 Group</th>
<th>AAP Group</th>
<th>BAP Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>News</td>
<td>Drama</td>
<td>News</td>
</tr>
<tr>
<td>Identifying problems (IDP-TXT)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>7(20%)</td>
</tr>
<tr>
<td>Self evaluating-expressing confidence (SE-CONF)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>4(12%)</td>
</tr>
<tr>
<td>Self evaluating-expressing uneasiness (SE-LCONF)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>7(20%)</td>
</tr>
<tr>
<td>Comprehension monitoring (COM)</td>
<td>1(100%)</td>
<td>3(100%)</td>
<td>3(9%)</td>
</tr>
<tr>
<td>Selective attention (SELA)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>2(6%)</td>
</tr>
<tr>
<td>Self management (SLFM)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>3(9%)</td>
</tr>
<tr>
<td>Describing comprehension behaviour (DCOMB)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>8(24%)</td>
</tr>
<tr>
<td>Total</td>
<td>1(100%)</td>
<td>3(100%)</td>
<td>34(100%)</td>
</tr>
</tbody>
</table>

N.B. Percentages in the brackets indicate the frequency count of strategies used within each category.
Figure 4-6 shows that, of the seven metacognitive strategies identified, the L1 used one metacognitive strategy exclusively (monitoring) to comprehend the news and drama texts. The AAP used seven strategies and the BAP used six strategies to comprehend both the news and drama texts. The strategy used by the AAP but not used by the BAP was 'self evaluating--expressing confidence'.

When the total number of metacognitive strategies used by the three groups was compared, the AAP and the BAP used 32 to 34 times more strategies to comprehend the news texts (34 times for the AAP and 32 times for the BAP) and 6 times to 7 times more strategies to comprehend the drama texts (18 times for the AAP and 21 times for the BAP) than did the L1 (once for the news and 3 times for the drama).

The dominant strategy used by the AAP was 'describing comprehension behaviour' for the news texts (24 per cent) and 'self evaluating--expressing uneasiness' for the drama texts (28 per cent). These strategies were followed in order of frequency by 'identifying the problems' (20 per cent) and 'self evaluating--expressing uneasiness' (20 per cent) to comprehend the news texts, and by 'self evaluating--expressing confidence' (17 per cent), 'comprehension
monitoring' (17 per cent) and 'describing comprehension behaviour' (17 per cent) to comprehend the drama texts.

The AAP used 'comprehension monitoring' and 'selective attention' strategies more often to comprehend the drama texts (17 per cent and 11 per cent each) than the news texts (9 per cent and 6 per cent each). In contrast, the use of 'describing comprehension behaviour' was more frequent for the news texts than for the drama texts (24 per cent for the news texts and 17 per cent for the drama texts). The use of these strategies by the AAP was similar to that employed by the BAP.

The BAP used the 'self evaluating--expressing uneasiness' strategy most frequently to comprehend the news texts (47 per cent). To comprehend the drama texts, they used 'self evaluating--expressing uneasiness' and 'comprehension monitoring' strategies equally often at 38 per cent. The next most frequently used strategies by this group to comprehend the news texts were 'describing comprehension behaviour' (28 per cent) and 'identifying the problems' (13 per cent). In comprehending the drama texts, the next most frequently used strategy was 'describing comprehension behaviour' (14 per cent). This group did not use the 'self evaluating--expressing confidence' strategy to comprehend the two different texts. Nor did this group use the 'selective attention' strategy to comprehend the news texts or the 'identifying the problems' strategy for the drama texts. They used the 'selective attention' strategy sparingly (5 per cent) to comprehend the drama texts. To comprehend the news texts, the 'identifying problems' strategy was used almost twice as often (13 per cent) as other strategies such as 'comprehension monitoring' and 'self management' (6 per cent each).

Both the AAP and the BAP used 'identifying the problems' more often to comprehend the news texts (20 per cent for the AAP and 13 per cent
for the BAP) than to comprehend the drama texts (5 per cent for the AAP and 0 per cent for the BAP). This behaviour confirms that the L2 students perceived the texts with fewer paralinguistic clues to be more problematic to comprehend (Bucknall, 1997).

The distribution pattern for the metacognitive strategies produced a consistent pattern between the L1 and the two L2 groups: the L1 used more metacognitive strategies to comprehend the drama texts than the news texts, while the two L2 groups used more metacognitive strategies to comprehend the news texts than to comprehend the drama texts. Thus, in brief, the use of metacognitive strategies by the L1 and L2 groups to comprehend the two different genres of texts was inversely related. This finding is in agreement with findings reported in 4.1.1.1 in this chapter.

4.1.1.3 Summary
This detailed analysis of data identified similar and dissimilar use of listening strategies by the L1 group and the two L2 groups. All three groups used cognitive strategies more often under the AV conditions and metacognitive strategies more often under the A conditions. Under the AV conditions they used cognitive strategies related to top-down processing and under the A conditions they used those related to bottom-up processing. In general, these data indicate that the students in this study perceived performing a listening task under the A conditions to be more difficult than when aural input was presented simultaneously with visuals. Under the A conditions, they used the ‘inferencing’ strategy most often.

The results also revealed a distinct pattern in strategy use that differentiates the L1 from the two L2 groups. Overall, the L1 used far fewer cognitive and metacognitive strategies than the L2 groups. The L1 used cognitive strategies slightly more often to comprehend news
texts. Conversely, the two L2 groups used this category more often to comprehend drama texts. The L2 groups used the 'identifying key terms' strategy often to comprehend news texts under the A conditions but the L1 did not use this strategy because of their strong ability in automatic processing. The L1 used more metacognitive than cognitive strategies to comprehend drama texts and their use was evenly distributed across both listening conditions, while the two L2 groups used this strategy category more often to comprehend the news texts under the A conditions.

Overall, the students in the three groups used more cognitive strategies and fewer metacognitive strategies, the greater their proficiency. Preference for cognitive strategies over metacognitive strategies by the three groups was thus consistent with the findings reported by O'Malley et al. (1989), Bacon (1992a), and Vandergrift (1992).

More importantly, the L1 used cognitive strategies related to top-down processing throughout the investigation. The AAP also reported a similar use of such strategies, though to a lesser extent. The BAP, on the other hand, did not use such strategies and they tended to focus their attention on other strategies related to bottom-up processing. The data also revealed that the genre of texts had little significant effect on the choice of listening strategies by the intermediate-level learners of Japanese.

In conclusion, the results of the quantitative (descriptive) analysis showed more regularities than irregularities in the strategy use which characterises the two L2 subgroups: the AAP and the BAP used similar strategies proportionally, according to the genre and the testing condition. The two L2 groups used strategies far more often than the L1. One could speculate that this result may be due to these students invoking strategies more often or encountering comprehension
problems more often than the L1.

The qualitative analysis of the protocol data, however, revealed some striking differences between the two groups. The ways in which the AAP clustered 'identifying key terms' warranted further investigation in order to validate the findings of Study 1 presented above. The following section investigates these concerns further through the analysis of the protocol data.

4.1.2 Additional Findings - Identification of Salient/Effective Strategy Use

The aim of the quantitative (descriptive) analysis presented in section 4.1.1 in this chapter was to identify the strategy use characteristic of the L1 and L2 groups under different test conditions. On closer examination of the protocol data, other qualitative differences in strategy use emerged among the three groups. Although the AAP and the BAP shared a similar strategy repertoire and frequency, 'identifying key terms', 'translating' and 'summarising' strategies were not used accurately by the BAP. At a surface level, the BAP appeared to have used these strategies actively. On this basis, a further investigation was conducted to examine the effectiveness of using these three strategies. The three strategies were included in the investigation because the nature of their assessment is categorical (correct or incorrect), which enables the investigator to assess easily.

Thus, further investigation aims to examine the L2 subgroups' performance in relation to: 1) effectiveness in applying the three specific strategies; and 2) ways in which the two L2 groups sequenced their choice of strategies. In investigating the second behaviour, the focus was on the 'identifying key terms' strategy since it is a triggering factor which activates subsequent strategies.
The L1 speakers' data were not considered in this study due to these speakers' automatic word encoding and decoding ability in their native language. Therefore, a contrast was made between the AAP and BAP groups only. This information is vital for the planning and development of a strategy intervention program to enable effective strategy training.

4.1.2.1 Three Major Strategy Uses and Effectiveness of Usage

Use of 'Identifying Key Terms', 'Translating', and 'Summarising' Strategies

Table 4-7 and Figure 4-7 show a profile of these three strategies used by the AAP and the BAP, as well as each group's effectiveness (represented as a percentage of accurate use) in using these strategies.

<table>
<thead>
<tr>
<th>Major Strategy</th>
<th>AAP Group</th>
<th></th>
<th></th>
<th></th>
<th>BAP Group</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accurate</td>
<td>Inaccurate</td>
<td>Sub-total</td>
<td></td>
<td>Accurate</td>
<td>Inaccurate</td>
<td>Sub-total</td>
</tr>
<tr>
<td>Identifying key terms</td>
<td>57(97%)</td>
<td>2(3%)</td>
<td>59(100%)</td>
<td></td>
<td>46(87%)</td>
<td>7(13%)</td>
<td>53(100%)</td>
</tr>
<tr>
<td>(IKEY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translating (TRANSL)</td>
<td>39(91%)</td>
<td>4(9%)</td>
<td>43(100%)</td>
<td></td>
<td>7(50%)</td>
<td>7(50%)</td>
<td>14(100%)</td>
</tr>
<tr>
<td>Summarising (SUM)</td>
<td>17(68%)</td>
<td>8(32%)</td>
<td>25(100%)</td>
<td></td>
<td>0(0%)</td>
<td>12(100%)</td>
<td>12(100%)</td>
</tr>
</tbody>
</table>

Figure 4-7: Three Major Strategy Use and Effectiveness of Usage by Group
Both the AAP and the BAP identified the key terms successfully on most occasions with slightly less effective use by the BAP (97 per cent for the AAP and 87 per cent for the BAP).

However, when the use of 'translating' and 'summarising' strategies by the groups was compared, the data revealed a striking difference: the AAP achieved 91 per cent and 68 per cent accuracy respectively, while the BAP achieved 50 per cent and 0 per cent accuracy respectively. These figures indicate that although the frequency count of 'translating' strategy use by the BAP was 8 per cent and 4 per cent under the AV conditions and the A conditions (Table 4-2), and 0 per cent and 13 per cent for the news texts and drama texts (Table 4-5), this group was effective in translating the texts only with 50 per cent accuracy. Moreover, the use of the 'summarising' strategy was not effective at all. The use of the 'translating' strategy by the AAP, on the other hand, was effective on most occasions (91 per cent accuracy) although their use of the 'summarising' strategy was less effective (68 per cent accuracy).

**Units of Text Segmentation**

To identify why the AAP was more effective than the BAP in their use of these strategies, units of text which were segmented or 'chunked' by the AAP and BAP were contrasted. The strategies contrasted were 'identifying key terms' and 'translating'. The data were analysed at two levels: word level and phrase level. Table 4-8 and Figure 4-8 show the relationship between the L2 subgroups' use of the two strategies and effectiveness at these two levels.

<table>
<thead>
<tr>
<th>Major Strategy</th>
<th>AAP Group</th>
<th></th>
<th>BAP Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accurate</td>
<td>Inaccurate</td>
<td>Accurate</td>
<td>Inaccurate</td>
</tr>
<tr>
<td>Identifying key term (IKEY)</td>
<td>57(97%)</td>
<td>2(3%)</td>
<td>46(87%)</td>
<td>7(13%)</td>
</tr>
<tr>
<td>-word level</td>
<td>42(95%)</td>
<td>2(5%)</td>
<td>34(94%)</td>
<td>2(6%)</td>
</tr>
</tbody>
</table>

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The data demonstrate clear differences in the ways in which the AAP and BAP processed the text information.

The AAP and BAP used the 'identifying key terms' strategy to achieve a high level of accuracy at word level (95 per cent for the AAP and 94 per cent for the BAP). At phrase level, the BAP achieved a slightly lower level of accuracy (71 per cent) while the AAP achieved a very high level of accuracy (100 per cent). These figures indicate that the AAP was consistently successful in identifying key terms at both levels, but this was not the case for the BAP whose ability to identify meaning at phrase level was significantly lower than their ability at word level. This indicated the AAP’s ability to chunk longer text segments to achieve a higher level of comprehension and the BAP’s lesser ability to do so. This result was congruent with the research findings of L1 and L2 cognitive psychologists who claim that since short-term memory (STM) has a limited capacity, a single item can be chunked to maximise the effectiveness of processing learners (Block, 185).
Because of their ability to process 'a larger chunk' of information, the AAP students are able to recall input information better than the BAP students.

A similar pattern exists in use of the 'translating' strategy. The AAP was effective on most occasions in translating text selections at the phrase level (93 per cent) but with less success at word level (50 per cent). In contrast, the BAP interpreted the text selections inaccurately on all occasions at word level, and with 50 per cent accuracy at phrase level.

The level of accuracy in the use of the 'summarising' strategy was parallel to that in using 'translating' strategy (68 per cent for the AAP and 0 per cent for the BAP). In addition, the latter group used this strategy to about half the extent that the former group did (25 times for the AAP and 12 times for the BAP).

Generally in listening comprehension, key terms help listeners (and readers) establish a working framework or 'scaffolding' of the text, which enables a higher level of comprehension (Rumelhart, 1980; Resnick, 1984). Yet despite a high level of accuracy in using the 'identifying key terms' strategy at the word level, the BAP could not achieve a similar level of accuracy on text comprehension. These findings provided impetus to examine further the differences in how the students in the AAP and BAP sequenced their choice of strategies.

4.1.2.2 Sequential Pattern Used by Two L2 Groups

The qualitative analysis of L2 protocol data concerned with verbal protocols demonstrated that the students from the two groups sequenced their choice of strategies in distinct ways. These excerpts
selected from the verbal protocol data of the main study (Study 1) provide insights into why the BAP did not achieve a high level of comprehension in listening despite using a range and frequency of strategies similar to those used by the AAP.

Characteristic use of the three strategies, 'identifying key terms', 'inferencing', and 'elaborating' by the AAP and BAP in the protocols can be illustrated in the following excerpts. These contain general characteristics of each student's strategy use followed by detailed analysis of their comprehension behaviour as they listened to four texts (Texts 1, 2, 5, and 6).

The transcription of the texts (in Japanese) and the English translation are presented below at the beginning of the analysis of the qualitative data in Figures 4-9 to 4-12. The numbers at the beginning of each excerpt are the excerpt numbers. The text types are indicated in the bracket at the end of the excerpt while the strategy types are presented in the brackets as code form used in 3.1.5 in Chapter 3. The number of excerpts was chosen only to exemplify the analysis and does not indicate the degree of effective or ineffective strategy use. These analyses of data should be read in conjunction with Table 3-9 (Students' perceived level of comprehension) and Appendix 4-B (Summary of L2 strategy use).

**Figure 4-9: Transcription of Test Text 1**

<table>
<thead>
<tr>
<th>TEXT 1 - News (Panda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の未明老衰のため死にました。フェイフェイは12年前の昭和57年に日中交流正規化10周年を記念して中国から送られました。昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。そして、その2年後には息子のユウユウも生まれ、一家で人気を集めています。しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱しきった状態が続いていました。上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。</td>
</tr>
</tbody>
</table>

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**English translation:***

*Fei-Fei*, a giant panda housed at Ueno zoo in Tokyo, died of old age early this morning. He was sent to Japan from China twelve years ago in 1982 as a gift to commemorate the tenth anniversary of normalisation of relations between China and Japan. In 1986, his female companion, *Fang-Fang* gave birth to their long-awaited offspring, *Tong-Tong*. Two years later, *Yuu-Huu* was born, and *Fei-Fei’s* family was the centre of attention for many people. *Fei-Fei* was 27 years old, equivalent to the human age of 80. Because of old age, he began losing his appetite from October this year, and from the beginning of this month, his condition worsened. He was receiving treatment in his usual quarters in the zoo to maintain a minimum stress level. Early this morning he died peacefully.

**Figure 4-10: Transcription of Test Text 2**

**TEXT 2 – Drama (Hayu yo koi)**

春希：帰ってこないのかな、どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。
母：知ってても言えないでしょう。お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って辛いの。
春希：あーあ、いつまで帰ってこないつもりなんだろう、お父さん。
母：大学の入学の稽古が終わるまで帰ってこないんじゃないかの。お父さん帰ってこないと入学金、払え込めないでしょう。
春希：お父さん、本当に怒ってるのね。
母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：春希。
春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。
母：母さん、春希は本当に大学へ行かしたいと思っている。あんたが大学、入学する日を楽しみにしてる。

**English translation:**

Haruki: Father might not come home. Where has he gone? I wonder if Mr Momose really doesn’t know where he is?
Mother: Even if Mr Momose knows, he will not tell us. Father must have asked him not to tell us. Mr Momose is having a hard time dealing with father and us.
Haruki: Oh I wonder how long father is going to stay away?
Mother: I think he won’t come back until the university closes its applications for enrolment. If he doesn’t come back, maybe we won’t be able to pay the enrolment fee?
Haruki: He’s really angry, isn’t he?
Mother: Don’t worry. We’ll manage.
Haruki: I don’t really want to go to university if it means you’ll have trouble.
Mother: Haruki, darling!
Haruki: Even if we could manage to pay the enrolment fee and I went off to University, you and father won’t get along well. Father’s really angry. Things will be extremely awful for you, mother.
Mother: Haruki, I really want you to go to university. I’m really looking forward to the day you start.

**Figure 4-11: Transcription of Test Text 5**

**TEXT 5 – News (Siberian tiger)**

中国に住む野性のシベリア虎は、90年代以降30頭ほど確認されただけで、年々数が少なくなっています。この為、中国政府は動物園で飼育していたシベリア虎を集め、ある訓練を始めました。この訓練を始める為、中
English translation:
The number of wild Siberian tigers living in China has been on the decrease and only 30 have been confirmed to exist since 1990. The Chinese government has begun a training project with Siberia tigers raised in the zoos. For the first time, they have established a safari park in Harbin for the purpose of this project. The safari park has an area of 300,000 hectares and 30 tigers have been receiving training. The zoo officials believed that once the tigers were released they would instinctively hunt their prey. However, the tigers, having been raised in captivity and accustomed to be hand feeding, were unfamiliar with preying on live animals. Therefore, the zoo caretaker handfeeds them meat. The safari park is determined to continue this training in order to release these tigers into the wild.

Figure 4-12: Transcription of Test Text 6

Aunt: The supermarkets I've seen in Tokyo are so large that they remind me of a gymnastics building. They sell most necessary items such as foodstuffs, groceries, clothing and miscellaneous items.

Sister: Is the supermarket similar to a department store?

Aunt: The supermarket differs from a department store in that a supermarket is cheaper. They buy in bulk so they can sell goods cheaply. Also they save money by employing fewer customer service workers.

Sister: Without employing sales persons?

Aunt: Customers can select goods more freely.

Brother: Do you understand, sister?

Sister: Not really.

Brother: But the supermarket will be located in the next town, not here.

Sister: I hope so but....

The BAP Group

Sharon: Sharon's frequency count of strategy use was the lowest in
the groups (18 times). She often repeated the Japanese words she identified, but rarely inferred the meaning of these words using contextual clues or her own experience. Instead, she listened passively to the text selections. She did not elaborate on the text information at all. Her perceived level of comprehension was 35 per cent under the audiovisual condition and 40 to 45 per cent under the audio-only condition. The following excerpts illustrate these points.

1. I wonder what the word is to, tora ..... oh, must be lions - TEXT 5 (REPT; INF)
2. They started some kind of ..... I don’t know – TEXT 5 (IDTC)
3. It says haru, harubin ..... - TEXT 5 (REPT)
4. Talking about the father ..... - TEXT 2 (IKEY)
5. She’s talking about a supaa - TEXT 6 (IKEY)

**Alicia:** Although she made moderate use of cognitive strategies (35 times), her major source of text information came from visuals. This interpretation was confirmed in excerpt 2 in which she specifically mentioned this behaviour. It is not clear whether she understood the key terms or comprehended the selected text as her comments did not relate to the auditory information presented. Her ability to identify key terms appeared to be very limited which led to her very limited comprehension of the text. Alicia did not use the ‘elaborating’ strategy. Her perceived level of comprehension was 40 to 50 per cent under both conditions.

1. It’s a nice picture of a tiger anyway - TEXT 5 (DESS)
2. I didn’t understand what she was saying ..... I was more involved with watching the picture ..... so I didn’t pick up the meaning there - TEXT 5 (DCOMB; SELCONF)
3. Opening of a Chinese safari park or something - TEXT 5 (INF)
4. It's interesting looking at the traditional Japanese room in the background - TEXT 2 (R/E INF)

However, she attempted to associate key terms with the visuals that she remembered or that were presented simultaneously in attempts to infer the meaning of the word she identified:

5. Talking about the zoo I think ..... probably about the tigers - TEXT 5 (IKEY; INF)
6. I caught akachan which is baby ..... maybe it's some sort of baby animal - TEXT 1 (IKEY; INF)
7. It's 30 hectares or something ..... the bus is going through, typical tourist behaviour staring out of the windows - TEXT 5 (IKEY; R/E INF)
8. I caught university ..... so obviously, I think she would be a student ..... and talking about her father - TEXT 2 (IKEY; INF; IKEY)

Although she mentioned the visuals associated with auditory input, she tended to focus on visuals. This may be because her vocabulary range was limited or be the result of her problem with decoding words, which may have encouraged her to redirect her attention to visuals:

9. Um, there were a lot of numbers and figures there ..... I'm not sure whether it was the year or an amount - TEXT 1 (R/E INF; SE/LCONF)

She actively used the ‘inferencing’ strategy by hypothesising possible propositions to confirm her inferences.
10. *Ni juu nana sai***i ..... maybe it's the age of the animal, or maybe it's the zoo thing again ..... yeah that it might be any sort of baby animal, probably a live one by the sound of it - TEXT 1 (IKEY; INF; COM)

11. Talking about daily food, or necessities or some type of ingredients maybe - TEXT 6 (INF)

**Laticha:** This student made numerous references to strategy use (48 times) and used a very wide range of cognitive strategies (10 out of 12), particularly 'identifying key terms' and 'inferencing' (14 times each).

She tended to make lengthy elaborations from single words. Her comments did not indicate that she comprehended the text selection since they did not refer to the content. It appears she verbalised her thoughts to 'retain face' without actually comprehending. However, she attempted to use elaboration strategies after identifying key terms. Her perceived level of comprehension was 40 per cent under the audiovisual condition and 50 to 60 per cent under the audio-only condition.

1. The safari, I got the Chinese safari park where obviously the tiger was ..... when 'safari park' comes to mind, I immediately think of Africa and some of the big game parks that they have there - TEXT 5 (IKEY; ELAB)

2. I can imagine that, just judging by the size of the hectares that they said that the safari park was, it would obviously be, although it seems relatively big in comparison to say, South Africa, for instance, no where near as big ..... although it seems that it'd be a good tourist attraction - TEXT 5 (ELAB; R/E INF)
Her comments were sometimes difficult to understand. This may be due to her inability to retain text information in her short-term memory (STM). As a result, her comments were often fragmented without making connections with the preceding text selections.

3. Listening to it and comparing it with a zoo, and umm, just virtually the visual video of it, umm it sort of virtually says to me that, even though the animals are obviously running free it's obviously a lot different to a zoo - TEXT 5 (SUM)

4. In the last couple of sentences I didn't quite understand the vocab ..... but just by looking at the video, it obviously seems that it would be fairly interesting place to go to ..... basically the safari park is something that is obviously a tourist attraction that's able to let these animals run freely that are on show - TEXT 5 (SE-LCONF; R/E INF; SUM)

She identified only one word and did not draw on other sources of information to make inferences. Therefore, she was forced to rely on either visuals or the prospective text.

5. I picked up otoosan so they're obviously talking about someone's father or her own father to be precise ..... just have to see exactly what emerges from that - TEXT 2 (IKEY; SELA)

Laticha's problem in decoding the key words she identified is highlighted in the following excerpts. She appears to have an appropriate approach for listening. Although she aimed at getting the gist of the story, her low level of word-decoding skills and her over-reliance on paralinguistic clues (use of voice tone) as a base for
inference prevented her from developing the story line. Consequently, her summary of the text selection was derived from her own guesses and hence lacked precision.

6. I listened for a fairly long period of time to just try to get a gist of basically what they were saying ..... picked up certain words and images like *otoosan, okaasan, I was thinking of mother, father, daigaku, uni ..... I was wondering, trying to work out exactly what the problem was that she was talking to her mother about, because some of the vocab I wasn’t too sure about and umm ..... basically I think she is virtually talking to her mother about, or it could actually be her grandmother or an aunt to find out you know, what she is going to do about her problem - TEXT 2 (DCOMB; IKEY; SE-LCONF; SUM)

7. Just listening to the way that she’s speaking and trying to understand exactly what she’s trying to say, it’s obvious that she’s, the tone of her voice is more so, that she is offering advice ..... and virtually saying that it will be okay and virtually just trying to, not calm her down, but sort of just offer some advice - TEXT 2 (INF; SUM)

Laticha activated her formal schema in attempting to identify the text genre. This was based on familiar music played at the beginning of a news program. She appears to be a sound-sensitive listener.

8. This music just reminds me of basically an introduction to television news ..... which is, you know, sort of either channel 7 or, anything like that - TEXT 1 (ALAN; ELAB)

Her comments in the following excerpts indicate that she was not comprehending. Although she identified the text genre successfully,
she picked up only two key terms (*kyoo* and *Tokyo*) in excerpt 9, which did not provide sufficient information for her to make inferences about the meaning of the text selection. Furthermore, excerpt 10 demonstrated that she decoded the words (*gakusei* and *okokusei*) incorrectly which reduced her level of comprehension drastically.

9. Umm, I basically got *kyoo*, she’s obviously talking about today’s weather ..... I virtually tried to listen to the whole paragraph, sentence to try and figure out exactly she’s going to talk about, and it was obviously in Tokyo - TEXT 1 (IKEY; DCOMB)

10. There was some of the vocab that I didn’t pick up because I haven’t, I didn’t know much about it ..... I picked up *chuugoku* which is China and *gakusei* which is student, or *okokusei*, I’m not sure about that ..... I’d have to listen to it again - TEXT 1 (SE-I.CON; IKEY; SLFM)

11. I got *sasumi* or it sounds similar to *natsu yasumi* but *yasumi* I got is holiday so, *sasumi* I’m not too sure of, it’s probably a completely different word ..... but umm, because a lot of the vocab in this particular tape I’m unfamiliar with, I’m finding it a little hard to pick up bits even though I can pick up familiar words obviously, but not all of it - TEXT 1 (TKNOWL; IDP-TXT)

12. *Tsukarimasu* is getting tired ..... so I’m not too sure about that or how it fits in - TEXT 6 (IKEY; COM)

Another example that illustrates her inability to associate key terms with other text sources or her schematic knowledge follows. Since no comprehension took place, she focused her attention on background sounds.
13. Looking at Tokyo was excellent, possibly, supaa, mita, Tokyoo ..... and I picked up some sounds, I couldn’t be sure what they are, it sounds like some cleaning sounds or a door or something like that - TEXT 6 (IKEY; INF)

She checked the word meaning by exploring alternative words to effect comprehension. However, her inference remained within the word level and hence comprehension did not occur.

14. She’s talking about nedan which to me is prices and then I got atsui, so hot ..... but that doesn’t make any sense, so I’m just not too sure exactly what she’s talking about ..... but they’re obviously talking about maybe she was talking about yasui instead of atsui I’m not too sure - TEXT 6 (IKEY; COM; ALAN)

With her limited range of vocabulary, coupled with problems in word decoding, she was forced to rely for interpretation solely on visuals, through which she produced erroneous interpretations of the text selections.

15. Something about okyakusan, umm the customers ..... maybe she had a hard day at work and maybe before when it said atsui, maybe it was hot possibly working, maybe she’s just finished work or something - TEXT 6 (IKEY; INF)

16. Just listening to the tone of his voice and the way he was saying things, possibly would suggest to me that he was trying to offer some sort of advice, or saying things will get better or something like that - TEXT 6 (INF)
Bill: The protocols produced by Bill resemble those of Sharon. Although he used cognitive strategies as many as 60 times, his individual protocols were very brief, without creating a link between text selections. Similar to Sharon’s behaviour, Bill did not extend the key terms or associate them with his schematic knowledge. His perceived level of text comprehension was 50 to 60 per cent under the two conditions.

1. OK, we’re at a China, zoo - TEXT 5 (IKEY)
2. Something very new here - TEXT 5 (IKEY)
3. Something *tame ni*, which belong to or in relation to - TEXT 1 (IKEY)
4. Now something happened twelve years ago - TEXT 1 (INF)
5. *Nigonen* ..... what’s that come out to? - TEXT 1 (IKEY; R/E INF)
6. *Shokuyoku*, I wonder what’s *shokuyoku* ..... something to do with hungry? - TEXT 1 (REPT; INF)

However, he attempted to associate visual information with his ceremony script stored in long term memory (LTM).

7. Looks like a celebration, maybe an opening ceremony - TEXT 5 (INF)

He related the two key terms he had just heard and attempted to identify the topic by relating to the visuals presented in the previous screen.

8. Something came from China, something came from China about twelve years ago ..... I wonder if it’s the tiger I saw in the last video - TEXT 1 (REPT; COM)
He mixed up the mother panda named *Fei-Fei* with the baby panda name *Tong-Tong*, which produced a completely wrong interpretation. To comprehend correctly it is vital for listeners to establish the relationships between the pandas as they appeared on the screen.

9. OK, somebody, *Tong-Tong*, had a baby - TEXT 1 (IKEY)

His summary illustrated that, although he had decoding problems, his ability to integrate two major sources of information (his schema and the text) produced a correct interpretation of the selection. This demonstrates how, by being strategic, listeners can offset shortcomings in decoding words.

10. OK, so she’s talking to her grandkid and he wants to go to the department store and she says it’s cheaper and close and they’ve got self service and that’s why it’s cheaper - TEXT 6 (SUM)

Due to his failure to correctly establish the nature of the relationships between the people in this selection, he could not correctly interpret the selection. However, he used the speakers’ tone of voice to infer meaning.

11. Somebody sounds surprised that there’s self-service .... is this mama come home to older sister? - TEXT 6 (INF; R/E INF)

**Brett:** Brett substantially lacked decoding skills and relied heavily on visual clues and voice tones to effect comprehension. He activated cognitive strategies 22 times in total. He acknowledged
that his vocabulary range is very limited, which affected his ability to comprehend. His perceived level of text comprehension was 45 to 50 per cent under the two conditions.

1. I can’t really understand what they’re saying but I can guess from the picture - TEXT 5 (DCOMB)
2. I’m just guessing it’s about a zoo because I heard the word *doobutsu* ..... that’s the only one I can recognise - TEXT 5 (IKEY; SE-LCONF)
3. Oh, I can guess what they’re talking about but I had trouble understanding ..... so maybe most of it I was just watching - TEXT 5 (SE-LCONF; DCOMB)
4. Just guessing it’s a traditional house from the picture - TEXT 2 (INF)
5. Just from the word I’m picking up I’m thinking maybe one of the *otoosan, daigaku* that’s all I can understand - TEXT 2 (IKEY)
6. Oh, I picked up one word the *nedan*, talking about some sort of prices or something - TEXT 6 (IKEY)
7. I can’t really understand but just I’m feeling she’s complaining about something from the tone of voice - TEXT 2 (INF)
8. Just sounds like an old person talking about something ..... Tokyo - TEXT 6 (INF; IKEY)

However, the protocol indicates that he successfully integrated three key terms to infer the topic of the news.

9. They’re talking about the panda, a zoo in Tokyo - TEXT 1 (IKEY)

The following protocol illustrates his perception of listening
comprehension as a process of understanding each individual word.

10. I can’t understand but I’m trying to pick up individual words ..... it’s a bit fast for me - TEXT 1 (DCOMB; SE-LCONF)

Unlike his approach to the previous excerpt 9, here he could not relate the three key words he had identified previously and thus he failed to establish a comprehension framework. He may be weak at encoding the original input into his STM.

11. Oh I can’t really understand it but I’m trying to imagine what they’re talking about the zoo, Tokyo and Ueno - TEXT 1 (IKEY)

Mick. Mick had a limited vocabulary repertoire and experienced difficulty in identifying topics although he used cognitive strategies 46 times. As a result, he used paralinguistic clues as his sole information source to effect comprehension. His perceived level of text comprehension was 40 to 60 per cent under the audiovisual condition and 40 per cent to 55 per cent under the audio-only condition.

The following excerpts demonstrate his heavy reliance on visuals to effect his comprehension, and his use of strategy was limited, in the main, to within the word-association level.

1. She’s talking about a date, about some animals which I see - TEXT 5 (IKEY)
2. Something to do with Chinese, ah people, ah at the park - TEXT 5 (IKEY)
3. Talking about something at Tokyo or belonging to
Tokyo - TEXT 1 (IKEY )

4. Doobutsuen again, something about the zoo ..... maybe going there - TEXT 1 (IKEY; INF)

He elaborated on specific words but did not really go beyond this.

5. Sanjuuman, thirty-thousand hectares comes to mind so, a big park ..... reminds me of Taronga Park Zoo - TEXT 5 (IKEY; ELAB)

6. Ah, the scene immediately brings to mind old Samurai movies, picture, the setting - TEXT 2 (ELAB)

However, the following excerpts demonstrate that after associating the two key words, he activated the ‘inferencing’ strategy (excerpt 8) or tried to infer the meaning from visuals (excerpt 9).

7. We’re associating the daigaku and the father ..... probably the father works at the uni and he might be home soon - TEXT 2 (IKEY; INF)

8. I got and it ..... oh the word Shirimasen ..... maybe about how it attains its kill, from - TEXT 5 (IDTC; IKEY; INF)

He repeated the word to attempt to decode its meaning. However this process was very slow and excessive focus on single words did not improve his comprehension.

9. Juugatsu, something about small ..... Juugatsu, juugatsu, juugatsu, juugatsu, October - TEXT 1 (IKEY; REPT)

Mick failed to relate his interpretation to new or previous
information. Instead, he took bits of information in isolation, which resulted in erroneous interpretation. In other words, he listened to text 'shreds' (Bacon, 1992a).

10. Mother's chastising the daughter for her impudence and she's trying to condemn what the mother said - TEXT 2 (SUM)

11. So she's talking about the university again .... maybe the daughter's inquiring about the university and she's saying it'd be all right to study at the university to that extent - TEXT 2 (IKEY; SUM)

He misconstrued the meaning of key words on several occasions (kokkoo – international relationship as kookoo – high school).

12. Talking about a junior school - TEXT 1 (IKEY)

He also misheard a key word but because he monitored the suitability of its meaning, he realised that it was not a meaning appropriate for the context (nengan – wish as mendai).

13. She's commenting about mendai ..... I don't know what mendai is but it may be babies or a baby screaming - TEXT 1 (IKEY; INF)

He monitored his comprehension and used the speakers' voice to infer the gender of the character. The process of associating this information with the word that he identified enabled him to expand his comprehension of the selected text. His interpretation was at the phrase level.

14. I have to listen to a bit more ..... it sounds more like a
woman, an older woman explaining about something big - TEXT 6 (SLFM; INF)

He anticipated the forthcoming text selection by relating the key word he identified to his shopping script.

15. I heard *nichiyoohin*, daily groceries ..... so she will probably explain about daily groceries you can get, daily groceries at the supermarket - TEXT 6 (IKEY; ANTC)

He was uncertain about whether the supermarket was the biggest or the best. His decoding problem hindered his ability to interpret the text selection.

16. And she says you can go to a number one department store - TEXT 6 (TRANSL)

He associated the loan word with English instantly.

17. I think she got a word *saabisu* ..... it's in English, abbreviation for service ..... you can get good service there maybe - TEXT 6 (IKEY; TKNOWL; INF)

His interpretation of the following texts was based solely on his imagination. These texts did not relate to either the previous text information or his schema. He interpreted the text information in isolation on most occasions.

18. A lawyer is taking to his wife or sister, “Did you get that?” She says “Did you get that to mum?” - TEXT 6 (SUM)

19. It seems to me they’re planning or trying to speak
softly, not to offend the mother or whoever the lady was speaking - TEXT 6 (SUM)

The AAP Group

David: David used cognitive strategies 51 times. Although this level of usage was average, he used multiple sources of information (visuals; tone of voice; key words; schema; discourse marker) to evoke strategies in sequence. He did so immediately after he identified a couple of key terms. These strategies included 'translating' and 'summarising'. He processed a large chunk of information at one time and, moreover, he was able to retain this information and the information presented in the previous section in his STM to enable integration of both lots of information. As a result, his translations and summary were mostly accurate. This was because of his high level of decoding and processing skills which in turn increased the processing capacity in STM. His perceived level of text comprehension was as high as 90 per cent under the audiovisual condition and was 85 to 90 per cent under the audio-only condition.

David identified three key words first (excerpt 1) and made inferences based on word association while referring to his schematic knowledge (excerpt 2). He produced this summary:

1. Something about China and obviously it's something about tigers ..... and I heard something about 30 animals - TEXT 5 (IKEY; IKEY)
2. It must have something to do about how tigers are becoming extinct because it talks about in Siberia or somewhere like that ..... and it refers to how their numbers are becoming less and less - TEXT 5 (INF; TRANSL)
Apart from identifying key terms, David used linguistic information (discourse markers) and associated it with his previous interpretation of text selection. This indicates his ability to retain the text information in STM. On this basis, his translation of the text selection was accurate on most occasions when he produced summaries. He also used visuals simultaneously to make coherent interpretations (excerpt 4).

3. I heard safari park ..... I picked up the words ‘something, something no tame’ ..... so it could mean something to do with how they’re trying to protect or preserve the species in the form of a safari park - TEXT 5 (IKEY; IKEY; INF)

4. I picked up esa ..... it showed a picture of the tiger chasing around a rabbit ..... so I guess it’s talking about how they’re living with other animals but it’s talking about the difficulties some animals that haven’t been trained from birth to catch their own food may have - TEXT 5 (IKEY; DESS; SUM)

He segmented or chunked information in relatively large units. Using these large chunks of information which he confirmed through use of visuals, he produced correct summaries on most occasions.

5. Something about in captivity ..... the humans must keep giving the tigers food ..... and it was obviously in a cage ..... I heard that something, something will continue ..... so, it means that the keeping of lions in captivity will keep continuing - TEXT 5 (IKEY; TRANSL; DESS; IKEY; SUM)
By associating two key terms, he inferred the topic and the content of the text.

6. Something about *daigaku* ..... oh, she said something about the cost of university ..... maybe he won't come back - TEXT 2 (IKEY; IKEY; INF)

He processed information without difficulty and produced instantaneous translation of the set phrase. With his ability to access high level information (sentence level), he produced an accurate summary.

7. She wants her daughter to go to university but the daughter's concerned about the mother's viewpoint ..... *tachiba ga warukunaru*, her standpoint in the home will become worse - TEXT 2 (SUM; TRANSL)

He used commonsense schema as a basis for his inference.

8. After entering into this month a something condition ..... which obviously means, I suppose if she died then she must have become sick or displayed some sort of unusual behaviour - TEXT 1 (TRANSL; ELAB)

9. I only picked up the last bit, she started breathing like she was slowly breathing, like she was tired ..... which obviously means it's describing how she died or the way in which they observed her dying - TEXT 1 (TRANSL; SUM)

David used the speaker's tone of voice to infer the character's emotional state and related this information with key terms to identify the topic.
10. How she was astounded by the size of it, I can still tell by her voice how she's marvelling at it ..... I picked up a few words, *nichiyoo hin* everyday things ..... so I guess she's talking about all the different types of products that were on sale there - TEXT 6 (SUM; IKEY; SUM)

He made inferences based within a framework that he had already established. Relating two key words that he had identified within a given framework or context facilitated his comprehension and produced accurate interpretation. This approach enabled him to produce a more coherent and accurate summary of the selection.

11. I picked up self-service and *yasuku* ..... therefore I guess, associating those, she's saying that because it's all self-service and you take everything yourself then you can buy things more cheaply - TEXT 6 (IKEY; SUM)

This is the end of one episode. Therefore the text content ended in the style of 'to be continued'. Since the ending did not make sense to David (and he was not aware of the ending), after translating the selection, he anticipated what would follow.

12. I heard someone saying that they don't understand and that it's got nothing to do with this town ..... I don't know where it's going to go from here - TEXT 6 (TRANSL; ANTC)

**Breanna:** Breanna used cognitive strategies 46 times. She usually activated the 'anticipating' strategy for the coming selection whenever she could not make logical interpretation of texts. She also
evaluated her comprehension and provided self-appraisal of her behaviour that may have encouraged her progress. There was a great gap in her perceived level of comprehension under the two testing conditions: 50 to 55 per cent under the audio-only condition and 80 to 90 per cent under the audiovisual condition.

By associating three sources of information such as word, visuals, and her schema, she inferred the text selection effectively.

1. The Chinese government ..... I don’t understand but, obviously something about these beautiful big tigers, maybe they’re endangered, they probably are - TEXT 5 (IKEY; INF)

Similar to the comprehension behaviour exhibited by David, Breanna was able to retain previous information in her STM and related it to visuals to confirm her inferences. She evaluated her own progress.

2. Oh I like this place ..... OK, finally somewhere they have a proper safari park and I think this might even be in China ..... so it’s a good move - TEXT 5 (R/E INF; INF; SE-CONF)

After summarising the selection, she related the text information with her experience to check whether the text information was analogous to her expectation.

3. The parents want the kid to go but the kid doesn’t want to go ..... it’s foreign to me because I’ve always wanted to go, the other way ‘round - TEXT 2 (SUM; ELAB)
She identified the word and immediately anticipated unknown elements that were involved in the event. Use of the ‘anticipating’ strategy enabled her to focus on forthcoming text selection and thus facilitate her comprehension.

4. Someone died! - Text 1 (IKEY)
5. Something from China ..... I don’t know but maybe it’s a panda? - TEXT 1 (IKEY; INF)
6. A baby was born ..... but I don’t know when - TEXT 1 (TRANSL; ANTC)

She associated a couple of key terms she had identified and then attempted to reflect on her personal experience in Japan. She monitored her interpretation, but as she had not understood enough key terms (or other information), her inferencing of the text did not match her experience. Her interpretation thus remained incomplete and she became less sure of what she thought she understood.

7. I don’t know but doobutsu, the doobutsuen they’re talking about ..... Ueno doobutsuen and stress relief ..... I don’t think the two go together personally ..... because I’ve been there and it didn’t really seem to happen - TEXT 1 (IKEY; IKEY; COM; ELAB)

She continued to evaluate text information based on her incorrect interpretation. Since she missed some information she continued to question the story that centred solely around her past experience and she could not get back onto the right track. This illustrates the powerful effect of inappropriate schema working by default.

8. I don’t know but if it was Ueno doobutsuen and they’re trying to talk about how there’s stress relief for the
animals or putting the animals to the best test I disagree ….. because when I went to Ueno doobutsuen it struck me how small the cages were and how dirty and how ugly ….. that’s all I can think about - TEXT 1 (R/E INF; ELAB; COM)

After translating the text selection, she inferred the story line by relating her experience. She confirmed her hypothesis by referring to her supermarket script.

9. She’s saying that department stores and supermarkets, the difference is that one’s cheaper ….. I don’t know which one she means is cheaper, I’m suspecting she means the supermarkets are cheaper - TEXT 6 (TRANSIL; INF)

She inferred the character’s mood by use of voice. Unlike Laticha, Breanna did not produce her interpretation based on guesses or less reliable information sources. Instead, when comprehension was not occurring, she often activated the ‘anticipating’ strategy.

10. She wants to complain about the prices ….. but I don’t know if she means the department or the supermarket - TEXT 6 (INF; ANTC)

Jenny: Jenny used strategies 36 times. Jenny’s major focus was single words and often she repeated the words and was very determined to work out their meanings. In doing so, her retrieval of word meaning was often too slow and insolated, without relating to other sources of information. This was because she had forgotten the earlier part of the text. Consequently, her level of comprehension was limited. Her perceived level of comprehension was 70 to 80 per
cent under the audiovisual condition and 50 to 70 per cent under the audio-only condition.

She identified one key word and associated it with visuals.

1. OK, oh, there’s something about the animals in, in *Chuugoku*, some, some, something’s living there - TEXT 5 (IKEY)

She made a logical guess from the phrase she translated.

2. OK, the, the numbers of these animals are, they’re depleting ..... so maybe extinction - TEXT 5 (TRANSL; INF)

Her translation was fragmented without relating to the text sections that were presented in the preceding sessions.

3. OK, so because of this they’re going to ..... they’re going to help the animals so they don’t become extinct ..... Chinese something - TEXT 5 (REPT; SUM; IKEY)

The following excerpts show her reliance on solving the meaning of words. Since she perceived the word partially incorrectly, she could not then correctly infer its meaning. The partially perceived word *kun* appeared consistently in the excerpts.

4. OK, for these animals, they’re, they’re having a safari park ..... There’s this word *kun*, I didn’t understand it - TEXT 5 (SUM; SE-LCONF)

5. I think *kun* means the animals they’ve got there - TEXT 5 (INF)
The following excerpts demonstrate her sole focus on a single word and attempts to infer its meaning. She spent too long in repeating words and focusing on the meaning of single words and the rest of the text information appeared to have been forgotten and not processed at all.

6. *Kekkyoku, kekkyoku* ..... I’ve heard that before and can’t remember what it was ..... *kekkyoku* ..... - TEXT 5 (REPT; SE-LCONF; REPT)

7. *Ryuugakin* I don’t know if I got that word right, *ryuugakin* ..... but I understand what it was *ryuugakin* ..... oh, something, it has -in on the end so I presume that it’s some kind of person but I don’t know - TEXT 2 (REPT; REPT; INF)

Repetition of words indicates her inability to decode the meaning of words quickly.

8. *Ikanakunare... i-ka-na-ku-na-ru* ..... she didn’t go - TEXT 2 (REPT; TRANSL)

9. *Nengan, nengan no akachan* ..... that’s some kind of animals’ baby, I think ..... I don’t know what *nengan* is - TEXT 1 (REPT; INF; SE-LCONF)

10. *Ninengo, ninengo* ..... oh, two years ago perhaps - TEXT 1 (REPT; INF)

Her summary was inaccurate as a result of her focus on single words and she did not relate them to other information sources.

11. And they’re, they’re making these parks so the tigers don’t have to live in situations like this any more, I think
Sometimes her summary was correct when the genre was drama. Jenny perceived she was better able to comprehend drama texts than news texts (Table 3-9).

12. They’re saying so many times he’s not coming home and they’re saying it in so many different ways - TEXT 2 (SUM)

13. Something at the end, she said that she’s looking forward to going or something like that - TEXT 2 (TRANSL)

She perceived the word incorrectly twice in excerpt 14 – seijyooka (normalisation) as sensei (teacher) and seito (students) and once in excerpt 15 - hachi juu (80) as juu hachi (18).

14. OK, something about, something about teachers and students - TEXT 1 (IKEY)

15. 27 years old and 18 years old - TEXT1 (IKEY)

Her less confident manner in inferring word meaning is demonstrated in the following excerpts.

16. Shokuyoku is that their appetite? - TEXT 1 (INF)

17. Hyoukuryoin ..... kin, what that means, hyoukuryokin? - TEXT 6 (REPT)

However, she used visuals to relate what she had comprehended so far.

18. Something about feeling, stress at the zoo ..... maybe
the animals feel stressed at the zoo if there's people watching them - TEXT 1 (IKEY; INF)

She used the speaker's tone of voice to successfully infer the age of the character. She also produced alternative propositions from which she could choose later.

19. OK, she sounds like an old woman and she's just gone to the supermarket in Tokyo and it sounds like a gymnasium ..... so maybe she usually shops at smaller shops, so this is a new experience - TEXT 6 (INF; INF)

She confirmed one of the propositions she had made in the previous text selection. She also used the speaker's tone of voice to infer the character's emotional state effectively.

20. OK, she's gone to the department store and the prices are cheap and there's something about it ..... her voice sounds like disbelieving or suspicious - TEXT 6 (SUM; INF)

Belinda: She used cognitive strategies 58 times. Her preferred strategies were 'inferencing', 'translating', and 'identifying key terms', although she used a wide range of strategies overall. Initially she appeared to have experienced a decoding problem but nonetheless produced accurate translations and summaries of the text selections. Her perceived level of comprehension was 50 to 60 per cent under the audiovisual condition and 60 to 80 per cent under the audio-only condition.

Although she acknowledged the two sources of information (text and visuals), she did not relate them (excerpt 1), However, the second
excerpt showed that she made an inference regarding the proposition and interpreted it successfully from the selection she translated.

1. I am thinking about China ..... and then a picture of a tiger came up but I don’t know why - TEXT 5 (IKEY; VIS)
2. They said about the numbers decreasing ..... so maybe they’re at a really dangerous low level of extinction or something - TEXT 5 (TRANSL; ELAB)

She identified the topic only, without activating other information sources. This behaviour made her a passive listener by not attempting to infer the rest of the selection.

3. I didn’t really understand much of that but I presume they’re talking about the tiger and what they’re living like or whatever - TEXT 5 (INF)

The following excerpt shows that she attempted to produce alternative hypotheses based on the key terms, what she had heard, and her schema.

4. Maybe they’re talking about how to increase the numbers or something and talking about a safari park ..... a park that just opened in China - TEXT 5 (INF; IKEY)

After identification of a key word (although partially wrong), she elaborated on the content. She also used visuals to make her own inferences but her inferences did not relate to what was presented previously.

5. A 30 hectare safari park ..... I presume they have buses
to go around it in as in other zoos or something because that's pretty big - TEXT 5 (IKEY; ELAB)

6. And then they’re giving them cut bits of food ..... I don’t know why but because they’re in cages now rather than out in the park - TEXT 5 (DESS; R/E INF)

She attempted to establish the setting and relationships between the people in this selection. This information is crucial for comprehension to take place.

7. She said that someone wouldn’t come home and she’s sitting with her mother ..... I think maybe she’s engaged or something and still living at home waiting for her fiancee or something ..... I just noticed the way they’re sitting and it made me think of Japan and the way that I had to sit like that - TEXT 2 (TRANSL; INF; ELAB)

Her inferences became more accurate. She either identified the topic or translated the test selection. Then she made inferences by relating new text to previous text information.

8. They’re talking about the father and when he plans to come home ..... they’re probably worried about him or angry with him or something - TEXT 2 (SUM; INF)

9. The father’s angry with her ..... so maybe she’s waiting for him to come home so she can apologise or something - TEXT 2 (TRANSL; INF)

10. Talking about university or something ..... I’m not sure if the father wants her to go and she doesn’t want to go or the other way around and they’ve had a fight over it - TEXT 2 (IKEY; COM)
She attempted to translate the selection without success because her focus this time was on the visuals.

11. She said he’s really angry about the university situation that if she goes she can’t be like them or be a good mother or something .... I’m still wondering what the lady’s sewing - TEXT 2 (TRANSL; ANTC)

She successfully identified the topic from either visual or auditory input and then she related this information to her experience in Japan.

12. A giant panda in a zoo .... all I can think of is the pandas that I saw in Japan that were really big and quite cute - TEXT 1 (IKEY; ELAB)

13. Talking about a supermarket in Tokyo .... reminds me of when I went shopping there. There were lots of supermarkets there - TEXT 6 (IKEY; ELAB)

14. As wide as a gymnasium .... a place with a counter type of thing and pretty much all of the shopping centres are like that in Tokyo .... they’re all pretty big - TEXT 6 (TRANSL; ELAB; R/E INF)

15. A shop that had everything from groceries to everyday type of things .... it’s pretty much how I remember they were like - TEXT 6 (TRANSL; ELAB)

She failed to decode several words. However she did successfully identify numbers such as the date 19XX. Lack of word knowledge prevented her from interpreting the selection.

16. Talking about so many years beforehand .... maybe a panda died or something .... I didn’t really get it - TEXT
Using background sounds, she successfully infers the meaning.

17. Talking about a baby panda ..... so maybe a mother had a baby and it sounded like it was quite playful - TEXT 1 (IKEY; INF)

Finally she confirmed her interpretation using her knowledge of Chinese names.

18. I presume that Yuu Yuu is the name of the panda though I didn’t really know - Text 1 (INF)

The following excerpt indicates her accurate summarising ability.

19. Comparing the 27 years old of the panda is like 80 years old, something in human length, human age ..... so it’s pretty old - TEXT 1 (SUM; R/E INF)

She interpreted some text selections accurately but she became less confident when the text information did not match her expectation or existing schema.

20. As much as they can they’re going to try and reduce the stress of the panda ..... I don’t know what stress a panda could have though - TEXT 1 (TRANSL; ANTC)
21. About it being cheap ..... I don’t know whether she was saying that it was or wasn’t ..... but I thought they were - TEXT 6 (TRANSL; COM; COM)

On the other hand, she became a confident listener when her
translation matched her expectation.

22. They sell things cheaply and you get it yourself ..... so it sounded alright - TEXT 6 (TRANSL; R/E INF)

Additionally, she used tone of voice (excerpt 23) to infer the age/genre and linguistic information (kinship term) to establish human relationships between characters.

23. That you take and you get things you like for shopping ..... she sounds like a grandmother ..... she’s really impressed with this shop - TEXT 6 (TRANSL; INF; R/E INF)

24. I didn’t hear what he said at first, but he’s obviously the younger brother because he called her oneechan, older sister, and he asked a question ..... I didn’t hear what he said and she answered with something I didn’t understand - TEXT 6 (TKNOWL; SE-LCONF)

**Tony:** Tony used strategies 53 times from a relatively wide repertoire. His comprehension appeared to be influenced heavily by the presence of visuals. However, his protocols did not indicate whether he comprehended the text selection. This was due to a lack of text-related comments. His perceived level of comprehension was 60 per cent under the audiovisual condition and 25 per cent under the audio-only condition. Thus the different listening conditions appear to have a dramatic effect on his listening comprehension process.

His interpretation was based extensively on visuals. Occasionally, however, he elaborated by relating text information to his experiences.
1. Straight away it's gone from a tiger to someone cutting a tape, for some reason ..... seems like it's an opening ceremony or something ..... that is what it symbolises when you see someone cutting a tape - TEXT 5 (DESS; INF; ELAB)

2. A bus load of tourists, reminds me of what happened in Japan last year when the tunnel crashed - TEXT 5 (ELAB)

He reacted emotionally to some of the visuals and said that the scenes with a drastic or destructive nature reduced his comprehension level.

3. Aah, immediately this gets me really angry, I hate seeing like animals so strong as that being put in cages and metal bars. It's a very striking picture - TEXT 5 (R/E INF)

4. There is this guy just feeding him slabs of meat, just, it's not right - TEXT 5 (R/E INF)

The following excerpts demonstrate his heavy reliance on visuals (for example, the characters’ feelings and facial expressions) without comprehending auditory input. It is not clear from the data whether he comprehended the simultaneous presentation of aural information.

5. The tiger is upside down, it's a very strange camera angle they've got but quite humorous - TEXT 5 (R/E INF)

6. Straight away, traditional style housing no matter even if I see this as a movie or whatever ..... it's very, very Japanese with the tatami mats, shoji screens and they're
kneeling down - TEXT 2 (DESS; R/E INF)

7. The expression on the young girl’s face, she’s very worried about something. She’s very, she seems very defensive - TEXT 2 (INF)

8. Their whole expression has changed. Their topic has changed. They seem a bit happier now, a bit more relaxed - TEXT 2 (INF)

His protocol confirmed his heavy reliance on visuals.

9. The first thing in my mind even though the teacher has told me there is no picture, I’m trying to switch my audio senses on ..... no matter what I’m trying to focus all my attention on my audio, it’s very difficult when you cut off your visual senses - TEXT 1 (SELA; IDP-TXT)

The presence of English loan words and identification of the topic set his framework for the task.

10. OK, straight away I know it’s talking about a zoo, about a giant panda ..... it’s verbalised in English ..... it’s very easy for me to pick up things in Japanese when they say it in English and you know what they are talking about ..... if you know the subject it’s very easy to understand the dialogue - TEXT 1 (IKEY; ALAN; SLFM; SLFM)

Due to the fast delivery of news and registers involved (and perhaps coupled with his limited vocabulary range), he was unable to pick up some key terms except a loan word (stress) and a familiar Japanese place name (Ueno).
11. *Niju nana sai*, something is 27 years old ..... it’s very quick - TEXT 1 (IKEY; IDP-TXT)

12. I know it’s at Ueno zoo and they’re talking about stress that is put on ..... this lady is very, very fast, it’s very difficult to pick up - TEXT 1 (IKEY; IDP-TXT)

He describes the 'fleeting nature' of the listening process in a precise manner. The speed of delivery appears to be the major factor affecting his (and other students') comprehension and as a consequence, it appears he comprehended very little of the text selection.

13. Immediately when you take the visual away from me, it’s just so difficult ..... you’re just trying to grab words and when you’re holding a thought in your head you go ‘yep, that’s the word’ and then all of a sudden you’re about two or three sentences further on and you just feel yourself drowning in a sea of words - TEXT 1 (IDP-TXT; DCOM)

Without visuals, he used the speaker’s tone of voice to infer the character’s age. He then picked up another loan word. Use of loan words facilitates considerably the English-speaking students’ comprehension ability.

14. Sounds like an elderly lady’s voice ..... I picked up *supaa* in Tokyo - TEXT 6 (INF; IKEY)

His recent experience of learning these words that were retained in his STM facilitated his comprehension. By associating these words, he inferred the topic.
15. Aah that’s great! ..... I’ve just learned these two words in the past week ..... shokuryohin and nichiryohin ..... they’re talking about groceries and they’re talking about a supermarket even though I can not see what is happening - TEXT 6 (R/E INF; ELAB; IKEY; INF)

The following excerpts indicate that his lack of vocabulary prevented him from making inferences about the text selection.

16. Just picking up words like sukimonono and kaimono, things they like, things they want to buy ..... not much more I can glean from it just from listening - TEXT 6 (IKEY; SE-LCONF)

His use of speaker’s tone of voice to infer the characters’ mood was highlighted but little information was available to infer his level of comprehension.

17. The change in their voices. Their voices have changed, they seem to be talking about something a bit more serious than their supermarket - TEXT 6 (INF)

18. Very slow, their voices have, the lady’s voice has dropped. Something she’s concerned about or something she’s a little bit unsure about - TEXT 6 (INF)

Gary: He used strategies 62 times and activated most of the strategies identified in the study. The majority of his protocols were descriptions of his own comprehension behaviour. However his behaviour did not reveal precisely the extent to which he comprehended the text information. As he comprehended, he often used linguistic clues (vocabulary and discourse markers) to trigger other strategies such as ‘elaborating’ by relating the text information
with his experiences in Japan. He was 'pro-active' to information and often anticipated what would follow. His perceived level of comprehension was 70 to 80 per cent under the audiovisual condition and 50 per cent (drama) and 80 per cent (news) under the audio-only condition. These figures indicate that Gary perceived news texts easier to comprehend than drama texts.

The following excerpts demonstrate the processing patterns that Gary favoured.

Identification of key terms (usually text-based linguistic items) led him most times to activate multiple strategies. He described for himself one linguistic discourse marker as an ‘instant trigger for meaning’ (excerpt 2). He usually translated it and attempted to contextualise what he understood. Then he anticipated what would follow. Since he created alternative scenarios, he had greater capacity to process other information.

1. When I hear hodo I think of ‘to what degree’ ..... so I think of the numbers, you see, the number, to what degree she’s talking about so it’s something to do with quantity, size, or these sort of things - TEXT 5 (IKEY; ANTC)

2. So tame ..... I always identify the word tame and reflect on or think about what's coming next ..... for what purpose were they doing that. It's sort of like an instant trigger for meaning in my mind - TEXT 5 (IKEY; SELA; ANTC)

He related the discourse marker to the previous text and then anticipated the forthcoming selection. He also selected certain elements to direct his attention (excerpt 4). Since he did not summarise these selections, it is not clear if he understood the content.
3. When I hear *tsuite* I think about how the word popped into my mind and I automatically convert the preceding phrase into about that topic in English ..... so now I’m getting ready for the next phrase she’s talking about, because obviously there was an end in the last phrase - TEXT 1 (DCOMB; ANTC)

4. The phrases like *ereba* and the conditional ending *ba* stand out ..... and so I try to work out the meaning backwards from that and then forwards - TEXT 6 (IKEY; DCOMB)

5. The stress that she uses on different words like *mono* and at the end of the sentences ..... the words like *desho*, *ne* and once again these endings, it makes me think whether it’s assertive or a question or whatever ..... and think of the conversation that I hear around university - TEXT 2 (ALAN; ALAN; ELAB)

6. *Kashira* stands out because I actually used *kashira* after I first heard my female friend use it in Japan and everyone laughed because I used female expression ..... but she’s talking about price so she’s worried about cost and images of people - frugal people worried about the cost come into my mind ..... I’m thinking why she should worry about cost she should just go and buy it - TEXT 6 (ELAB; VIS; R/E INF)

He used the ‘visualising’ strategy after identifying a key word.

7. So here, about the park ..... I visualise the park and obviously the pictures help you do that as well but I wasn’t looking at the pictures. I still visualise safari park or similar type of environment - TEXT 5 (IKEY; VIS)
In the following protocol he mentioned that his attention shifted to visual mode only when the screen presented a dramatic scene. This reactive behaviour to visuals was similar to the behaviour exhibited by Tony.

8. At this stage, when the visuals are so dramatic it’s hard to concentrate on what she’s actually saying ..... so when you see a lion actually attacking the sheep or whatever it is, my concentration goes away from pure listening to more visual and therefore the meaning’s not clear - TEXT 5 (DCOMB; DCOMB)

9. When they’re talking about the meat feeding process I’m actually in awe of the tiger and what it’s actually capable of doing, what’s it catching ..... the cage also inspires that sort of fear in me - TEXT 5 (R/E INF; R/E INF)

When the screen presentation became less overpowering, he began to concentrate again on comprehending the text.

10. Now that the image is cute and I’m thinking about how cute the lion is ..... and I’m taking more in about what she is saying rather than when the image was a more ferocious image on the screen - TEXT 5 (R/E INF; DCOMB)

Gary paid attention to the speaker’s tone of voice to aid his comprehension. From the tone of voice, he also inferred meaning.

11. As soon as I hear kanaa I reflect back to when I’m in that situation with Japanese and they’re stressing over
what they’re doing or whether or not something is gonna happen or what to do ..... so I empathise with them in the current situation ..... and it’s such a typical stress and tone in the voice that it’s quite easy to pick up the meaning - TEXT 2 (ELAB; R/E INF; SE-CONF)

12. There is something, something about the tone, the girl speaks in and the mother speaks in, that makes me focus more on the girl’s voice than the mother’s voice ..... her voice seems to be more attractive or more easy to listen to my ears - TEXT 2 (SELA; R/E INF)

13. So from the tone of his voice, sort of the response, the tone of the old woman’s voice, they are trying to discover something ..... he is asking her if she’s tried a department store ..... she must be complaining about something she couldn’t find at the supermarket - TEXT 6 (INF; TRANSL; INF)

14. So now she sounds like a type of complaining woman and she’s obviously complained about something or someone has complained about something to her ..... so then there was an interjection by another young female voice so the tone of the voice makes me think she’s startled at something the mother, the older lady said - TEXT 6 (INF; INF)

He expressed difficulty in understanding the speech spoken naturally by native speakers.

15. When I listen to the mother’s voice I don’t pick up as clearly as I do the words of the daughter ..... I think this is some sort of way I learnt the language or what I listened to, maybe my friends and there seems to me some sort of cross generational difference in the way they
He also relied on background noise as an aid to comprehending. Like the dramatic visual scenes, some background noises also affected his comprehension.

16. The changes in the voices and the sound of the background are affecting how I listen to the tape as well ..... so the roar of the panda roaring, it's sort of interfering a little bit with how I was comprehending - TEXT 1 (DCOMB; IDP-TXT)

It was also the case for Gary that his use of one strategy triggered use of other strategies. His visualisation of the scene acted as an instant trigger for using the 'elaborating' strategy.

17. I visualise, probably someone like my last home stay's mother's mother and probably wearing a *kimono* ..... talking about the supermarket, just the sort of Seven Eleven style of supermarket in Japan. But it's hard to find groceries, all the rest of it - TEXT 6 (VIS; ELAB)

18. Straight away I'm thinking the image she's talking about the panda and the zoo or the animals, so I'm getting the picture of black and white ..... recalling memories of a picture of a zoo, a Chinese zoo in Beijing - TEXT 1 (VIS; ELAB)

Loan words that originated from English written in katakana also appeared to evoke listeners' comprehension. Here Gary described his listening comprehension process with the help of loan words.

19. The *katakana* word in the middle of the sentence
really stands out to me, so it makes comprehension a little bit easier ..... Ears don’t have to drive for every single word to pick up, trying to pick up the meaning of the sentence - TEXT 1 (SLFM; DCOMB)

He identified the news genre and described its structure.

20. Typical entry into a news article, giving date and location and very structured part of the news item - TEXT 1 (ALAN)

He used the ‘selective attention’ strategy and related it to the given context to facilitate his comprehension.

21. I hear the word *kankeinai* ..... it really stands out because it’s a set phrase. It’s used so globally in Japanese ..... so basically I can get the meaning of the sentence from the word *kankeinai* so ‘no relation with’ or ‘nothing to do with’, this sort of English expression, then I relate it to the sentence because meaning becomes clear - TEXT 6 (IKEY; ALAN; DCOMB)

The following excerpt shows the role played by familiar terms as facilitators in text comprehension. The familiar sentence-final particles at the end of certain expressions helped him to relax and to anticipate the forthcoming selection.

22. These *kedo* endings once again are similar to *kana*, *kashira* ..... these sort of endings where people are contemplating whether or not something’s right ..... *likedo* once again it’s a set phrase in Japanese ..... it’s quite easy to listen to. My ears actually relax on listening
to something so set. I can prepare for the next phrase's coming alone and makes it's a sort of like a respite .... If there's a long line of words that I don't know, it's almost impossible to get the meaning. It's a very frustrating learning experience but if there's a few words or phrases that I know interspersed in the passage, it is a much more valuable experience and much easier to learn than when words are not completely unknown to you - TEXT 6

(TKNOWL; ALAN; ALAN; SLFM; DCOMB)

The analysis of these excerpts presented above demonstrates clearly the qualitative differences between the AAP and BAP in their use of listening strategies. On the other hand, data from the quantitative analysis presented in 4.1.1 showed that these L2 subgroups used a similar range and frequency of strategies proportionally, despite the different test conditions and use of different genres of text. The data also showed that students of the BAP were as active as students of the AAP in their use of strategies such as 'identifying key terms' and 'inferencing'.

Nevertheless, the protocol evidence revealed that strategy use by the BAP was generally ineffective and did not produce accurate interpretation of texts. This was due mainly to the inability of those in the BAP to process information from a longer text in a contextualised manner. As a consequence, they relied heavily on visual information, which in turn resulted in erroneous text interpretation.

The major differences between the AAP and BAP subgroups have been summarised below:

After they had identified key terms, the AAP accessed the meanings of these terms which triggered other strategies instantly. The strategies triggered were 'elaborating', 'inferencing', or 'visualising'. They were
evoked in clusters, which verified listening as an interactive process between text and listener. On the other hand, the BAP experienced difficulty in decoding words with their attempts at both perceiving words and establishing their meanings. Often they identified key terms in isolation, without any attempt to link these to other parts of the same texts or aspects of the full text. This behaviour creates problems in remembering. Unlike the AAP, they could not access this information quickly to enable them to trigger other strategies. Thus the BAP’s interpretation was confined to single words on most occasions. These behavioural differences between the two subgroups have significant implications for STM processing capacity.

With extensive attention to individual words and spending considerable time attempting to establish their meanings, the BAP’s processing became overloaded and as a consequence, they generally could not remember what they had comprehended. In contrast, due to the AAP’s ability to process information smoothly, the AAP were able to relate what they comprehended to previous information. Moreover, they were able to process a larger chunk of information (phrases or sentences rather than single words) at one time, which produced more coherent interpretation for them. It is inevitable, then, that with greater information intake and fewer processing problems, listeners would be able to activate a wider range of strategies than they could do otherwise. In general, the smaller the intake of information, the less coherent are the listeners’ interpretation results.

Furthermore, the AAP attended to auditory and visual input simultaneously. They used visuals to confirm what they had comprehended or their hypotheses. On the other hand, the BAP’s focus was primarily on visuals. Other strategies used by the AAP include ‘selective attention’ and ‘anticipating’, which were rarely used by the BAP.
The behaviour exhibited by the students in this study as they attempted to create general meaning was analogous to the findings of earlier studies: the BAP students listened to 'shreds and details' and the AAP students listened to 'content and ideas' as referred to by Bacon (1992a:408).

In summary, the data examined in 4.1.2 in this chapter suggest that 'identifying key terms' - the strategy used most commonly by all students - is crucial for effective comprehension to take place in listening as this strategy becomes a basis for activating other key strategies such as 'inferencing' and 'elaborating'. These data also verified that strategic listeners cluster follow-up strategies such as 'inferencing' and 'elaborating' in sequence and are mentally active. These characteristic features of strategy use by the proficient group (the AAP) were incorporated in the strategy intervention program. The next section reports the results of this intervention.
4.2 Study 2 - Listening Strategy Intervention Program

Study 2 reports the results of the listening strategy intervention program involving ten students of Japanese language. The participating students were assigned to two groups: the intervention group (IG) and the non-intervention group (NIG). The assignment for the IG or the NIG was made voluntarily by students in order to avoid timetable clashes with other subjects.

4.2.1 Training sessions

As explained in Chapter 3, the choice of strategies included in Study 2 depended on the findings of Study 1. Therefore, it is necessary to provide here procedural descriptions for the training and testing sessions.

The results of Study 1 identified three key strategies used by the L1 and L2 speakers. The inclusion of these three strategies was based on the observation that the strategy intervention may be more effective by concentrating on teaching a small number of strategies as students may become confused if multiple strategies are introduced at the same time (personal communication with Chamot in 1998). The three strategies included in Study 2 are: 'identifying key terms', 'elaborating' and 'inferencing'. Further analysis of Study 1 data discussed in 4.1.2 in this chapter revealed that simply teaching these strategies independently would prove to be insufficient: the protocol data demonstrated that the AAP students of Study 1 clustered these strategies in distinct ways. For example, the group activated strategies such as 'visualising' and 'elaborating' immediately after they identified key terms. These strategies were then followed by 'inferencing' strategies. In other words, the instruction on clustering these strategies should be a part of an ideal strategy training program (Brown, 1988). The two strategies of 'elaborating' and 'inferencing' are presented in sequence. Bridging the 'elaborating' strategy and
‘inferencing’ strategy creates an additional encoding route that results in better integrated memory representation of text (Anderson, 1983; Horiba, 1996; Myers & Duffy, 1990). Under such conditions, original information is more easily retained and retrievable from memory and thus instructing students to use these strategies in sequence improves their level of comprehension.

Two important considerations are the role of metacognitive awareness and control of cognition in learning (see 2.5.2 in Chapter 2). A teacher-directed intervention program can instruct students in pairing cognitive strategies with appropriate metacognitive strategies, since this form of pairing is believed to maximise students’ language learning outcomes (O’Malley et al., 1985b; Short & Weissberg-Benchell, 1989).

The literature review in 2.6.3 in Chapter 2 reported the positive effects of advance organisers in various forms on memory and learning. The title of the videos served as an advance organiser in this study, by allowing the students to establish an appropriate working framework and it contains major key terms that relate to general information on the topic. These key terms also reappear frequently. Familiarity with key terms (and an ability to decode them) is crucial, considering the transitory nature of the listening situation (Lund, 1991). Additionally, because the text was viewed under audiovisual contexts, the students were advised to allocate their attention to both audio and visual modes. Thus, if they encounter difficulty in decoding the meaning of a word aurally, they may be able to induce its meaning through visual information, but this does not work in reverse.

Thompson (1995:138) lists several strategy units for L2 listening strategy instruction: 1) determining setting; 2) determining
interpersonal relations; 3) determining mood; 4) determining topic; 5) forming hypotheses; 6) making predictions and inferences; and 7) determining the main idea of a passage. The first three items (1, 2, and 3) are closely related to the visual components of a video which often appear on the screen when information on background, commentary, and follow-up of the news events is presented (see 3.2.3 in Chapter 3). These were presented in the video in conversation format such as a witness’s comments and interviews. Thus the students can readily make judgements from the paralinguistic clues on the screen about the setting of the events, and the mood and relationships among the people involved in the events. In contrast, the remaining four items relate to the use of the three strategies under investigation: use of the ‘identifying key terms’ strategy helps students determine the topic of a video (4); form hypotheses concerning the story line; and make predictions and inferences as to the main idea of the video (6 and 7). ‘Elaborating’ and ‘inferencing’ strategies are also of great value in making hypotheses (4 and 5).

In summary, this study examines whether in training students how to use the strategies of ‘identifying key terms’, ‘elaborating’, and ‘inferencing’ enables students to perform with ease these cognitive operations relevant to the listening task. The following section describes the major procedures used for the training and testing sessions.

**Lesson 1: Preparation Stage**

Prior to formal training, the students from the IG were briefed in relation to: 1) the importance of listening in formal education; and 2) the nature and purpose of the training procedure. The teacher explained various strategies to the group according to the list of strategy categories developed from Study 1. The purpose of

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72 Japanese interpersonal relations can be inferred through linguistic information such as use of kinship terms.
introducing the list was to enable students to become familiar with these terms and to facilitate strategy instruction. After the explanation, the students watched the demonstration video which was produced specifically for Study 1, and discussed the think-aloud method. This ensured that students were made more aware of their mental processes. After viewing the videotape, the teacher explained how to use strategies to cope with the swift and transitory nature of listening. For example, students were told that they must know the five Ws and one H (what; when; where; who; why; how) to narrow down the possible interpretation of news broadcasts. They were also encouraged to use tone/speed of delivery or facial expression to determine a performer's mood or linguistic forms (for example, kinship terms) to signal interpersonal relationships, or visual clues on the screen to determine setting. Also important was using two major sources of prior knowledge: formal schema and content schema. The structure of the news broadcast and the accompanying key discourse markers were introduced to the IG as a part of formal schema. At the end of this session, the IG students were told not to divulge to the NIG students the content and processes of the intervention.

Lesson 2: Teacher Modeling of Strategies
The teacher introduced students to three useful strategies identified in Study 1 (‘identifying key terms’, ‘elaborating’, and ‘inferencing’). She also highlighted the important role played by metacognition to monitor comprehension and to encourage the students to become self-regulated learners. When she referred to the ‘identifying key terms’ strategy, it became necessary to explain the term itself since most students' understanding of ‘key terms’ was very limited. She illustrated these terms using a ‘tree-structure’ diagram and explained different levels of idea structures that make the identification of key terms easier. The students were taught how to take notes using a T-
This is a record of main ideas written on the left side and details on the right side forming the shape of a T. Taking notes and remembering minimise processing overload in their short-term memory (STM). These three concepts of key terms, main idea unit, and T-list format are closely related, so presenting them simultaneously is likely to ensure that the concepts are retained in the students' memory structure. The students were then given practice in note-taking and identification of key terms under teacher guidance (through listening to two simple descriptions of activities prepared by the teacher).

Prior to performing the think-aloud session (on 'Murder in the Philippines'), the teacher provided the English equivalent of the title immediately after it appeared on the screen. Provision of a title as an advance organiser is likely to enable students to form a link with their prior knowledge. It also supports top-down processing. Moreover, students' schema may possibly be triggered since the title contains key terms relating to the topic. The students were therefore reminded to recall the title at any time when they encountered new terms or comprehension difficulties. By associating the news title or headline they should be able to make more astute inferences and accurate elaboration from the terms or the story line.

The teacher then verbalised her thoughts during the pause while the rest of the class observed her performance. During the pause, the teacher asked the students to identify the type of strategies she used. The teacher repeated the same process using the same text but, the second time, as she performed her think aloud, she discussed the alternative strategies suggested by the students, in order to draw their attention to their own strategies.

**Lesson 3: Teacher Modelling of Strategies with Students’ Responses**

The teacher began the think-aloud process (on ‘Bank robbers steal
money from security car') during the pause interval inserted at the predetermined position by the investigator. This time, students were also prompted to make their own comments on key terms that they identified from the title. The key terms identified were in turn expected to trigger ‘elaborating’ and ‘inferencing’ strategies. Since the English equivalent of the title was given to the students, they were able to make intelligent guesses. As expected, immediately after the television commentator read the headline, the students expressed their anticipation of what would appear afterward (for example, the location and time of the incident). It was evident that some students were familiar at the subconscious level with the presentation order of the news item. Another powerful inference the students made was illustrated in the comment that “the robber may not have been arrested yet because the television did not show the name of the person or his/her face. If the robber were arrested, his/her name and face would appear on the screen”. These are examples of the students demonstrating the use of pragmatic knowledge of news broadcasts which remains, for the most part, at the subconscious level. The teacher repeated the same process using the same text, but more responses were elicited from the class the second time round. Interaction between the teacher’s feedback and the students’ responses occurred during the session. The less active students followed the more active behaviour exhibited by some students after they became more familiar with the think-aloud procedure. The students commented that the session was enjoyable and relaxing.

Lesson 4: Students Practising Strategy Use
The concept of reciprocal teaching (Palinscar & Brown, 1984) was introduced for this session in which students emulate the teacher’s modeled behaviour and cooperate with each other by taking turns to apply a sequence of strategies to comprehend the text. Prior to
conducting the think-aloud process, the students were instructed to identify any problems, and then try some strategies to solve them. This process was necessary to convince students of the value of strategic listening as well as raising their awareness of strategy use. The students were then reminded to make use of a title and association strategy between the key terms and their prior knowledge, and to make use of note-taking. Note-taking activity helps the students reduce memory overload in their STM.

In the reciprocal-teaching approach, the students were forced to explain, elaborate, infer or defend their positions through social interaction. This process results in deeper comprehension (Hatano & Inagaki, 1987) and enhances learning engagement and motivation (Brown, 1988).

Then one pair of students performed the think-aloud procedure on ‘Helicopter crash’. One student verbalised his/her thoughts during the pause while the other listened to what his/her partner said. Then they changed roles. During the pause interval, the students interacted with each other by explaining and clarifying their interpretation. This session was repeated three times. Compared to the previous session, this time the class was less active and quieter. Some students became less vocal at the initial stage. Performing the given task individually and the shift of responsibility from teacher to student resulted in a less interactive class. However, with teacher and peer prompts and feedback, students had an opportunity to evaluate the effectiveness of their chosen strategies, which in turn resulted in more strategic listening.

Due to the small number of students in this study, the grouping was made according to the students’ behaviour observed by the investigator during the previous session (Lesson 3): active students were matched with less-active students and also matched for
proficiency level; in order to capitalise on the reciprocal teaching process. Careful selection of pairing and constant teacher and peer feedback are seemingly crucial ingredients for a successful peer teaching approach.

Lesson 5: Students Practicing Strategy Use Following the Testing Procedures

In this session, the students viewed the video following the exact procedure used for the testing sessions: previewing, global listening, and intensive listening. The decision to present the video in three different presentation formats was based on the feedback received from the 1997 cohort who stated that viewing the same video three times was “more than adequate”.

First, the students previewed the whole section of videotape (titled ‘Japanese tourist bus crashes in Fiji’) without the accompanying audio text. However, the English meaning of the title was given to facilitate the key-term identification process. The purpose of presenting the video without audio was to activate students’ existing knowledge of the topic and to encourage them to elaborate and actively infer meaning. Visual-only conditions encourage students to make predictions about the prospective text. During this process, students can gather information based solely on visual stimuli and make intelligent inferences about the main content of the text through a ‘skimming’ process. In this investigation the students were encouraged to tell their peers words that they expected to hear in the video on the basis of visual-only stimuli. This was intended to activate the ‘inferencing’ strategy and to help the students to familiarise themselves with new terms. During the key-term identification process, students were encouraged to interact with each other to increase their range of vocabulary and enhance their level of comprehension (Craik & Lockhart, 1972; Herron et al.,
After viewing the visual-only information, the teacher reminded the students about making full use of knowledge of the title and they discussed in pairs the key terms (key words and phrases) that may have been contained in a particular segment of visuals. This process sought to activate the students' background knowledge by relating visuals with forthcoming auditory information, enabling a possible framework that encourages students to anticipate what will follow. Once the students had established the major content of the news, they discussed with the other groups whether their inferences were similar. Another important function of the previewing session is to provide students with an opportunity to use top-down processing strategies to construct the gist of the text. The key reason for the previewing session without auditory stimuli was to minimise the possibility of processing overload.

The second viewing, under the audiovisual condition, provided the students with an opportunity to check and confirm the inferences they had made in the previous procedure by attending to both visual and auditory modes. The students also set about constructing global meaning (using linguistic and paralinguistic clues). Students were encouraged to clarify and discuss their interpretation of the text selection with their peers and the teacher. The teacher provided her feedback on the correct identification of key terms and the use of clues in the visuals.

In the third viewing - intensive viewing - the students fine-tuned what they heard or viewed. They listened to the text for more information by filling in gaps they had missed during the previous two procedures through 'scanning' or reconfirming what they had heard. During the second and the third listening sessions, the
students were allowed to take notes at will on details or vocabulary
that they thought was important. The majority of students indeed did
take notes accordingly. The teacher provided feedback to students on
their comprehension to enable them to monitor their progress and, if
necessary, to use different problem-solving strategies. Since the
students' attention was directed more towards completing the
listening task, the teacher provided her feedback less often. The
students commented that they found it difficult to identify the key
concepts in the video because of the rapid delivery of speech in the
video.

4.2.2 Testing Sessions
The procedure used for testing the comprehension levels of the IG
and the NIG were those used for Lesson 5 of the explicit training
session (see 4.2.1 in this chapter): previewing (audio-only), global
viewing/skimming (audiovisual), and intensive viewing/scanning
(audiovisual). These three procedures were collated into one testing
session.

Prior to the testing session, the teacher informed the IG and the NIG
about the type and the length of the texts, and the task required of
them in each of the post-tests (a short test at the end of the final
viewing session). The information on the Japanese video title
appeared on the screen (its reading and meaning) was given in
English to the students of the IG and the NIG. Thus all students in
the study were treated equally. Another reason for retaining the title
was purely practical: its removal was not possible as it often
appeared in the middle of the screen. Given this constraint, the
investigator judged that providing such information would better
reflect realistic audiovisual listening situations.

Testing sessions for the seven post-texts were conducted at two-
week intervals (see Table 4-9). However, due to a two-month semester break between Test 3 and Test 4, an additional explicit training session (repeat session of the Lesson 5) was administered at the beginning of semester 2 to remind the students about the training they had being given in semester 1, and to provide them with an extra opportunity to practise the use of the three strategies.

Table 4-9 lists schedules for the training and testing sessions. Seven video texts used for the post-testing sessions were presented in compact disk format attached in Appendix 3-C.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Week</th>
<th>2-Training Demonstration video</th>
<th>Semester 2</th>
<th>Week</th>
<th>2-Training 6: Repeat training session of Lesson 5</th>
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<tbody>
<tr>
<td></td>
<td>Week 3-Training 2: Murder in the Philippines</td>
<td></td>
<td>Week 4-Testing 4: Inspection of students' school bags</td>
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<tr>
<td></td>
<td>Week 4-Training 3: Bank robbers steal money from security car</td>
<td></td>
<td>Week 5-Testing 5: Audibility of household goods when in operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 5-Training 4: Helicopter crash</td>
<td></td>
<td>Week 8-Testing 6: Computer identification of individuals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 6-Training 5: Japanese tourist bus crashes in Fiji</td>
<td></td>
<td>Week 10-Testing 7: Book day for children</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 8-Testing 1: New bicycle management in Tokyo apartment block</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 10-Testing 2: Report on school absentees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 12-Testing 3: Poisoning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB: Some weeks not included in Table 4-9 followed normal class activities which included oral-related activities such as role-playing, discussions, or individual oral presentations.

The seven video texts used for the post-testing sessions were analysed by two dimensions. These dimensions were derived from the classification scheme of genres and their characteristic features: (i) the amount of visual information (paralinguistic features); and (ii) the formality level of registers used (Japanese words or Chinese words). These are considered to be influential in the students’ overall text comprehension. Moreover, some texts contain diagrams or tables. These features are also considered to be equally influential in deciding the overall difficulty level.
Two Japanese teachers who taught the intermediate-level Japanese language subject at the university ranked the difficulty level of the video texts using the two criteria detailed in the preceding paragraph on a scale of 1 to 7 (1=easiest; 7=most difficult). Table 4-10 shows the difficulty level of the seven video texts determined by the judges.

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Text Title</th>
<th>Amount of visual information</th>
<th>Formality level of registers</th>
<th>Overall Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New bicycle management in Tokyo apartment block</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Report on school absentees</td>
<td>4</td>
<td>7 (highest)</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Poisoning</td>
<td>7 (lowest)</td>
<td>5</td>
<td>6 or 7 (most difficult)</td>
</tr>
<tr>
<td>4</td>
<td>Inspection of students' school bags</td>
<td>6</td>
<td>6</td>
<td>6 or 7</td>
</tr>
<tr>
<td>5</td>
<td>Audibility of household goods when in operation</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Computer identification of individuals</td>
<td>1 (greatest)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Book day for children</td>
<td>2</td>
<td>1 (lowest)</td>
<td>1 (easiest)</td>
</tr>
</tbody>
</table>

At the conclusion of the last testing session, the Listening Strategy Questionnaire (see 3.2 in Chapter 3) was administered to all students.

In the pre-test and post-test design, the effect of the intervention was measured by comparing the performance of the IG (who received the strategy instruction treatment) with that of the NIG (who were not exposed to the treatment).

4.2.3 Analysis of Data Related to Research Question 4

To strengthen the validity of findings from the data, Study 2 used two methods of data analysis. Both methods compared group performances before the intervention and after the intervention using group-average test scores.

To assess performance before the intervention The 1996 Japan Foundation Japanese Language Proficiency Test (Level 3) was used as a pre-test in order to establish the baseline score. To assess the
efficacy of the intervention including its maintenance effects, seven post-tests were administered at two-week intervals immediately after the intervention was completed.

The first method of analysis compared the difference in raw group-average scores on each of the eight tests (one pre-test and seven post-tests). The second method extended this analysis. It used gain/loss assessment to compare group-average test scores for each of the seven post-tests not only on each test but also against the results of the pre-test. The gains and losses revealed through the second method provide useful information relating to the extent of the students' improvement or regression subsequent to the intervention.

4.2.3.1 Comparison of Group-Average Test Scores

Pre-Test Results

Students' profiles according to their results on The 1996 Japan Foundation Japanese Language Proficiency Test were presented in 3.2.1 in Chapter 3 (Tables 3-13 and 3-14). For readers' convenience these profiles are reproduced below.

### Profile of Intervention Group Students

<table>
<thead>
<tr>
<th>Students (n=5)</th>
<th>Gender</th>
<th>Age</th>
<th>Test score question 1 (out of 14)</th>
<th>Test score question 2 (out of 12)</th>
<th>Total score (out of 26)</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>F</td>
<td>26</td>
<td>9</td>
<td>5</td>
<td>14</td>
<td>53.85%</td>
</tr>
<tr>
<td>Terri</td>
<td>F</td>
<td>23</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>46.15%</td>
</tr>
<tr>
<td>Nick</td>
<td>M</td>
<td>26</td>
<td>8</td>
<td>3</td>
<td>11</td>
<td>42.31%</td>
</tr>
<tr>
<td>Kamala</td>
<td>F</td>
<td>19</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>38.46%</td>
</tr>
<tr>
<td>Natalie</td>
<td>F</td>
<td>21</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>50%</td>
</tr>
<tr>
<td>Group average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46.15%</td>
</tr>
</tbody>
</table>

### Profile of Non-Intervention Group Students

<table>
<thead>
<tr>
<th>Students (n=5)</th>
<th>Gender</th>
<th>Age</th>
<th>Test score question 1 (out of 14)</th>
<th>Test score question 2 (out of 12)</th>
<th>Total score (out of 26)</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>M</td>
<td>22</td>
<td>9</td>
<td>6</td>
<td>15</td>
<td>57.69%</td>
</tr>
<tr>
<td>Alice</td>
<td>F</td>
<td>22</td>
<td>11</td>
<td>8</td>
<td>19</td>
<td>73.08%</td>
</tr>
<tr>
<td>Tracey</td>
<td>F</td>
<td>19</td>
<td>9</td>
<td>3</td>
<td>12</td>
<td>46.15%</td>
</tr>
<tr>
<td>Emily</td>
<td>F</td>
<td>24</td>
<td>10</td>
<td>9</td>
<td>19</td>
<td>73.08%</td>
</tr>
<tr>
<td>Kay</td>
<td>F</td>
<td>26</td>
<td>9</td>
<td>5</td>
<td>14</td>
<td>53.85%</td>
</tr>
<tr>
<td>Group average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.8</td>
<td>60.77%</td>
</tr>
</tbody>
</table>
These data indicate that on the pre-test the group-average test score of the IG was 46.15 per cent and that of the NIG was 60.77 per cent. Thus, the difference between the groups in their group-average scores before the strategy intervention was 14.62 per cent in favour of the NIG. This suggests that before the intervention the NIG was stronger in their Japanese language comprehension skills than the IG.

**Post-Test Results**

Tables 4-11 and 4-12 present the post-test scores of the IG and NIG on the seven satellite listening tests.

### Table 4-11: Seven Post-Test Scores for the Intervention Group

<table>
<thead>
<tr>
<th>Student</th>
<th>Test 1 (out of 40)</th>
<th>Test 2 (out of 40)</th>
<th>Test 3 (out of 40)</th>
<th>Test 4 (out of 40)</th>
<th>Test 5 (out of 40)</th>
<th>Test 6 (out of 40)</th>
<th>Test 7 (out of 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>25.5 (63.8%)</td>
<td>29 (72.5%)</td>
<td>18 (45.0%)</td>
<td>21 (52.5%)</td>
<td>27 (67.5%)</td>
<td>23.6 (59.0%)</td>
<td>30.6 (76.5%)</td>
</tr>
<tr>
<td>Terri</td>
<td>24.5 (61.3%)</td>
<td>29.4 (73.5%)</td>
<td>25.5 (63.8%)</td>
<td>23.6 (59.0%)</td>
<td>23.8 (59.5%)</td>
<td>28.8 (72.0%)</td>
<td>30.6 (76.5%)</td>
</tr>
<tr>
<td>Nick</td>
<td>22.5 (56.3%)</td>
<td>20.4 (51.0%)</td>
<td>27.5 (68.8%)</td>
<td>21.1 (52.8%)</td>
<td>13.6 (34.0%)</td>
<td>22.6 (57.0%)</td>
<td>36.6 (91.5%)</td>
</tr>
<tr>
<td>Kamala</td>
<td>20 (50.0%)</td>
<td>26.7 (66.8%)</td>
<td>21.5 (53.8%)</td>
<td>21.6 (54.0%)</td>
<td>20.3 (50.8%)</td>
<td>31.6 (79.0%)</td>
<td>21.6 (54.0%)</td>
</tr>
<tr>
<td>Natalie</td>
<td>24.5 (61.3%)</td>
<td>30.7 (76.8%)</td>
<td>27 (67.5%)</td>
<td>23.6 (59.0%)</td>
<td>13.8 (34.5%)</td>
<td>27.1 (67.8%)</td>
<td>30.4 (76.0%)</td>
</tr>
<tr>
<td>Average</td>
<td>58.5%</td>
<td>68.1%</td>
<td>59.8%</td>
<td>55.5%</td>
<td>49.3%</td>
<td>67.7%</td>
<td>74.9%</td>
</tr>
</tbody>
</table>

### Table 4-12: Seven Post-Test Scores for the Non-Intervention Group

<table>
<thead>
<tr>
<th>Student</th>
<th>Test 1 (out of 40)</th>
<th>Test 2 (out of 40)</th>
<th>Test 3 (out of 40)</th>
<th>Test 4 (out of 40)</th>
<th>Test 5 (out of 40)</th>
<th>Test 6 (out of 40)</th>
<th>Test 7 (out of 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>26.5 (66.3%)</td>
<td>28.7 (71.8%)</td>
<td>22.5 (56.3%)</td>
<td>21.6 (54.0%)</td>
<td>23.1 (57.8%)</td>
<td>23.6 (59.0%)</td>
<td>22.3 (55.8%)</td>
</tr>
<tr>
<td>Alice</td>
<td>26.5 (66.3%)</td>
<td>32.7 (81.8%)</td>
<td>29.5 (73.8%)</td>
<td>26.6 (66.5%)</td>
<td>18.3 (45.8%)</td>
<td>28.6 (71.5%)</td>
<td>23.6 (59.0%)</td>
</tr>
<tr>
<td>Tracey</td>
<td>24.5 (61.3%)</td>
<td>28.7 (71.8%)</td>
<td>23.5 (58.8%)</td>
<td>25 (62.5%)</td>
<td>17.6 (44.0%)</td>
<td>23.6 (59.0%)</td>
<td>28.6 (71.5%)</td>
</tr>
<tr>
<td>Emily</td>
<td>28.5 (71.3%)</td>
<td>36 (90.0%)</td>
<td>26.5 (66.3%)</td>
<td>26.6 (66.5%)</td>
<td>19.6 (49.0%)</td>
<td>36 (90.0%)</td>
<td>30.6 (76.5%)</td>
</tr>
<tr>
<td>Kay</td>
<td>25 (62.5%)</td>
<td>20.4 (51.0%)</td>
<td>33.5 (83.8%)</td>
<td>21 (52.5%)</td>
<td>15.6 (39.0%)</td>
<td>25 (62.5%)</td>
<td>30.6 (76.5%)</td>
</tr>
<tr>
<td>Average</td>
<td>65.5%</td>
<td>73.3%</td>
<td>67.8%</td>
<td>60.4%</td>
<td>47.1%</td>
<td>68.6%</td>
<td>67.9%</td>
</tr>
</tbody>
</table>

Expressing post-test scores for the group average as a percentage for each test assisted assessment of the difference between the groups on
their seven post-test performances. The group-average test scores of the two groups across the seven post-tests ranged from the lowest score at 47.1 per cent (NIG in Test 5) to the highest at 74.9 per cent (IG in Test 7). The IG's group-average scores in descending order from the 74.9 per cent peak in Test 7 were 68.1 per cent in Test 2, 67.7 per cent in Test 6, 59.8 per cent in Test 3, 58.5 per cent in Test 1, 55.5 per cent in Test 4, and 49.3 per cent in Test 5. For the NIG, the highest group-average test score was 73.3 per cent in Test 2 followed by 68.6 per cent in Test 6, 67.9 per cent in Test 7, 67.8 per cent in Test 3, 65.5 per cent in Test 1, 60.4 per cent in Test 4, and 47.1 per cent in Test 5.

Comparison of the groups' average scores by tests is best demonstrated by Figure 4-13. The trends presented in this figure indicate the positive effect of intervention on the IG.

![Figure 4-13: Group-Average Test Scores between Pre-Test and Post-Test Assessments](image)

The data in Figure 4-13 show the average test scores on the post-tests were higher for the NIG than for the IG in five of the seven tests, with Test 5 and Test 7 the two exceptions. Recognising the initial difference of 14.62 per cent between the two groups' pre-tests, with the NIG holding the higher score, this difference generally
reduced as the groups undertook more post-tests. By Test 7, in fact, the IG score surpassed the NIG score.

In Tests 1 and 2, the NIG group-average score exceeded the IG score by 7 per cent and 5.2 per cent respectively. In subsequent tests the gaps rose slightly to 8 per cent (Test 3) and fell to 4.9 per cent (Test 4). In Test 6, the gap fell dramatically to 0.9 per cent. As noted above, on Tests 5 and 7 the group-average test scores for the NIG were in fact lower than those for the IG -- by 2.2 per cent in Test 5 and 7 per cent in Test 7. Thus, although the group-average for the NIG exceeded that for the IG in five of the tests, the NIG clearly did not maintain its pre-test dominance of 14.62 per cent over the IG throughout the tests.

On the contrary, after the fourth test, the IG bettered the NIG in post-test performance. Indeed, in the last three of the seven tests, the IG bettered the NIG performance in two tests and in the third (Test 6) scored only less than 1 per cent lower than the NIG. This trend towards the NIG losing its dominance over the IG as the post-tests progressed suggests that experience with strategy intervention helped the IG to improve their performance and not simply narrow the performance gap, but eliminate it. By the final test, the IG has overtaken the NIG in post-test performance.

In contrast, when the average post-test scores obtained by students individually within their group were examined, individual scores ranged from 34 per cent to 91.5 per cent for the IG and from 39 per cent to 90 per cent for the NIG. Three IG students and four NIG students each scored below 50 per cent in two tests: one IG student scored 45 per cent in Test 3 and the other two IG students scored 34 per cent and 34.5 per cent in Test 5. The four NIG students had scores ranging from 39 per cent to 49 per cent in Test 5. These
results confirm the finding discussed earlier that students in general found Test 5 to be the most difficult of the seven post-tests.

Smaller intra-group variation was observed among the 10 than the NIO and the intra-group variation among the IG decreased as students gained experience in using strategies taught in the intervention program. These variations in students’ performances are discussed in the subsequent section.

4.2.3.2 Comparison of Post-Test Gains/Losses on Pre-Test Scores

Tables 4-13 and 4-14 present the gains and losses in the post-test scores against the pre-test scores obtained by the two groups.

Table 4-13: Post-Test Gains/Losses on Pre-Test Scores for the Intervention Group

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre-test</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>53.85%</td>
<td>9.9%</td>
<td>18.7%</td>
<td>-8.9%</td>
<td>-1.4%</td>
<td>13.7%</td>
<td>5.2%</td>
<td>22.7%</td>
<td>8.56%</td>
</tr>
<tr>
<td>Terri</td>
<td>46.15%</td>
<td>15.2%</td>
<td>27.4%</td>
<td>17.7%</td>
<td>12.9%</td>
<td>13.4%</td>
<td>25.9%</td>
<td>30.4%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Nick</td>
<td>42.31%</td>
<td>13.9%</td>
<td>8.7%</td>
<td>26.4%</td>
<td>10.4%</td>
<td>-8.3%</td>
<td>14.7%</td>
<td>49.2%</td>
<td>16.4%</td>
</tr>
<tr>
<td>Kamala</td>
<td>38.46%</td>
<td>11.5%</td>
<td>28.3%</td>
<td>15.3%</td>
<td>15.5%</td>
<td>12.3%</td>
<td>40.5%</td>
<td>15.1%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Natalie</td>
<td>50%</td>
<td>11.3%</td>
<td>26.8%</td>
<td>17.5%</td>
<td>9.0%</td>
<td>-15.5%</td>
<td>18.0%</td>
<td>26.0%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Average</td>
<td>46.15%</td>
<td>12.4%</td>
<td>22%</td>
<td>13.6%</td>
<td>9.3%</td>
<td>3.1%</td>
<td>20.9%</td>
<td>28.8%</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

Table 4-14: Post-Test Gains/Losses on Pre-Test Scores for the Non-Intervention Group

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre-test</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>57.69%</td>
<td>8.6%</td>
<td>14.1%</td>
<td>-1.4%</td>
<td>-3.7%</td>
<td>0.1%</td>
<td>1.3%</td>
<td>-1.9%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Alice</td>
<td>73.08%</td>
<td>-6.9%</td>
<td>8.7%</td>
<td>0.7%</td>
<td>-6.6%</td>
<td>-27.3%</td>
<td>-1.1%</td>
<td>-14.1%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Tracey</td>
<td>46.15%</td>
<td>15.1%</td>
<td>25.6%</td>
<td>12.6%</td>
<td>16.4%</td>
<td>-2.2%</td>
<td>12.9%</td>
<td>25.4%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Emily</td>
<td>73.08%</td>
<td>-1.8%</td>
<td>16.9%</td>
<td>-6.8%</td>
<td>-6.6%</td>
<td>-24.1%</td>
<td>16.9%</td>
<td>3.4%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Kay</td>
<td>53.85%</td>
<td>8.7%</td>
<td>-2.9%</td>
<td>29.9%</td>
<td>-1.4%</td>
<td>-14.9%</td>
<td>9.2%</td>
<td>22.7%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Average</td>
<td>60.77%</td>
<td>4.7%</td>
<td>12.5%</td>
<td>7.0%</td>
<td>-0.4%</td>
<td>13.7%</td>
<td>7.8%</td>
<td>7.1%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

When expressed as percentages, the test scores indicate that the average gain or loss in scores of the IG and NIG groups ranged from -13.7 per cent (NIG in Test 5) to 28.8 per cent (IG in Test 7). The NIG recorded a loss in two tests while the IG recorded no loss in any test. Indeed, the IG made larger gains than the NIG in all seven tests. Five test scores were well above 10 per cent (Tests 1, 2, 3, 6, and 7) and the only gains less than 10 per cent were: 9.3 per cent in Test 4.
and 3.1 per cent in Test 5. The IG’s highest gain of 28.8 per cent in the final test was followed by 22 per cent in Test 2, 20.9 per cent in Test 6, 13.6 per cent in Test 3, 12.4 per cent in Test 1, 9.3 per cent in Test 4, and 3.1 per cent in Test 5. This indicates that while the IG maintained positive scores in all seven tests, the gains were irregular across the tests. To some extent, the data presented here reflect the trends apparent in the earlier analysis: strong performance on Test 2, followed by regression in scores until the lowest on Test 5, then with a strong finish on Test 6 and the highest score on Test 7.

The NIG, like the IG, also recorded gains, though not sequential gains, in five of the tests. The exception was again Tests 4 and 5, where a marginal loss of 0.4 per cent in Test 4 and a dramatic loss of 13.7 per cent were recorded. As in the earlier analysis, the highest gain score was 12.5 per cent in Test 2 followed by 7.8 per cent in Test 6, 7.1 per cent in Test 7, 7 per cent in Test 3, and 4.7 per cent in Test 1.

Both groups’ scores on Test 5 indicate this was the most difficult test for both groups. Even so, the second analysis revealed that whereas the NIG score plummeted to a dramatic loss of -13.7 per cent, the IG maintained a positive, if low, score of 3.1 per cent, which was 16.8 per cent higher than the NIG score.

In general, the data indicate that the IG’s group-average gains on the pre-test score were constantly higher than those of the NIG. The scores also indicate that the two groups encountered similar levels of difficulty across the seven texts. Data indicating differences between the groups’ average gains and losses across the tests are presented in Table 4-15 and Figure 4-16.
Table 4-15: Average Gains/Losses on Test Scores in Post-Tests

<table>
<thead>
<tr>
<th>Group</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>IG</td>
<td>12.4%</td>
<td>22%</td>
<td>13.6%</td>
<td>9.3%</td>
<td>3.1%</td>
<td>20.9%</td>
<td>28.8%</td>
<td>15.7%</td>
</tr>
<tr>
<td>NIG</td>
<td>4.7%</td>
<td>12.5%</td>
<td>7.0%</td>
<td>-0.4%</td>
<td>-13.7%</td>
<td>7.8%</td>
<td>7.1%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Differences</td>
<td>7.7%</td>
<td>9.5%</td>
<td>6.6%</td>
<td>9.7%</td>
<td>16.8%</td>
<td>13.1%</td>
<td>21.7%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>

Figure 4-14: Average Post-Test Gains/Losses on Pre-Test Scores for IG and NIG

Figure 4-14 indicates clearly that the difference between the IG and the NIG remained fairly constant in the early tests. In the later tests the differential gap began to increase, until by the final test, the IG’s continued gains (as opposed to the NIG’s more static scores) were readily observable. The data also indicate that the group-average gain score of the IG for the seven tests was 15.7 per cent and that of the NIG was 3.6 per cent. On this calculation the overall difference between the groups in their score was 12.1 per cent. This confirms the positive relationship between the intervention program and group performance.

Inter and Intra-Group Differences

Table 4-16 and Figure 4-15 present the overall average post-test gains/losses scores on the pre-test obtained by individual students.

Table 4-16: Average Gains/losses in Scores by Individual Students

<table>
<thead>
<tr>
<th>IG Student</th>
<th>Gains/losses</th>
<th>NIG Student</th>
<th>Gains/losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>8.6%</td>
<td>Thomas</td>
<td>2.4%</td>
</tr>
<tr>
<td>Terri</td>
<td>20.4%</td>
<td>Alice</td>
<td>-6.7%</td>
</tr>
<tr>
<td>Nick</td>
<td>16.4%</td>
<td>Tracey</td>
<td>15.1%</td>
</tr>
<tr>
<td>Kamala</td>
<td>19.8%</td>
<td>Emily</td>
<td>-0.3%</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>Natalie</td>
<td>13.3%</td>
<td>Kay</td>
<td>7.3%</td>
</tr>
<tr>
<td>Group average</td>
<td>15.7%</td>
<td>Group average</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

Figure 4-15: Average-Gains /losses in Scores by Individual Students

Four of the five IG students obtained gain scores above 10 per cent: 20.4 per cent, 19.8 per cent, 16.4 per cent, and 13.3 per cent. The remaining student’s gain score was 8.6 per cent. By contrast, only one NIG student obtained a gain score above 10 per cent, at 15.1 per cent. The next closest score in the NIG group was less than half of this score (7.3 per cent) followed by a gain score that was only around a third of this lower score (2.4 per cent). Two students in fact regressed, by 6.7 per cent and 0.3 per cent each.

Overall, the scores in this analysis indicate greater variation in post-test gains/losses across students than the scores recorded in the previous analysis, particularly for students from the NIG who did not receive the strategy intervention. These results will be discussed in detail in the next chapter.

4.2.3.3 Effects of Intervention on Specific Listening Skills

The data were analysed further to identify which of the students’ listening skills benefited most from the intervention. Test results
from the seven listening comprehension tests that served as the post-test measure, were analysed to assess this effect. Each of these tests followed the same testing format consisting of three major questions. The detailed description of the test instrument was explained in 3.2.5 in Chapter 3.

Question 1 concerns the topic that requires listeners to use a top-down processing skill. Question 2 concerns supporting details, which requires listeners to use a bottom-up processing skill. Question 3 was directed at an aspect of comprehension quite different from Questions 1 and 2, and related to the identification of key words (and phrases).

Both L1 and L2 literature identify the crucial role played by key words in comprehension as discussed in detail in Chapter 2. Key words provide a useful framework on which listeners (and readers) can draw constructively to enhance their comprehension. Hence, the investigator included Question 3 to specifically measure participating students' word-decoding ability. The data derived from this question enabled the investigator to explore whether comprehension failure is caused by the listener's limited word decoding ability as applies in reading comprehension.

**Use of Top-Down Processing**

Tables 4-17 and 4-18 present the scores on Question 1 on the seven listening post-tests for the IG and NIG respectively. These test scores are expressed as percentages.

<table>
<thead>
<tr>
<th>Student</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>75%</td>
<td>50%</td>
<td>20%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>56.4%</td>
</tr>
<tr>
<td>Terri</td>
<td>50%</td>
<td>100%</td>
<td>0%</td>
<td>50%</td>
<td>25%</td>
<td>75%</td>
<td>100%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Nick</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>25%</td>
<td>50%</td>
<td>40%</td>
<td>100%</td>
<td>52.1%</td>
</tr>
<tr>
<td>Kamala</td>
<td>50%</td>
<td>100%</td>
<td>0%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Student</td>
<td>Test 1</td>
<td>Test 2</td>
<td>Test 3</td>
<td>Test 4</td>
<td>Test 5</td>
<td>Test 6</td>
<td>Test 7</td>
<td>Average</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Thomas</td>
<td>75%</td>
<td>100%</td>
<td>40%</td>
<td>50%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Alice</td>
<td>75%</td>
<td>100%</td>
<td>75%</td>
<td>100%</td>
<td>50%</td>
<td>60%</td>
<td>50%</td>
<td>72.9%</td>
</tr>
<tr>
<td>Tracey</td>
<td>50%</td>
<td>100%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>60.7%</td>
</tr>
<tr>
<td>Emily</td>
<td>50%</td>
<td>100%</td>
<td>50%</td>
<td>100%</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>78.6%</td>
</tr>
<tr>
<td>Kay</td>
<td>75%</td>
<td>50%</td>
<td>90%</td>
<td>50%</td>
<td>50%</td>
<td>70%</td>
<td>100%</td>
<td>89.3%</td>
</tr>
<tr>
<td>Average</td>
<td>65%</td>
<td>90%</td>
<td>55%</td>
<td>70%</td>
<td>45%</td>
<td>66%</td>
<td>80%</td>
<td>67%</td>
</tr>
</tbody>
</table>

The group-average test scores on Question 1 across the seven tests ranged from the lowest score at 19 per cent (IG in Test 3) to the highest score at 90 per cent (IG in Test 7 and NIG in Test 2). The NIG maintained higher scores in the first six tests but the IG exceeded the NIG in Test 7.

The group-average score on Question 1 for the IG ranged from 19 per cent to 90 per cent. The IG's highest score was 90 per cent in Test 7 followed by 80 per cent in Test 2, 56 per cent in Test 6, 55 per cent in Test 1, 45 per cent in Test 4, and 40 per cent in Test 5. However the score on Test 3 dropped dramatically to 19 per cent. This was because two IG students obtained 0 per cent, which also contributed to the greater intra-group variation in their overall performance.
In contrast, the group-average test score for the NIG ranged from 45 per cent to 90 per cent. The highest score was 90 per cent in Test 2, followed by 80 per cent in Test 7, 70 per cent in Test 4, 66 per cent in Test 6, 65 per cent in Test 1, 56 per cent in Test 3, and 45 per cent in Test 5. These scores indicate that this group maintained relatively constant scores across the seven tests.

Both the IG and NIG maintained comparable test scores in Tests 1 and 2. In these tests, the difference in scores was 10 per cent. However, the gap between the two groups rose in Tests 3 and 4 to 37 per cent and 25 per cent respectively. This gap narrowed in Test 5 and 6 to 5 per cent and 10 per cent. In Test 7, the IG not only eliminated the gap but also exceeded the NIG in their score, again consistent with findings discussed earlier. The overall group-average test score across tests was 55 per cent for the IG and 67 per cent for the NIG. The inter-group difference in score was thus 12 per cent. This score indicates that the NIG was more effective than the IG in their use of top-down processing strategies.

The results for the first four tests indicate that the IG’s performance did not show immediate effects in the use of top-down processing. However, this group’s improvement became evident in the results of the last three tests. In the data presented here, although a positive effect from the intervention can be identified, it is also evident that the IG students require longer time than the study allowed to familiarise themselves with, and then automate this demanding skill.

*Use of Bottom-Up Processing*

Tables 4-19 and 4-20 present the results of Question 2 for the IG and NIG on the seven listening post-tests. The scores are expressed as a percentage total.
The group-average test score on Question 2 across the seven tests ranged from the lowest score at 42 per cent (NIG in Test 5) to the highest score at 80 per cent (NIG in Test 3). The NIG maintained higher scores than the IG in the first three tests and the IG scored higher than the NIG in the last four tests.

The group-average test scores on Question 2 for the IG ranged from 52 per cent to 76 per cent. The highest score was 76 per cent in Test 6, followed by 75 per cent in Test 3, 70 per cent in Test 7, 66 per cent in Test 2, 62 per cent in Test 1, 56 per cent in Test 4, and 52 per cent in Test 5. These results indicate that the IG's performance on
Question 2 was relatively stable across the tests.

Figure 4-17 shows the intra-group variation in the scores on Question 2 for the NIG was greater than that for the IG. It ranged from 80 per cent (Test 3) to 42 per cent in Test 5. The NIG's highest score of 80 per cent in Test 3 was followed by 74 per cent in Test 6, 68 per cent in Test 2, 66 per cent in Tests 1 and 7, 46 per cent in Test 4, and 42 per cent in Test 5.

The NIG started with slightly higher scores than the IG (by 2 to 5 per cent) in the first three tests. From the fourth test the IG overtook the initial dominance of the NIG. The gap between the two groups was greatest in Tests 4 and 5 (by 10 per cent each). Moreover, the IG score was higher than the NIG in Test 6 (by 2 per cent) and Test 7 (by 4 per cent). Overall group-average test scores across tests was 65 per cent for the IG and 63 per cent for the NIG. The inter-group difference in score was thus 2 per cent only. This score indicates that the use of bottom-up strategy by the IG was similar to that by the NIG.

**Key-Word Decoding Skills in Listening Comprehension**

Tables 4-21 and 4-22 present the results of Question 3 of the seven listening tests for the IG and NIG. These scores are expressed as a percentage total.

<p>| Table 4-21: Intervention Group Test scores on Question 3 |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th>Student</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoe</td>
<td>0%</td>
<td>100%</td>
<td>50%</td>
<td>60%</td>
<td>100%</td>
<td>66%</td>
<td>66%</td>
<td>63.1%</td>
</tr>
<tr>
<td>Terri</td>
<td>75%</td>
<td>34%</td>
<td>75%</td>
<td>66%</td>
<td>33%</td>
<td>33%</td>
<td>66%</td>
<td>54.6%</td>
</tr>
<tr>
<td>Nick</td>
<td>75%</td>
<td>34%</td>
<td>75%</td>
<td>66%</td>
<td>33%</td>
<td>66%</td>
<td>66%</td>
<td>54%</td>
</tr>
<tr>
<td>Kamala</td>
<td>50%</td>
<td>67%</td>
<td>75%</td>
<td>66%</td>
<td>33%</td>
<td>66%</td>
<td>66%</td>
<td>60.4%</td>
</tr>
<tr>
<td>Nathalie</td>
<td>75%</td>
<td>67%</td>
<td>75%</td>
<td>66%</td>
<td>33%</td>
<td>66%</td>
<td>66%</td>
<td>66.6%</td>
</tr>
<tr>
<td>Average</td>
<td>55%</td>
<td>60.4%</td>
<td>70%</td>
<td>64.8%</td>
<td>53%</td>
<td>59.4%</td>
<td>69.6%</td>
<td>61.7%</td>
</tr>
</tbody>
</table>

<p>| Table 4-22: Non-Intervention Group Test scores on Question 3 |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th>Student</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>50%</td>
<td>67%</td>
<td>25%</td>
<td>66%</td>
<td>66%</td>
<td>66%</td>
<td>33%</td>
<td>53.3%</td>
</tr>
<tr>
<td>Alice</td>
<td>50%</td>
<td>67%</td>
<td>50%</td>
<td>66%</td>
<td>66%</td>
<td>66%</td>
<td>66%</td>
<td>56.9%</td>
</tr>
<tr>
<td>Tracey</td>
<td>75%</td>
<td>67%</td>
<td>50%</td>
<td>100%</td>
<td>66%</td>
<td>66%</td>
<td>66%</td>
<td>70%</td>
</tr>
<tr>
<td>Emily</td>
<td>75%</td>
<td>100%</td>
<td>75%</td>
<td>66%</td>
<td>66%</td>
<td>100%</td>
<td>66%</td>
<td>78.3%</td>
</tr>
</tbody>
</table>
Figure 4.18: Test scores on Question 3 for IG and NIG

The group-average test scores on Question 3 across the seven tests ranged from the lowest score at 53 per cent (IG in Test 5) to the highest at 79.6 per cent (NIG in Test 4). The NIG maintained higher scores in five tests and the IG exceeded the NIG in two tests.

The group-average score on Question 3 for the NIG ranged from 55 per cent to 79.6 per cent (a 24.6 per cent gap) and that for the IG ranged somewhat more narrowly from 53 per cent to 70 per cent (a 17 per cent gap).

The IG’s highest score was 70 per cent in Test 3 followed by 69.6 per cent in Test 7, 64.8 per cent in Test 4, 60.4 per cent in Test 2, 59.4 per cent in Test 6, 55 per cent in Test 1, and 53 per cent in Test 5. The NIG’s highest score was 79.6 per cent in Test 4. This was followed by the much lower score of 67 per cent in Test 2, 65 per cent in Test 1, 59.6 per cent in Test 6, 59.4 per cent in Tests 5 and 7, and 55 per cent in Test 3.

Figure 4.18 demonstrates that in the first two tests, the NIG scored higher than the IG by 10 per cent and 6.6 per cent respectively. The
IG then exceeded the NIG by 15 per cent in Test 3 but in Test 4 and Test 5, the NIG again surpassed the IG by 14.8 per cent and 6.4 per cent respectively. However the NIG could not maintain its dominance. The gap disappeared in Test 6 and the IG again surpassed the NIG in the final test by 10.2 per cent.

These performance patterns exhibited by the two groups in identifying key words (Question 3) were similar to those that emerged in using top-down processing (Question 1) excluding performance on Test 3. In Test 3, the IG surpassed the NIG on Question 3, but it was not the case on Question 1. This idiosyncratic pattern exhibited by the two groups in their test scores is discussed in 5.3 in Chapter 5.

In general, the trend on all three questions was towards the strong initial dominance of the NIG which diminished as the study progressed. By the final test, the IG had overtaken the NIG in test scores.

In summary, the scores of the IG who undertook the intervention were higher than those of the NIG who did not receive this intervention in each of the data analyses. It is important to recognise that students did not begin the tests with the same proficiency level in listening. The 1996 Japan Foundation Japanese Language Proficiency Test results indicated that the NIG had stronger listening comprehension scores than the IG. Yet, despite the initial difference, the IG outperformed the NIG on listening comprehension tests after the IG undertook the intervention. The findings from the analyses of the data derived from these test results using two different methods produced consistent outcomes. Both analytical methods demonstrated the positive effect of intervening in students' strategic listening. Among other things, the intervention was effective in enhancing students' overall performance in identifying key words,
which in turn helped the students to improve their overall level of text comprehension. This ability to identify key words is considered to play a crucial role in listening.

In the next chapter, the results of the intervention presented in this chapter are discussed in detail and with reference to the theoretical framework adopted in this study.
CHAPTER 5: DISCUSSION OF RESULTS

Study 1 deals with research questions 1, 2, and 3. The data relating to the three questions of Study 1 were summarised in Chapter 4. Study 2 (the development of the intervention program) depends on the findings of Study 1. Accordingly, this chapter discusses the final research question (Question 4).

The strategy intervention consisted of teacher modelling of strategy use and reciprocal teaching. Both types of instruction aim to raise the learners' awareness of their own learning processes. Therefore, both data obtained from the Listening Strategy Questionnaire (that was conducted immediately after the intervention), and the investigator's observation of the students' study behaviour while undergoing the strategy instruction are included for discussion.

The Listening Strategy Questionnaire (LSQ) as described in 3.2 in Chapter 3, is concerned with students' reactions to authentic listening. It has three parts. Part 1 has two questions relating to the students' rank order of the difficulty level of the seven texts and the reasons they gave for their ranking (Question 1), and assessment of the frequency of their reported strategy use (Question 2). Part 2 has two questions relating to the students' ranking of the usefulness of the strategies introduced in the intervention (Question 3) - thus it was applicable to the intervention group only - and assistance they sought from language teachers to facilitate students' comprehension in authentic listening situations (Question 4). Part 3 consists of four open-ended questions. The questions ranged from typical strategies used by the students to solve comprehension problems (Question 5); strategies that they perceived to be effective (Question 6); how to improve listening skills (Question 7); and their preferred mode of speech delivery (Question 8).

Question 1 asked the students to rank the difficulty level of seven texts on
a scale of 1 to 7 (1=most difficult; 7=easiest). From the general pattern that emerged from the data, the investigator judged that a small number of students misinterpreted this instruction, responding with 7 for the most difficult and 1 for the easiest. Consequently these data were excluded from the analysis. Table 5-1 shows the results of Questions 2, 3, and 4 on the LSQ. Some representative comments derived from Questions 5 to 8 were presented in the text. The LSQ is included in Appendix 3-D.
<table>
<thead>
<tr>
<th>Question Item</th>
<th>IG</th>
<th>NIG</th>
<th>NIG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(A) Strategies related to top-down processing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looked at the title and guessed what the topic might be</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Tried to understand the general ideas and ignore details</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Ignored unfamiliar words and continued listening</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Guessed the meaning of unfamiliar words from the context</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Group-average score</td>
<td>4.3</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>(B) Strategies related to bottom-up processing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gave up listening on encountering many unfamiliar words</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Tried to listen to each word and figure out its meaning</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Became frustrated when the delivery was too fast</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Watched rather than listened</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Group-average score</td>
<td>2.6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(C) Strategies related to metacognition:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliberately maintained concentration throughout</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Directed attention to the repeated/stressed words</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Checked answers to see if they make sense</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Checked interpretation by referring to visuals</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Took notes</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Group-average score</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Question 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paying attention to the title and thinking about related words</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Checking the answers to see whether they make sense</td>
<td>7</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Paying attention to repeat/stressed words</td>
<td>6</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Identifying key terms to understand the content of the text</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Maintaining concentration</td>
<td>1</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Linking auditory information with visuals</td>
<td>5</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Taking notes</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Regular reinforcing of the news structure</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

**Question 4**

<table>
<thead>
<tr>
<th>Introduction of unfamiliar words before listening</th>
<th>1</th>
<th>2</th>
<th>1</th>
<th>1</th>
<th>1</th>
<th>1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of information about the topic before listening</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>More pauses during listening</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3.4</td>
</tr>
<tr>
<td>Replay of VTR several times</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3.2</td>
</tr>
</tbody>
</table>

NB: Question 2 uses the scale of 1 to 5 (1=never used; 5=always used). Question 3 uses the scale of 1 to 8 (1=most useful; 8=least useful). Question 3 is applicable to the IG only and the NIG did not respond for this question. Question 4 uses rank order of preferred assistance on a scale of 1 to 4 (1=most preferred; 4=least preferred).
5.1 Post-Test Performances

Comparison of the group-average post-test data demonstrated that the intervention group (IG) improved their performance, not simply narrowing the performance gap after Test 1 and then again after Test 4, but overtaking the non-intervention group (NIG) in the last two tests (Tables 4-11 and 4-12).

This performance pattern exhibited by the IG may be attributable to several factors. First, each of the seven post-tests was administered at two-week intervals after the last intervention took place. Proceduralisation or automatic use of strategies with which L2 learners are not familiar is a slow process. During this process, instead of learners' adopting new strategies for use, their conventional strategies may still be at work. Recognising this delayed reaction, the immediate effect of the intervention was not observed in Test 1 but became observable in Test 2. The comment made by one IG student in the LSQ (Question 1) adds weight to this proposition:

When I watched the first videotape (the first post-test text), I did not have the skills to listen and comprehend. That's why the first one was very difficult to understand. But as I kept watching and listening, my skills and knowledge were getting better and finally, comprehending satellite videos became a bit easier than what I felt the first time.

Indeed, the subsequent scores for the post-tests (Tests 5, 6, and 7) administered after the supplementary training session (Session 6 in semester 2) support this observation. Due to a two-month semester break between Test 3 and Test 4, the IG were given an additional training session to remind them how to use the three strategies introduced in semester 1 and this session also provided an extra opportunity for the IG to practise these strategies. Provision of extra training resulted in dramatic improvement for the IG in the three final tests (the IG reduced the
performance gap considerably in Test 5 and outperformed in Tests 6 and 7 with a slightly lower score in Test 6). Furthermore, the performance gap in Test 4 that was administered immediately after the additional training was smaller than the gap for Test 3. Thus, the memory effect of the initial intervention conducted before the post-testing appears to have been still strong, influencing positively the IG’s performance despite the two-month semester break. This outcome suggests that the IG would continue to improve their post-test performance if they were given more time to procedurallyise their strategy use.

This positive carry-over effect could not, however, be observed in Test 5. Test 5 was the most difficult test for both groups, as revealed by the data. This may be because the students were not familiar with the topic presented in Test 5. The effect of topic familiarity will be discussed later in this chapter.

Another potential reason for improvement in the IG’s performance relates to their increased familiarity with the test format and their ability to anticipate the questions in the test sessions. The seven post-tests followed the same format. Here the IG and the NIG had the same access to information. One of the key features of the strategy intervention was the inclusion of a metacognitive component to raise students’ awareness of the processes involved in listening. Because of the type of the intervention that the IG received, the IG students may have developed greater awareness toward the ways in which the questions are structured. Thus this effect (metacognitive awareness) in the intervention was stronger and more durable for the IG. As a result, as shown in the IG’s average test scores, this group performed better than the NIG.

During the post-testing sessions, the investigator observed that the IG students’ request for test results after they completed the task became more frequent than the requests from the NIG students as the study progressed. Each time the IG received their test result, the group evaluated whether they were making progress toward achieving better results. This

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higher level of monitoring ability led them to understand the significance of the strategy instruction and to appreciate why strategies were necessary. This effect enabled the IG to receive maximum benefit from the intervention that the NIG did not have.

Comparison of the test-score on group-average gains/losses in the post-tests demonstrates a clearly identifiable difference in the IG and NIG performances. Generally speaking, despite the initial difference in the pre-test score, the IG performed better than the NIG by reducing the gap across the seven post-tests and the IG maintained more constant gaps than the NIG including Test 5.

It was noted that the two NIG students who outperformed all in the IG and NIG in the pre-test recorded substantial losses in some of their post-test scores: one regressed in five tests and the other in four tests.

5.1.1 Adequacy of The 1996 Japan Foundation Japanese Language Proficiency Test as a Pre-Test Measure

The 1996 Japan Foundation Japanese Language Proficiency Test (The 1996 JFJLPT) that was used as the pre-test was an audio-only listening test. Both intervention and post-testing sessions used satellite videotexts under an audiovisual listening situation. Three key differences relating to these variables are easily identifiable. The first relates to the listening situation -- one with auditory-only and the other with audiovisual listening. The second relates to the language contained in the texts and the third relates to the length of the text itself.

The 1996 JFJLPT is more stylised than the satellite texts used for the intervention program. The former text was produced in a highly controlled manner with the language spoken relatively slowly and clearly without accompanying background noise. On the other hand, the satellite texts

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79 See Kato (1992) for his extensive review on The Japanese Language Proficiency Tests (listening component only) produced by the Japan Foundation.
were authentic, aimed at a specifically native Japanese audience. Hence these later texts contained all the features characteristic of natural speech. Equally important was the third difference, which concerns the different length of the two texts. The 1996 JFJLPT aimed at measuring listeners’ comprehension of a text smaller than a passage (of several short sentences at most) while the seven satellite video texts used as the post-test measure aimed at the comprehension of a whole text (of several passages at least).

Comprehension of a relatively short text requires less processing and retention of information in the learners’ short-term memory (STM) for a shorter period. In contrast, comprehension of a whole text demands different processing ability from the listeners. Listeners must process larger amounts of information as they listen and retain the information in their STM. They must retain the incoming information as they receive it and try to match this with schemata stored in their long-term memory (LTM). This processing must be performed quickly, and in an integrated manner, to effect comprehension. These differences in the demands of segments versus whole texts influence not only the listeners’ comprehension processes but also comprehension outcomes. Accordingly, these three key variables are believed to have influenced the students’ performances significantly.

When listeners attempt to comprehend and learn from an authentic spoken text whose content is unfamiliar to them, they require knowledge of appropriate comprehension strategies and their uses. The two NIG students whose test scores were high in the pre-test but low in the post-tests are typical of L2 classroom learners who are accustomed to the listening tests used in traditional classroom settings. They apparently lacked appropriate strategies needed for authentic listening even though they appeared to have strategies for typical classroom testing. These students can improve their performance if they are instructed to use strategies in task-appropriate ways and at the same time monitor their use of these strategies. Without such instruction, their comprehension of
authentic spoken text remains severely limited and improvement is slowed. Additionally, given the transitory nature of the auditory signal containing the information in authentic listening, listeners need to be able to deploy strategies rapidly to reduce the load on their STM.

5.2 Intervention Effects on Study-Specific Strategies
The three strategies introduced in the intervention (‘identifying key terms’, ‘inferencing’, and ‘elaboration’) are all cognitive strategies. Cognitive strategies are covert internal mental activities that are not subject to external observation. Hence the discussion of the effect of the intervention on using top-down and bottom-up processing (and metacognitive strategies) relies on data derived from the post-test scores and self-reported data in the LSQ.

5.2.1 Top-Down and Bottom-Up Processing
The data presented in the previous chapter indicate that the effect of the intervention on the IG’s use of strategies that related to the top-down processing was somewhat less assessable than the intervention effect on the use of strategies related to bottom-up processing because of the study design adopted by this study.

The key terms and the lexical items presented in the news title on the screen served as building blocks for constructing text meaning. This information provides listeners with a base for activating other strategies such as inferencing and elaboration. In this process, once the listeners have instantiated inference, other connected nodes in LTM are activated for elaboration to take place. Spreading this rich network through elaboration continuously strengthens the learners’ conceptual framework and the comprehension that results (Ashcraft, 1989; Anderson, 1995). This continuous reinforcement of the connected nodes can range in degree from simple guessing about the forthcoming text to more detailed inference and elaboration relating to what is already known to the listeners. The more constructive inference and elaboration that result from active network
activation influence the listener’s subsequent recall and comprehension of text (Mayer 1992; Wittrock, 1992). This process also enriches the schemata themselves and provides learners with a wider range of strategy applicability (Resnick, 1989). For these reasons, the strategies used by L1 and the AAP involved significant elaboration (as discussed in Chapter 4) and the strategies involving more elaboration are associated with better retention than the strategies involving less elaboration. The IG was instructed to use these strategies in sequence and the use of these ‘strategic sequences’ can be identified in the LSQ data presented below.

Question 2 in the LSQ (Table 5-1) examined the students’ frequency of using each of the three major strategies on a scale of 1 to 5 (1=never used; 5=always used). The first four questions related to top-down processing and the next four questions related to bottom-up processing. The last five questions, on the other hand, related to metacognitive strategy use.

One of the strategies related to top-down processing effected by titles in Question 2, ‘[I] looked at the title and guessed what the topic might be’ was rated 5 by four of the IG students and 4 by the remaining one IG student (group-average score: 4.8). In contrast only one NIG student rated this strategy at 5 (group-average score: 4). Although the investigator acknowledges the limited utility of learners’ reported strategy use as data, the intervention treatment seems to have facilitated the IG’s making inferences about the forthcoming selection of the texts. Another inferencing strategy, ‘[I] guessed the meaning of unfamiliar words from the context’ was rated 5 by two IG students and 4 by the remaining three students (group-average score: 4.4). The rating of this strategy by the NIG was 5 by two students and 4 by one student. The remaining two NIG students rated this strategy at 3 (group-average score: 4).

One of the remaining two strategies related to top-down processing, ‘[I] tried to understand the general ideas and ignore details’ was rated 5 by one IG student, 4 by two of the IG students and 3 by the remaining two IG students (group-average score: 3.8). The rating of this strategy was 4 and 3
by two NIG students respectively and 2 by the remaining one student (group-average score: 3.2). The strategy ‘[I] ignored unfamiliar words and continued listening’ was rated 4 by all five IG students (group-average: 4), but it was rated 4 by only one NIG student, 3 by three NIG, and 2 by the remaining one student (group-average score: 3). The overall group-average score on the use of the first four strategies related to top-down processing was 4.3 for the IG and 3.6 for the NIG.

These data indicate that the IG’s reported use of strategies related to top-down processing showed upward skewing while the NIG’s use of these strategies showed downward skewing. The IG’s increased reported use of strategies related to top-down processing was however not substantiated by the data in their post-test performance (Tables 4-17 and 4-18). In the post-test data, the overall group-average test score across seven tests was 55 per cent for the IG and 67 per cent for the NIG – a score 12 per cent lower for the IG. Despite the IG’s reported use of strategies related to top-down processing, this pattern was not sustained in their post-test performance.

Another explanation for the less effective use of strategies related to top-down processing by the IG may be due to the interference of the conventional strategies the learners have been using on the newly introduced strategies. Generally L2 teachers commonly use edited or commercially available text to measure students’ ‘comprehension’ by counting the number of items that the students have recalled or identified correctly. As a result, the L2 students conceptualised comprehension of text as mere decoding of words. Testing students’ understanding of ‘gist’ or ‘major ideas’ in the texts is more difficult and lamentably rare. Therefore, when learners are exposed to real listening situations such as those presented by satellite videotexts, many become anxious and frustrated.

The students in the study may have perceived newly taught strategies as
less relevant and more difficult to employ, and therefore continued to use conventional strategies (O'Malley, 1987). The Question 4 data in the LSQ on a scale of 1 to 4 (1=most useful; 4=least useful) support this view. Although the intervention focused on the use of strategies related to top-down processing, four IG and three NIG students reported 'introduction to unfamiliar words before listening' as the most useful (group-average score was 1.2 for the IG and 1.4 for the NIG), while one IG and one NIG student reported 'provision of information on the topic before listening' as most helpful (group-average score for the IG and NIG: 2.2 respectively).

The two strategies relating to bottom-up processing, '[I] tried to listen to each word and figure out its meaning' and '[I] became frustrated when the delivery was too fast' were rated lower and thus used less often by the IG. The former strategy was rated 1 (rarely used) and 2 by one IG student each and 3 by the remaining three IG students (group-average score: 2.4). One NIG student rated this strategy 5 (always used), followed by 4 and 3 by each of the remaining two students (group-average score: 3.8). Similarly, the latter strategy, which relates to the speed of delivery was rated lower by the IG, which indicates the IG's higher level of tolerance for the speed of text delivery -- a feature characteristic in authentic listening. This strategy was rated 3 by the three IG students and 2 by the two IG students (group-average score: 2.6). The three NIG students rated this strategy 4 and the remaining two NIG students rated 3 (group-average score: 3.6). In general, these data indicate that the IG become more resilient with the use of these two strategies.

On the other hand, the remaining two strategies related to bottom-up processing, '[I] gave up listening on encountering many unfamiliar words' and '[I] watched rather than listened' were rated higher by the IG than the NIG. This indicates that the IG valued these two strategies (and other strategies) more highly than the NIG did. The strategy, '[I] gave up listening on encountering many unfamiliar words' was rated 3 by the three IG students, and 2 and 1 by each remaining IG student (group-average
score: 2.4). This strategy was rated 3 by one NIG student, 2 by two students and 1 by the remaining two students (group-average score: 1.8). The strategy, '[I] watched rather than listened' was rated 4 by one IG student, 3 by the three IG students and 2 by the remaining one student (group-average score: 3). This was rated 4 by one NIG student, 3 by the three NIG students and 1 by the remaining one student (group-average score: 2.8). The overall group-average score on the use of the second four strategies that related to bottom-up processing was 2.6 for the IG and 3 for the NIG.

These results indicate that although the IG’s reported use of two strategies related to bottom-up processing ('[I] tried to listen to each word and figure out its meaning' and '[I] became frustrated when the delivery was too fast') showed a favourable pattern (downward skewing), the use of the remaining two strategies ('[I] gave up listening on encountering many unfamiliar words' and '[I] watched rather than listened') did not produce a similar pattern.

The studies reviewed in 2.6.5 in Chapter 2 that investigated the relationship between ‘real’ and ‘perceived’ strategy use indicate that the learners used the strategies they perceived useful in L1 studies (Brown & Palincsar, 1982; Baker & Brown, 1984). While the empirical studies conducted by the L2 listening researchers did not report the same finding. Vogely (1995), for example, found her ESL listeners recognised top-down strategies as effective but fewer students reported that they actually used these strategies. Other L2 researchers reported similar results (Bacon, 1992a, 1992b; O’Malley et al., 1989). Additionally, Vogely (1995) found the FL listeners perceived top-down strategies more effective but the FL readers perceived bottom-up strategies to be more effective. This demonstrates that learning environment and modality have an influential effect on the choice and the perception of strategy usage.

In this study, the IG students were introduced to various strategies during
the intervention. Through the teacher constantly evaluating their strategy use, the IG students developed the ability to assess effective top-down strategies that matched the teacher's expectations. The students who perceived strategies relating to top-down processing as more valuable, responded in the LSQ that they actually used them in the post-test sessions. This finding was consistent with the finding reported by Vogely (1995).

In general, the studies reviewed in Chapter 2 indicate that L2 learners' reliance on lower level (bottom-up) processing shifts to integrating higher level processing as their L2 proficiency increases (Conrad, 1985; Voss, 1984). The analysis of protocol data presented in the previous chapter indicates how the AAP handled text differently from the BAP. The former group accessed phonological and semantic codes more quickly than the latter group.

In some cases, L2 learners may have similar ranges of vocabulary but differ substantially in their processing capacity. Some may take longer to make semantic judgements of words or be unable to retain all information, experiencing loss of some information presented earlier. This was demonstrated in the protocol data in this study (Study 1). Effective comprehension requires quick encoding and decoding of linguistic input that must be retained in STM. It can be reasonably speculated that if learners' coding speed is slow, the information retained in STM would be less than for learners whose coding speed is faster. Slow coding results not only in less comprehension but also means that learners will be left behind further in the cycle of comprehension events. One student in the main study (Study 1) described this behaviour succinctly as 'drowning in a sea of words'. Thus there seems to be a strong linkage between the amount of information kept temporarily in STM and learners' comprehension outcome. Because decoding of words in texts is such a basic part of comprehension, practice in comprehension may be responsible for increases in coding speed (both encoding and decoding), which differentiate skilled comprehenders from less-skilled comprehenders.
The post-test performance data show that the intervention dramatically improved the listening task relating to bottom-up processing. Text-based information (both linguistic and non-linguistic) usually specifies content to some extent but the learners are required to integrate this information with other sources of information (their prior knowledge) to effect full comprehension. The investigator observed some students' heavy reliance on bottom-up processing (individual word processing) at the initial stage of the intervention (as revealed by the protocol data presented in Chapter 4).

Overall, contrary to the results obtained from the reported strategy use, the post-test performance data indicate that the IG found strategies relating to top-down processing (Tables 4-17 and 4-18) were more difficult to apply than applying the strategies relating to bottom-up processing (Tables 4-19 and 4-20). This was demonstrated in the increased gap of the group-average post-test scores.

The relationship between the post-test performance data on the use of key-word decoding skills (Tables 4-21 and 4-22) and the reported strategy use was not easily identifiable, although the IG students ranked ‘identifying key terms to understand the content of the text’ as a third useful strategy. The difficulty in evaluating learners’ ability to identify key terms that relied heavily on original words in the title resides in the fact that it was not always clear to what extent students really comprehended texts or the meaning of the terms they had chosen. Some may have chosen familiar terms while others may have recognised key terms. Thus the data did not reveal whether the IG’s improvement was specifically due to their enhanced level of overall comprehension or improvement in their ability to decode words.

To measure cognitive processing involved in listening, this study used the
multiple-choice test item format in order to differentiate the use of strategies related to top-down and bottom-up processing (except in Question 3 which asked the students to write key terms). In general, multiple-choice questions elicit low-level cognitive processing and thus they have been criticised by educators (Guilford, 1967; Shepard, 1991). In contrast, conducted-response (CR) format such as summary writing and open-questions evoke a wider range and more complex cognitive activities (Cronbach, 1984; Martinez, 1999). Recognising the scope of the study and the assessment context outlined in 3.2.5 in Chapter 3, this test format was considered to be appropriate and served the purpose of the study.

5.3 Characteristics of Texts
In Chapter 2, the variables relevant to the study that are believed to have an effect on comprehension are students' domain-specific knowledge or familiarity with the text topic and structural organisation of texts. Additionally, as the comprehension of satellite texts involves both visual and auditory processing, the processing is included in the discussion. These variables are discussed with reference to the data obtained from the native speakers' rank ordering of text difficulty and Questions 5 to 8 in the LSQ. The difficulty level of seven videotexts as indicated by the native-speaker judges was presented in Table 4-10 in 4.2.2 in Chapter 4. For the reader's convenience the table is reproduced below.

<table>
<thead>
<tr>
<th>Test/video number</th>
<th>Text title</th>
<th>Amount of visual information</th>
<th>Formality level of registers</th>
<th>Overall ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New bicycle management in Tokyo apartment block</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Report on school absentees</td>
<td>4</td>
<td>7 (highest)</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Poisoning</td>
<td>7 (lowest)</td>
<td>5</td>
<td>7 (most difficult)</td>
</tr>
<tr>
<td>4</td>
<td>Inspection of students' school bags</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Audibility of household goods when in operation</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Computer identification of individuals</td>
<td>1 (highest)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Book day for children</td>
<td>2</td>
<td>1 (lowest)</td>
<td>1 (easiest)</td>
</tr>
</tbody>
</table>

The rank orderings of text difficulty level were determined on two criteria: i) the amount of visual information; and ii) the formality level of registers.
5.3.1 Topic Knowledge

The topics in the seven post-tests were general in nature, but of interest to the students in this study. Three texts dealt with modern technology (Tests 1, 5, and 6), two with education issues (Tests 2 and 4), and the remaining two concerned general events (Tests 3 and 7). The texts concerned with education contained more-formal registers and those related to general events contained less-formal registers. On the other hand, the texts concerned with modern technology contained more words of English origin or ‘loan words’ than the two other texts. Four texts (Tests 2, 4, 5, and 7) contained diagrams, the remaining three texts (Tests 1, 3, and 6) were free of diagram illustrations.

The significantly reduced group-average score obtained by the IG and NIG in Test 5 (audibility of household goods when in operation) may be due to the students’ lack of knowledge of the topic which affected their comprehension. Test 5 dealt with the audibility level of sound devices attached to household items such as microwave ovens, rice cookers, electric water jugs and so forth. It described the role played by the ‘loudness’ and ‘frequency’ factors and how these factors may influence the audibility level of different age-group audiences. The correlation between these two factors was illustrated visually in diagram form. This test was ranked 4 by the two Japanese teachers - a mid-range difficulty level. The investigator selected these seven texts on the premise that the illustration would facilitate the students’ comprehension even if they did not fully understand these two concepts.

It appears however that the IG and NIG students were not familiar with these two concepts as judged by their post-test scores. The major reason may lie in the investigator’s presumption that tertiary-level Australian students understand these two concepts because of their pre-tertiary study experience. This assumption, however, appears to be false. Although
science and/or biology subjects are compulsory in Japanese junior and/or senior high schools, they are elective subjects at Australian high schools and many arts-oriented students (such as those enrolled in L2 subjects) did not take these as elective subjects. Consequently the majority of the students in this study had not learned either science or biology in upper high school. The absence of this scientific knowledge may well have been an important reason why the group-average test scores for both the IG and the NIG plummeted dramatically in Test 5. This situation reinforces the schematic view of text comprehension in both reading and listening.

On the other hand, Test 1 was given an overall ranking of 3 by the native speaker judges. They ranked the visual aspect of this text at 3 and the formality level of register at 2. These ranking scores generally reflect the facilitative effect of the diagram illustration contained in the text on students' comprehension. The positive effects of the diagram illustration on the IG and NIG were exemplified in their high test scores (Tables 4-11 and 4-12). As described in the preceding section, Test 1 was the first post-test, so the effect of the intervention was only minimal at that stage.

The relatively low group-average score by the IG on Tests 3 and 4 was due to two factors. Two of the IG students obtained 0 per cent on the Question 1 assessment item in Test 3 (Table 4-17). This contributed to the dramatically reduced group-average score for the IG. By the same token, two NIG students obtained 100 per cent on Question 3 in Test 4 (Table 4-22), resulting in the noticeably high group-average score of the NIG. Tests 3 and 4 were ranked as two of the most difficult texts by the two native-speaker judges. Test 3 (Poisoning) presented hospital scenes, mostly without providing students with any concrete information as the incident remained unsolved at the time of screening. Students who picked up the name of the poisonous chemical may have been able to infer the content much more easily than those who did not. Similarly, Test 4 (Inspection of students' school bags) addressed concerns about school authorities inspecting students' school bags. This text presented scenes
around the school and classrooms exclusively, followed by interviews with two school students whose faces did not appear on the screen. Consequently, unless learners have the ability to process auditory information correctly, it is difficult for students to establish the relationship between ‘what’ was said and by ‘whom’ - the elements related to the five Ws and one H included in strategy training. This situation forces students into heavy reliance on using top-down processing strategies such as ‘inferencing’ and ‘elaborating’. To effect top-down processing, however, the students must have an appropriate knowledge base from which inferences can be drawn. The inspection of students’ school bags is a relatively unfamiliar practice to most Australian students. Although the composition of L2 groups in this study was relatively homogeneous in terms of their linguistic, cultural, and educational backgrounds, the extent of their knowledge on the specific topic was not measured. Consequently, the use of strategies such as ‘inferencing’ and ‘elaborating’ is closely associated with the amount of knowledge each student possesses.

Two IG students who obtained 0 per cent on the Question 1 in Test 3, failed to access the related knowledge schema while two NIG students who obtained 100 per cent on Question 3 in Test 4, were successful in accessing this knowledge. Thus, having and knowing how to access appropriate schema seems to be a major determinant in comprehending these texts. The anomalous score patterns exhibited by the students may be attributable to the level of their topic familiarity to a large extent.

In contrast, in Test 7 (Book day for children), the IG outperformed the NIG in all three areas of strategy usage (strategies related to top-down processing, strategies related to bottom-up processing, and identification of key terms). Here the visual component of text information was abundant and the formality level of registers was lowest and hence easy for the students to comprehend. The native speaker judges also ranked Test 7 as the easiest. Accordingly, a similar level of performance was expected from both groups. However, the NIG’s performance did not
confirm this expectation and the performance of the NIG failed to sustain the level of performance of the IG. To the investigator's knowledge there were no intervening variables other than the intervention program (perhaps extremely minor differences in domain-specific knowledge) that would have influenced the group's performance on this test. Hence the result demonstrates a positive relationship between the intervention effects and the IG group performance.

The topics of Tests 1 and 6 both concern computers and these texts are relatively comparable in terms of their amounts of visual information and the formality levels of registers. They contained many English-originated words that are familiar to both groups. The performance gap between the two groups on Test 1 was larger than that on Test 6 (Tables 4-11 and 4-12). In Test 6, the IG's performance was comparable to that of the NIG. This result provides additional support for the conclusion that the intervention had a positive effect on the IG's performance outcome.

Additionally, relatively constant score gaps in the six post-test scores by the two groups indicate that the texts used for the post-test assessment were in general familiar or unfamiliar to a similar extent for both groups.

5.3.2 Genre Knowledge

Another influential aspect of text familiarity relates to the knowledge about rhetorical forms and genres of the text. Despite introduction to the unique text structure of news broadcasts and associated discourse makers that signal the organisation of the content boundaries, the students found 'regular reinforcement of the news structure by the teacher' (Question 3 in the LSQ) to be least useful. Due to the transitory nature of listening, the students seemed to have paid little attention to the use of this form-focused strategy. Instead, they may have used their processing capacity in coping with the speed of delivery by picking up some key terms.
5.3.3 Visual and Auditory Information Processing

In general, when the text contains rich visual clues, listeners engage less in detailed examination of text features. Such texts are appropriate for the listeners to generate possible interpretation of texts. The investigator selected assessment texts in consideration of the balance between visual and auditory information. This consideration was supported by the relatively constant test score gap between the two groups in processing these texts. Relatively higher test scores on Tests 2, 6, and 7, in particular, by the IG, also verify the effect of the intervention in simultaneous use of visual and auditory modes of presentation.

Some studies have reported the positive benefits of visuals (static visuals such as stick figures; captions; titles) on comprehension (Chung, 1999; Hanley et al., 1995; Herron et al., 1998; Omaggio, 1979). However, precise control of this variable (presented as a television program) was not possible in this study and was deemed beyond the scope of the investigation.

The data presented in Chapter 4 demonstrated that the students in the main study (Study 1) did not change their use of strategies significantly under the audiovisual and audio-only testing conditions. On the other hand, the protocol data presented in section 4.1.2.2 in Chapter 4 indicated that the below-average proficiency group (BAP) tended to focus their attention on the visual rather than on auditory information. The IG reported higher use of the strategy, ‘[I] watched rather than listened’ -- one of the bottom-up processing strategies. As evidenced in their lower pre-test score, this group may have difficulty in using visuals to confirm what they have heard, rather than linking what they have seen with auditory input.

Accordingly, processing text information through the one mode (auditory-only listening) may differ from that presented through the two modes (audiovisual listening). In the former situation, listeners have no other information sources and comprehension derives solely from linguistic
information in the text. On the other hand, in the latter situation, listeners have access to visual information (such as paralinguistic clues) as well as auditory information. The effect of these situational differences on learners' performance was evident in the group-average test score gains/losses presented earlier in this chapter. Moreover, the protocol data in Study 1 exemplified this effect.

Tony, one student in the main study (Study 1) explained the task of L2 listening and frustration at his inability to keep pace with the speed of information presented under the audio-only listening situation thus:

Immediately when you take the visual away from me, it's just so difficult ..... you're just trying to grab words and when you're holding a thought in your head you go 'yep, that's the word' and then all of a sudden you're about two or three sentences further on and you just feel yourself drowning in a sea of words.

Auditory information (linguistic information) interacts with visual information in various ways for encoding text information (Paivio, 1983, 1986b). Processing both sources of information simultaneously is a demanding task for L2 learners. Tony expressed the difficulty of processing audio-only input thus:

The first thing in my mind even though the teacher has told me there is no picture, I'm trying to switch my audio sense on - no matter what, I'm trying to focus all my attention on my audio. It's very difficult when you cut off your visual senses.

Similarly, the LSQ data (Question 8) revealed that most students in both groups favoured audiovisual listening. For example:

Sometimes an audio tape is easier to listen to because you
only have the one sense to use and because you can focus on it more. With audiovisual you focus on the sense that gets the most information, and for me that is seeing. So the hearing - which is already not good - becomes worse.

This comment fits with the visual-priority position in processing information which claims that since auditory processing occurs later than visual processing, the earlier visual component is used for forming the concept (Baggett & Ehrenfeucht, 1983; Grime, 1990; Reese, 1982). The comment also indicates the negative effect on auditory processing caused by the over-reliance on visuals.

One student's comment verified the research finding on visual-priority in that when the texts were summarised verbally and shown verbatim simultaneously, adult viewers inevitably read the document and ignored the verbal summary. She stated thus:

*If I have a written text in front of an audio tape, I will read the text and not listen to the tape.*

Another of her comments, although here she did not specify the type of text, relates to the nature of the texts affecting her comprehension.

*It depends on the topic. Audiovisual tapes are good. That’s because the words you don’t know, you can usually pick up from the general story by the picture. However, these pictures also mislead the listeners or distract them when they are trying to listen.*

Attending to the dual modes of input is believed to require additional effort. The increased mental effort resulting from coherent interpretation of text led to better comprehension (Cennamo, 1993). Others acknowledged the contribution of the listening-only situation, stating
simply, “If we listen only once, sometimes listening without looking helps a great deal”.

That language learners whose language proficiency is low have a tendency to focus on the visual aspect (including written scripts) has been acknowledged by L2 researchers (Hanley et al., 1995; Herron, 1994; Mueller, 1980). The audiovisual task requires less cognitive load and hence involves surface processing. Indeed most students in this study found audiovisual listening as their preferred mode. This is because, as one student put it, “If we can’t understand fully with listening, visuals can help us to understand - even to be able to guess”.

Other important information obtained from the protocol data in the main study (Study 1) revealed the negative effects of dramatic visual screenings that temporarily halted processing of text information. Two of the above-average proficiency group (AAP) students specifically expressed their concerns thus:

When the visuals are so dramatic, it’s hard to concentrate on what she’s actually saying ..... so when you see a lion actually attacking the sheep or whatever it is, my concentration goes away from pure listening to more visual and therefore the meaning’s not clear.

When they’re talking about the meat-feeding process I’m actually in awe of the tiger and what it’s actually capable of doing, what’s it catching ..... the cage also inspires that sort of fear in me.

Now the image is cute and I’m thinking about how cute the lion is ..... and I’m taking in more of what she’s saying than when the image was a more ferocious image on the screen.
Within a cognitive psychology perspective, the first step involved in comprehending text is the establishment of a semantic propositional representation of the text. This semantic representational context is then used as a base for the construction of a mental model (Morrow et al., 1987; van Dijk & Kintsch, 1983). Some listeners may produce propositional representation of text based either on auditory or visual input. Some may combine both. However when listeners' comprehension is halted temporarily as shown in the above protocols, they produce very limited interpretation of the text. On this basis, the selection of texts used for assessment plays a vital role for studies that deal with learners' mental processing of text information.

The advantages of having news titles as advance organisers helped listeners to develop an overview and set of expectations about the text. The titles (and other diagrams in Tests 2, 4, 5, and 6) presented to the IG and NIG in their native language (English) helped students to make appropriate inferences and facilitated establishing a general working framework for the videos. One strategy included in the intervention - 'paying attention to the titles and thinking about related words' - was highly appreciated by the IG. Two IG students ranked this strategy as their most preferred and another two IG students ranked it as their second most preferred strategy. The remaining student ranked it third (group average score: 1.8). Thus, these data provided support for the beneficial effect of presenting the titles and their meanings to learners in listening comprehension. However, whether the positive effect was caused by the visual-priority or auditory-priority of input was not clear.

5.3.4 The Role of Metacognition and Motivation in the Intervention
The LSQ data in the last five questions in Question 2 (see Table 5-1) focused on the use of metacognitive strategies. The strategy, '[I] took notes' was rated 5 by one IG student and 4 by the remaining four students (group-average score: 4.2) but this strategy was rated 5 by one NIG student, and 4 and 3 by two students each (group-average score: 3.8). The
Note taking is beneficial in any learning situation. Thus, the IG perceived this fundamental skill more favorably.

Another metacognitive strategy, ‘[I] checked answers to see if they make sense’ was also highly valued by the IG students. This strategy was rated 5 by the three IG students and 4 by the remaining two students (group-average score: 4.6). This strategy was rated 5 by one NIG student, 4 by three NIG students and 3 by the one remaining NIG student (group average score: 4). Thus the IG students appear to have exercised a higher level of metacognition in solving listening problems.

Another strategy, ‘[I] deliberately maintained concentration throughout’ was however given the same rating by the two groups (group-average score for the IG and the NIG was 3.8). The IG rated the remaining two metacognitive strategies, ‘[I] directed attention to the repeated/stressed words and [I] checked interpretation by referring to visuals’ much lower than the NIG (group-average score for the IG was 3.8 and 3.6; group-average score for the NIG was 4.2 and 4.6).

When the IG students were asked to rank the usefulness of the strategies introduced in the intervention (see Question 3 in Table 5-1), they ranked ‘paying attention to the titles and thinking about related words’ -- one of the top-down strategies -- the most useful (group-average rating: 1.8) and ‘taking notes’ -- one of the metacognitive strategies -- the second most useful strategy (group-average rating: 1.8). These strategies were followed by the order of ‘identifying key terms to understand the content of the text’ -- a top-down strategy -- (group-average rating: 3), ‘checking the answers to see whether they make sense (group-average rating: 4.8), ‘maintaining concentration’ and ‘linking auditory information with visuals’ (group-average rating: 5.2 each) and ‘paying attention to repeated/stressed words’ (group-average rating: 5.6).

During the intervention, both the IG and NIG were encouraged to take
notes to avoid information overload in their STM. At the post-testing sessions, as verified by the LSQ data, most of the IG students recorded information in their notes. By contrast, the NIG rarely did so. Metacognitive awareness in the form of a note-taking strategy thus seems to have provided the IG with more cognitive capacity for other uses. Alternatively, the intervention may have provided an opportunity to remind the students of this fundamental skill that has been overlooked. This factor may have contributed strongly to the IG's overall post-test performance.

The important role played by metacognition in strategy training, as a complement to other cognitive strategies, has been acknowledged widely by both L1 researchers (Campione, 1987; Grant et al., 1989; Palincsar & Brown, 1984) and L2 researchers (O'Malley, 1987; Thompson & Rubin, 1996). O'Malley et al. (1985b:561) emphasise the important role played by metacognition in L2 learning claiming:

Students without metacognitive approaches are essentially learners without direction or opportunity to review their progress, accomplishments, and future learning directions.

As described in Chapter 3, adult learners can exercise a high level of metacognition. Metacognition refers to knowledge about cognition and regulation of cognition (Flavell, 1979). The first type of knowledge is a prerequisite for the second to take place in a problem-solving situation.

Metacognition plays two key roles in strategy intervention in L2 listening (and in other areas of study). First, it enhances learner's awareness of mental activities involved in the problem-solving activity. Hence it is essential for learners to have the ability to identify the source of their difficulties. When the learners know about their problem, they take the steps necessary to solve problems by using task-appropriate strategies. The second aspect of metacognition defined by Flavell (1979) relates to the
learners’ ability to reflect on and monitor their learning.

The present study focused on the first aspect of metacognition more than the second. This was because of the time available for administering the intervention study.

Monitoring occurs as a result of activation of the schema network stored in LTM. When the new information or information that is not congruent with the previous information is received, learners must activate new nodes of the schema network. When the connected nodes of the earlier framework are reactivated by further congruent information, they will begin to fade. As a result, what was comprehended earlier will be lost. This process explains why comprehension monitoring is necessary and used more often by proficient learners in order to regulate the more efficient operation of strategies such as inferencing, elaboration, or anticipation.

The provision of teacher and peer feedback through ‘scaffolding’ and ‘reciprocal teaching’ provides cognitive support during the transitional learning stage of ‘novice’ or ‘apprenticeship’ (Collins et al., 1989). In these modelling and coaching methods, usually covert mental processes are externalised for learners’ observation. Observation plays a key role in developing a conceptual model of processes prior to initial attempts to execute a complex skill. It also provides an interpretive structure for making sense of the feedback received from the expert (and peers) in a shared problem-solving context. Practising these skills under the guidance of the teacher (and capable peers) enables L2 learners to improve their learning expertise by becoming more directed and autonomous learners.

This change in learning behaviour as a result of the intervention also influences learners’ learning goals (Brown, 1988). Moreover, learners’ active involvement resulting from increased processing activity and positive attitude enhances both their motivation to learn and their self-confidence. Conversely, if the learners lack comprehension-monitoring
skills after applying newly taught strategies, they may not notice improvement and they may stop using these strategies. Consequently, they do not appreciate the value or purpose of using these strategies and continue to remain passive in the learning process. Their motivation to learn and their self-confidence will be affected severely and decline in some cases. Thus the motivation to perform strategically and beliefs about the utility of strategy use are important variables in L2 learning. It is reasonable to expect that motivated learners would use strategies that are different from less-motivated learners. The positive learning strategies and related attributions described above were incorporated in the intervention in this study and resulted in positive learning outcomes for learners of Japanese.

In summary, the strategy intervention that incorporated the methods of 'modelling', 'coaching', and 'fading' was beneficial to learners for developing listening skills used in top-down and bottom-up processing. The note-taking strategy helped learners access other resources needed to effect better comprehension. However, the skills relating to top-down processing generated from the text title and subsequent inference and elaboration were difficult to proceduralise and were less sensitive to the intervention treatment. The titles containing key terms helped the learners to infer the main topic and content of the text. Learners' ability to identify key terms also improved. This is due in all likelihood to improvement in their decoding skills derived from the titles as 'advance organisers', or to students' enhanced level of overall comprehension.

Equally important was the finding that the intervention was beneficial for the IG students to become more resilient in dealing with problems that are inherent in authentic listening. The IG students have shown higher levels of confidence and tolerance in coping with the speed of text delivery and unfamiliar words in the text.

This study also revealed great variation among individuals in their actual
use of strategies and their perception of strategy use. Each individual learner uses strategies in particular ways and determines individually the usefulness of strategies. Thus when the IG students’ reported use of strategies was examined in the light of their post-test performance, the gap between these two variables was highlighted.
CHAPTER 6: CONCLUSION AND IMPLICATIONS

This chapter presents the summary of findings derived from the four research questions undertaken for this study. It also discusses the strengths and limitations of the study and considers the implications for future research highlighted by the present study.

6.1 Research Questions and Findings

This thesis consists of two sequential studies: Study 1 and Study 2. Study 1 is the refinement of a listening strategy classification scheme and addresses the following three questions:

(1) What are the listening strategies used by native speakers of Japanese (L1) and by above-average proficiency (AAP) and below-average proficiency (BAP) tertiary-level learners of Japanese as a foreign language who are Australian-English speakers, in audiovisual (AV) and audio-only (A) listening contexts?

(2) How does the voice medium in different genres (television news broadcasts and television family dramas) influence these speakers’ listening strategies in AV and A listening contexts?

(3) What are the similarities and differences in strategy use in AV and A listening contexts between the L1 group and the AAP and BAP L2 subgroups?; what are the effective strategies used by these speakers?; and what types of strategies should be included in an instructional package for an effective intervention program?

To answer these three questions, listening comprehension processes used by these speakers were verified through the methodology of concurrent think-aloud protocol analysis.
Study 2 evaluated the efficacy of the listening strategy intervention program and addressed the following question:

Question 4. Does the listening strategy intervention program developed in this study result in more strategic listening in Japanese?

The findings of this empirical investigation for the four questions above and the conclusions drawn from these findings are summarised below.

6.1.1 Use of Strategies by L1 and L2 by Condition and Text (Research Questions 1 and 2)

To answer these questions, the data from this study were analysed according to three variables: proficiency level (L1, AAP, and BAP); testing context (audiovisual and audio-only listening conditions); and text genre (news and drama texts).

The data revealed that all three groups used more cognitive than metacognitive strategies. The participants used cognitive strategies more often under audiovisual conditions, and metacognitive strategies more often under audio-only conditions. Cognitive strategies used under the audiovisual condition related to top-down processing and those used under the audio-only condition related to bottom-up processing. Preferred use of cognitive over metacognitive strategies by the three groups was consonant with the findings reported by Bacon (1992a), O’Malley et al. (1989), and Vandergrift (1992).

The data also revealed a distinctive pattern in strategy use that differentiated the L1 from the two L2 subgroups. The L1 used far fewer cognitive and metacognitive strategies than the L2 subgroups. This result provides support for the proposition that a process that has become automatic is an unconscious mental operation since it does not involve
short-term memory (STM) and hence it is inaccessible for verbalisation (Anderson, 1995; Ericsson & Simon, 1993; Schneider & Shiffrin, 1977).

The L1 group used the same cognitive strategies (responding/evaluating information, elaborating, and inferencing) and metacognitive strategies (comprehension monitoring) consistently across the different conditions and text genres. On the other hand, although the L2 groups used a similar range of strategies, their use of these strategies was less consistent than that of the L1 group. The AAP used cognitive strategies such as responding/evaluating information, inferencing, and identifying key terms under the AV condition and identifying key terms, inferencing, and translating under the A condition. The BAP used inferencing, identifying key terms, and responding/evaluating information under both conditions.

In comprehending different genres of texts, the L1 used slightly more cognitive strategies to comprehend the news texts and more metacognitive strategies to comprehend the drama texts. On the other hand, the two L2 groups used more cognitive strategies to comprehend the drama texts and more metacognitive strategies to comprehend the news texts.

The three cognitive strategies used predominantly by the AAP were: identifying key terms, responding to/evaluating information, and inferencing to comprehend the news texts; and inferencing, identifying key terms, and elaborating to comprehend the drama texts. On the other hand, those used by the BAP were inferencing, identifying key terms, and responding to/evaluating information to comprehend the news texts; and inferencing, identifying key terms, responding to/evaluating information, and translating to comprehend the drama texts. Thus the L2 groups used a similar range of strategies to comprehend the two different genres of texts.
Similarly with their use of cognitive strategies, the L2 groups used metacognitive strategies less consistently. To comprehend the news texts, the AAP used describing comprehension behaviour, identifying problems and self evaluating--expressing uneasiness, and to comprehend the drama texts, they used self evaluation--expressing uneasiness, self evaluating--expressing confidence, comprehension monitoring, and describing comprehension behaviour. To comprehend the news texts, the BAP used self evaluating--expressing uneasiness, describing comprehension behaviour, and identifying problems, and to comprehend the drama texts, they used self evaluating--expressing uneasiness, comprehension monitoring, and describing comprehension behaviour.

Overall, the L2 data showed more regularities than irregularities in strategy use. The two L2 groups used a similar range and frequency of cognitive and metacognitive strategies proportionally, according to the text genres and the testing conditions.

It was noted, however, that the L1 data are not directly comparable with data for the L2 groups due to the L1 group’s ability in automatic language processing in their native language. On the other hand, these data indicate that the use of cognitive strategies by the L1 and L2 groups was inversely related to the use of metacognitive strategies despite the different testing conditions and text genres (when the proficiency level of L2 learners advances, they use more cognitive strategies and fewer metacognitive strategies). This outcome suggests that when general strategy use was compared across the three groups, that of the AAP L2 group was closer to that of the L1 group than of the BAP L2 group. This finding is consistent with the evidence of other researchers (Conrad, 1985; Cziko, 1980; Dobson, 1995) that the use of strategies by L2 learners becomes more like that of native speakers as the learners’ language levels advance.
Several reading researchers in both L1 and L2 claim that the use of structural knowledge in text comprehension is a characteristic of skilled reading (Meyer et al., 1989; Raymond, 1993), but text genre has little effect on the choice of listening strategies by the intermediate-level learners of Japanese in this study.

6.1.2 Qualitative Differences in Strategy Use between the L2 Subgroups (Research Question 3)

Although the quantitative analysis indicated that the L2 subgroups used a similar range and frequency of strategies, the analysis of protocol data revealed striking differences between the L2 subgroups. The BAP students were generally ineffective in strategy use, although they appeared to be active listeners at a superficial level. They failed to produce accurate interpretation of texts. With extensive attention to individual words, the BAP students’ processing became overloaded and they experienced difficulty relating what they interpreted to other parts of the text, either earlier or subsequent. These circumstances prevented the group from accessing various sources of information including using strategies related to top-down processing such as inferencing and elaboration that are strategies used commonly by the L1 and the AAP groups. In contrast, the AAP students with fewer processing problems and greater processing capacity, were able to activate a wider range of strategies relating to top-down processing, and used visuals to confirm what they had interpreted. This behaviour produced more coherent text interpretation than the behaviour of their counterparts in the L2 group.

6.1.3 Evaluation of Listening Strategy Intervention Program (Research Question 4)

The intervention group (IG) received intervention on the three task-
effective strategies (identifying key terms, inferencing, and elaborating) to promote their listening comprehension with the provision of teacher modeling of strategy use and subsequent peer coaching.

The group benefited in enhancing their overall proficiency. Greater improvement was observed in performance related to bottom-up processing by the IG students, which resulted from their greater metacognitive awareness. Observing the teacher externalising learners’ covert processes provided students with an example of expert scaffolding and an interpretive structure for making sense of the feedback they received. These procedures helped the IG students to improve their expertise and to become more directed and autonomous learners. Moreover, the positive change in learning behaviour influenced students’ attitudes toward dealing with authentic listening texts and learning goals, resulting in enhanced motivation and self-confidence.

It was noted, however, that due to the nature and scale of this study, analysis of test scores by individual students gave no precise indication of where or how the IG students might have benefited from the treatment they received in the intervention.

6.2 Strengths and Limitations of this Study

This study has shown that L2 teachers can assist learners with fewer strategies and lower levels of metacognitive awareness in particular, by introducing them to a number of concrete strategies simultaneously in order to develop learners’ confidence and progress in listening. The effects of the intervention reported in this study were confined to improvement in performance but also involved change in students’ perception of satellite listening. The change in learners’ perception of strategy use is one of the important factors that influences learning outcomes.
Technological developments expose us increasingly to multi-media situations. L2 teachers can best meet the needs of learners arising from these developments through identifying listening strategies in multi-media situations and incorporating these into classroom teaching to maximise students’ L2 listening proficiency. This study concludes that the audiovisual listening context promotes the development of top-down processing skills whereas the audio-only listening context promotes the development of bottom-up processing skills. These two skills play, however, complementary roles in advancing listening proficiency. L2 teachers must select listening materials for their students to augment these two aspects of listening skill development.

While the cognitive approach of this study has delivered useful findings, in assessing the results of this study, some caveats derived from its research orientation and underlying assumptions must be acknowledged here.

First is the use of the ‘think-aloud’ data collection procedure to establish the listening strategy classification scheme and subsequent protocol analysis methodology (Study 1). The investigator recognises the limitations of this method, but recent research states that the think-aloud method is the most revealing method currently available to unlock cognitive processing of learners as they learn (Cooke, 1999). Second is the inherent problem of the small size of the data base in this study which precludes generalisability of results. Moreover, the participants in this study were adult native speakers of Japanese and tertiary-level learners of Japanese as a foreign language who are Australian-English speakers. Therefore, the findings of this study may be limited in what they offer to other groups of learners with different language backgrounds who are learning other languages under different learning contexts.
Other limitations associated with the research design should be acknowledged. The first relates to the selection of assessment items used as the pre- and post-test measures to investigate the efficacy of the intervention. As discussed in Chapter 5, the modality used for the pre-test was an audio-only listening context and that for the post-tests was an audiovisual listening context. The modality for the two tests should be identical to minimise the effect of other intervening factors. Second is the use of a multiple-choice test format to assess students' use of various levels of processing skills. The multiple-choice questions are considered to elicit low-level cognitive processing or content retention. This makes it difficult to pinpoint what processes were exercised and what type of improvement, as a result of using taught strategies, was expected. These questions require further investigation. Use of an open-ended test format would be more appropriate to assess students' use of top-down processing skills if the study design were able to accommodate this format. Moreover, the distribution pattern of weighing the assessment items has significant consequences for determining what processes have benefited most from the intervention. Slight variation in the distribution pattern affects the results considerably. The third acknowledgement here relates to the interval between each session of the intervention and the duration of the intervention. As discussed in 5.1 in Chapter 5, proceduralisation of the taught strategies is an extremely slow process. Six one-hour training sessions at one-week intervals might not have been intensive enough to enable some students lacking taught strategies to adequately develop these skills. The fourth acknowledgement relates to the procedure for assessing the difficulty of texts used for the post-test assessments. In this study, the difficulty of texts was determined by native-speaker Japanese assessors. Because this listening was in the audiovisual context, the preferred learning style (visual-oriented or auditory-oriented) of the assessors might have influenced their decision on the rank ordering of
text difficulty. Fifth is that the test passages used in this study were relatively short, lasting for three to four minutes. In a natural situation, listeners are more likely to encounter longer passages. Therefore the results cannot be used as the basis for 'pure' comparison with the data obtained in different authentic listening situations. Finally, learner variables such as attitude toward language learning, motivation to participate in the experiment, learning styles and preferences were not considered in this study. Such factors may have influenced the results. Furthermore, the level of students' domain-specific knowledge on their performance was not measured although some have lived in Japan for nearly one year (two of the Study 1 students). Although the intervention group in this study was relatively homogeneous, these learner variables and the prior knowledge base of the students may have influenced overall group performance to some extent. These limitations notwithstanding, however, the investigator contends that the study has important implications for the direction of future research in L2 listening strategies.

6.3 Implications for Future Studies and L2 Pedagogy

This study indicates that a satellite text is an appropriate medium for teacher intervention in students' strategic listening in Japanese. In the audiovisual listening context, the creation of text meaning is a function of the listener's knowledge of a target language and prior experience, with additional information supplied by the video's visuals. Proficient students in this study used visual and auditory information simultaneously. Literature in both L1 and L2 reports that the use of visuals has positive effects on encoding and retention of text information (Bransford & Johnson, 1972; Herron et al. 1998; Kubota, 1999; Mueller, 1980; Omaggio, 1979). However, some studies (for example, Mueller, 1980) report that the effects of visuals related inversely to the proficiency level of L2 learners. Thus future research could ideally explore learners' strategic differences,
how learners manage their interaction with audiovisual and audio-only information and how these strategies relate to learners' language proficiency. Another issue relates to the old debate on processing priority between visual and auditory information (Baggett & Ehrenfeucht, 1983; Grime, 1990; Reese 1982). To this investigator's knowledge, there are no published studies available in this area in L2 listening at the time of undertaking the present study. Future studies could take up these two issues since they have pedagogical significance for L2 teaching and learning.

A wealth of empirical and theoretical evidence in L1 reading studies identifies some strategies to be taught through intervention. Despite their similarities at a deeper level, in the context of this study, the L1 models which focus on children may not be appropriate for the L2 listening program. Future studies designed for adults should capitalise on a high level of metacognitive awareness that these learners bring to their L2 classroom.

An equally important factor that inhibits the L2 learner from strategic listening relates to short-term memory (STM) capacity. Deficits in STM have detrimental effects on strategic performance. Accordingly, L2 teachers should help students encode and decode extended units of meaning to improve students' retention of information. For example, the strategic use of student prior knowledge can influence memory performance. Learners can be encouraged to activate this knowledge source and relate it to the material to be learned. This type of training should be conducted in the early stages of L2 learning to allow students to capitalise on strategic learning at the outset of development of L2 proficiency.
Considerable evidence in L1 has been accumulated which indicates that teacher/peer modeling or scaffolding of cognitive processes produces positive learning outcomes. However, it is not yet clear precisely what types of instruction are most effective. Some teachers focus on the demonstration aspect while others emphasise verbal explanations and interactions. Some students may benefit more from a particular teaching method, while for other students this method may have little positive effect. Therefore future research should address those instructional methods which produce maximum proficiency outcomes for students. This line of study will enable L2 researchers to investigate how learner characteristics interact with strategy instruction to influence learning outcomes.

Another potential issue for investigation is the effect of social interaction with teacher/peers on learners' individual attributes. Each student brings different attributes and skills to their L2 classroom. Some attributes may be stable and others unstable. Motivation, for example, is considered to be amenable to intervention. Future studies could examine how personal attributes may change as a consequence of social interaction in the classroom.

These instructional issues have direct implications for future teacher training programs and L2 curriculum policy. As acknowledged by McMeniman (1994) in Chapter 2, L2 teachers are no longer mere providers of comprehensible language input. They are now strategy instructors helping learners to become strategic in their own learning but many teachers remain unaware of this somewhat new responsibility. Many L2 classroom contexts do not capitalise on teachers developing students' awareness of their own learning process. To achieve this goal, language teacher educators and education policy makers should consider the inclusion of strategy instruction components in teacher training courses.
and in future language curriculum design. Innovation in these areas has great potential for improving language students' proficiency outcomes.

As evidenced in reading studies, students whose word proficiency has not reached a certain threshold or who have inadequate levels of proficiency in L2 will be unable even to identify their problems, let alone address these problems. As a consequence, the assistance provided by the intervention may be minimal. Students with higher proficiency, on the other hand, are both more confident about their language base and have greater metacognitive knowledge of their own learning. Although this study did not investigate the degree to which the proficient learners benefited from the intervention, the ideal intervention should consider the needs of all learners, in a formal teaching context in particular. Additionally, the strategies taught in this study were specific to news texts; they were not general strategies. Therefore, it is appropriate to question whether and how such specific strategies are transferable to other types of text with different structures. Thus the proposition of whether the strategies taught are durable and transferable to texts other than those for which learners were trained should be tested further.

To date, evaluation studies of strategy intervention in the area of L2 listening are very thin on the ground. Consequently, language researchers lack data to evaluate program components and language educators lack the basic information needed for selecting components for their intervention programs. More empirical intervention studies are urgently needed to improve the current state of research endeavours.

Strategic training in L2 is highly complex and difficult to conduct. In general, the use of strategies depends on crucial interactions between variables relating to personal factors (including fatigue; variation in STM
capacity; attentiveness; learning styles and preferences), text characteristics (such as text genres; length and degree of complexity), and task difficulty. These variables interact with each other in distinctive ways and contribute to the differences in individual choice of strategies and subsequent performance. This study did not seek to measure the influence of specific factors on strategies, or the degree to which strategies included in the intervention produced positive outcomes. To complement the findings of this study, future studies could consider incorporating quantitative methods with qualitative methods.

Moreover, despite the lengthy and labour-intensive empirical work in this investigation, it is premature to declare closure on the three issues central to the thesis: first, identification of the particular strategies to be included in a maximally effective listening intervention program; second, identification of the most effective way to teach these strategies; and third, identification of the most efficacious way of evaluating the results of the intervention on the students' performance outcomes. Future research will help build more conclusive findings for the benefit of language educators, students and indeed the many who have an indirect interest in the language abilities of the members of our society. The current study however, takes some useful, if preliminary, steps toward this broad goal.
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Appendix 3-A: Information handout on Study 1

To dear participants of K. Seo's study

K. Seo is currently pursuing the study on listening comprehension strategy, focusing on mental process when learners of Japanese process different types of text. She will be collecting data using 'think-aloud' method which requires participants to verbalise their thoughts while listening to a short text of about one minute. To be fully familiar with procedures, participants are expected to attend training sessions. A small financial compensation will be paid after the completion of five sessions.

Why?
Language strategies help the learners to enhance their learning competence. In particular;
1. You know most effective strategy when you encounter comprehension difficulties; that is, you will become a better listener.
2. You will change your perceptions of your comprehension ability and develop self-confidence.
3. You will be able to control your learning; that is, you become an autonomous learner.

How?
There will be 5 sessions; 3 group-training and 2 testing sessions. You must participate all sessions.

When?
Session 1 (4:30pm-5:00pm Monday in Week 4): Introduction & viewing a demonstration videotape to familiarise procedures (30 mins).
Session 2 (3:30pm-4pm Wednesday in Week 4): Practice session (30 mins)
Session 3 (3:30pm-4pm Friday in Week 4): Practice session (30 mins)
Session 4 (by appointment in Week 5): Individual testing session (30 mins) Session 5 (by appointment in Week 6): Individual Testing Session (30 mins)

Contact: Kyoko Seo (Ext. 7473) Room 0.20 AIS
Appendix 3-B: Seven post-tests

VTR Test (1) Name (

After listening to the VTR, answer the questions below.

Q1-A) What title would you give for this VTR? Choose only one answer that you think is appropriate. (5%)

1. Prevention of bicycles from being stolen.
2. An alternative way of administering bicycles.
3. A suggestion to increase the number of bicycles for the residents in need.

Q1-A) What is the main idea behind taking this action (based on your answer in Question 1)? Write your answer in one sentence. (5%)

Q2) Circle the correct answers. (20%)

1. Under the new system, the residents are allowed to use bicycles for more than 6 hours.
2. One household in this area has four bicycles.
3. Under the new system, the number of bicycles has greatly increased.
4. Under the new system, the number of bicycles has decreased into half.
5. Under the old system, many residents did not return the bicycles often.
6. Under the new system, the bicycles will be ready for the residents to use at any time.
7. The unit/apartment is located away from the station.
8. About half of the households are happy and they are using the new system.
9. Under the new system, detailed information will be recorded (eg, who; when; which bicycles is used).
10. This system is so cheap that the person received more than 50 inquiries.

Q3) Write four key words that you think important. (10%)

340
After listening to the VTR, answer the questions below.

Q1-A) Who is/are the subject(s) of the news? Choose only one answer that you think is correct. (5%)
   1. Primary school students
   2. Junior high-school students and primary school students
   3. Senior high-school students

Q1-B) What is the major issue/problem of the above group of the students? (5%)
   1. Not achieving good school results.
   2. Not attending classes on a regular basis.
   3. Have experienced victimisation/teasing at school.

Q2) Circle the correct answers. (20%)
   1. The school population has dropped in Japan recently.
   2. The school population has increased in Japan recently.
   3. The number of school absentees has become the highest in the past five years.
   4. There should be alternative schools/institutions that accommodate the needs of these students.
   5. The school education system is flexible enough to cater for the needs of these students.
   6. The school education system cannot be changed at the present moment.
   7. The school is a place to learn how to cope with other people.
   8. The school should not concern itself about these students after they have left their institution.
   9. Parents should force these students to attend schools so that they can sit for the exams.
   10. Both students and their parents perceive that school education is not essential.

Q3) Write three key words that you think important. (10%)
After listening to the VTR, answer the questions below.

Q1-A) What is the main theme of the VTR? Choose one.(2.5%)
Car accident; Mass suicide; Poisoning; Murder

Q1-B) What kinds of symptoms did the people involved in this incident show. Circle the ones that you think correct.(2.5%)
Dizziness; Headache; Vomiting; Numbness
Drowsiness; Loss of vision

Q1-C) Describe in one sentence the view/suspicion that is held by the police (ie, How did the incident happen?).(5%)

Q2) Circle the correct statements.(20%)
1. This incident happened at the private home during the weekend.
2. This incident happened in the factory on Monday morning.
3. Ten people were involved in the incident.
4. People involved in the incident drank coffee that was made out of tap water.
5. People involved in the incident drank tea that was made out of hot water kept in the thermos.
6. The thermos was switched off on Friday and switched on Monday.
7. The thermos was not switched off from Friday to Monday.
8. Some died as a consequence of the incident.
9. There appears to have been another similar incident recently elsewhere in Japan.
10. The substances of the chemical compounds that are less known to people are more difficult to identify than those that are well known.

Q3) Write three key words that you think are important.(10%)

342
After listening to the VTR, answer the questions below.

Q1-A) Why are they suggesting the introduction of a school bag inspection system? Write your answer in one sentence. (5%)

Q1-B) Who was the group responding to the survey? Circle one answer that you think is correct. (5%)

Parents of students; School students; School principals

Q2) Circle the correct statement. (20%)

1. One out of three respondents disagreed to the introduction of a bag inspection system.
2. About one third of the respondents have witnessed or heard of the school students bringing a knife to their school campus.
3. The school bag inspection system invades a basic human right. Therefore it should not be introduced.
4. Life is more important than human right. Therefore it should be introduced.
5. The introduction of this system may contribute to the diminishing of trust between teachers and students. Therefore it should not be introduced.
6. About a quarter of the respondents think the introduction of a bag inspection system is mandatory.
7. The inspecting of a student's bag is not an effective measure because students may hide their belongings elsewhere.
8. The majority of the respondents think inspecting a student's bag is acceptable once the students and their parents agree.
9. The introduction of the system should be left to an individual school.
10. It is more important to educate students about the importance of life rather than inspecting their school bags.

Q3) Write three key words that you think are important. (10%)
After listening to the VTR, answer the questions below.

Q1-A) What is the main purpose for conducting the experiment? Write your answer in English in one sentence. (5%)

Q1-B) Why don't the manufacturing companies increase the loudness level for their products? Write your answer in English in one sentence. (5%)

Q2) Circle the correct statement. (20%)

1. The sound level of 2,000 hertz is the most audible range for the aged.
2. The sound level of 4,000 hertz is the most audible range for the young.
3. Many Japanese household appliances use 2,000 hertz sound level.
4. Many Japanese household appliances use 4,000 hertz sound level.
5. When the loudness level is raised, the aged are able to hear the sound of 2,000 hertz range.
6. When the frequency level (expressed in hertz) is increased, the aged are able to hear the sound of 2,000 hertz range.
7. The frequency (expressed in hertz) is a major factor affecting the hearing capacity of the aged.
8. The increase of the loudness level by 1.5 times enables the aged to hear the sound of 2,000 hertz range.
9. In general, the loudness level has a minimum effect on hearing for the young.
10. In general, the loudness level plays a major role for the aged in hearing the sound product from the household appliances.

Q3) Write three key words that you think are important. (10%)
After listening to the VTR, answer the questions below.

Q1-A) Write a title that you think most appropriate for the VTR (one phrase in Japanese).(5%)

Q1-B) What is a distinct feature of koosai that differentiates individuals from others? Circle one only.(5%)
    colour; shape; pattern; size

Q2) Circle the correct statements.(20%)
(A) What features of a signature can this computer register?(5%)
    The computer can recognise the shape.
    The computer cannot recognise the stroke order.
    The computer cannot recognise the hand pressure applied in signing.
    The computer can recognise the hand movement as signature.
    The computer cannot recognise the speed in signing.
(B) What features of the human face can this computer register?(10%)
    hair style; eye shape; nose position; eye colour;
    mouth position; eyebrow shape; ear position; spectacles; skin colour;
    height of a nose;
(C) What was the comment made by Prof. Chihara. Circle the statements you think are correct.(5%)
    The computer must be accessible to everyone.
    The computer must be user friendly.
    The keyboard is an essential element of the computer.
    The computer must respond in ways that are similar to humans.
    The computer should be operated using a keyboard and a mouse.

Q 3) Write four key words that you think are important.(10%)

345
Satellite VTR Test (7) Name ( )

After listening to the VTR, answer the questions below.

Q1-A) To increase the number of children reading books, what was decided by the bookshop owners and the publishers? Choose one. (5%)
   - To publish more children's books;
   - To establish a 'book' day;
   - To include more pictures in children's books

Q1-B) What measure was taken by these people (ie, the bookshop owners and the publishers) as a part of their campaign for increasing the number of children reading books? Your answer must be written in one sentence (in English). (5%)

Q2) Circle the correct statements. (20%)
   1. The sale's level for children's books dropped to less than 3% last year.
   2. Mothers should exchange children's books with others more often.
   3. More than fifty bookshops throughout Japan were involved in conducting the story-reading sessions for children.
   4. One of the bookshops that contributed to the initiation of the story-reading session is located in Tokyo.
   5. In general, children want to re-read the books. As a result, their mothers will purchase the books that were read at the reading session. This will increase book sales.
   6. More cartoon books/magazines were sold than the children's books 20 years ago.
   7. More children's books were sold than cartoon books/magazines 20 years ago.
   8. Currently, more children's books are sold than cartoon books/magazines.
   9. Currently, more cartoon books/magazines are sold than children's books.
   10. Recently many bookshops have extended the area for children's books.

Q3) Write three key words that you think are important. (10%)
LISTENING STRATEGY QUESTIONNAIRE

NAME: ____________________________

This questionnaire is in three parts and is concerned with your reactions to the 7 videotapes that you viewed in Semesters 1 and 2, 1998. Part 1 relates to your evaluation of the relative difficulty level of the 7 videotapes and to your use of strategies throughout the listening exercises; Part 2 relates to your prioritising of certain listening strategies; and Part 3 relates to general questions about listening in Japanese.

PART 1

1. The 7 videotapes are listed below. Please place each title in order of priority from 1 = most difficult to 7 = easiest. Place the numbers 1 to 7 in the brackets preceding each title.

( ) VTR 1 - Number of school absentees at Japanese junior high schools
( ) VTR 2 - New way of administering bicycles for the apartment residents
( ) VTR 3 - Identification of individuals by computer
( ) VTR 4 - Proposal for inspection of school bags
( ) VTR 5 - Audibility range for the aged and household appliances
( ) VTR 6 - Poison in the thermos
( ) VTR 7 - Children's book day

Please state brief reasons for your priority ordering of these videos.

________________________________________________________________________

________________________________________________________________________

2. Please read each of the following strategies and circle the number which best describes your use of that strategy throughout the 7 listening exercises.

a. I looked at the title and guessed what the topic might be.

1=Never          2=Rarely           3=Sometimes        4=Frequently       5=Always

b. I watched rather than listened.

1=Never          2=Rarely           3=Sometimes        4=Frequently       5=Always

c. I ignored unfamiliar words and continued listening.

1=Never          2=Rarely           3=Sometimes        4=Frequently       5=Always

d. I became frustrated when the speed of delivery was too fast for me.

1=Never          2=Rarely           3=Sometimes        4=Frequently       5=Always

e. I checked my answers carefully to see if these answers made sense.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

f. I tried to understand the general idea and ignore specific details.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

g. I became frustrated when I encountered unfamiliar words or concepts.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

h. I tried to listen to every word and figure out its meaning.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

i. I gave up listening when I encountered many unfamiliar words.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

j. I deliberately maintained concentration throughout.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

k. I directed my attention to the repeated/stressed words.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

l. I guessed the meaning of unfamiliar words from the context.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

m. I checked my interpretation by referring to the visuals.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

n. I took notes so that I did not forget details.

1=Never 2=Rarely 3=Sometimes 4=Frequently 5=Always

**PART 11**

3. You were introduced to the following strategies during the strategy training sessions. Which strategies did you find most useful when listening to the 7 videotapes? Please place each strategy in order of priority from 1 = most useful to 8 = least useful. Place the numbers 1 to 8 in the brackets preceding each strategy.

( ) Paying attention to the title and thinking about related words.
( ) Checking the answers in the question sheet to see whether they make sense or not.
( ) Paying attention to the repeated/stressed words.
4. Which of the following do you think would be most useful for comprehending a satellite news broadcast? Please place each item in order of priority from 1 = most useful to 7 = least useful. Place the numbers 1 to 4 in the brackets preceding each item.

( ) Introduction of unfamiliar words before listening.
( ) Provision of information about the topic before listening.
( ) More pauses during listening.
( ) Replay of the VTR several times.

PART III

5. When you are listening to Japanese videotapes and you come to something you don't understand, what strategies do you typically use to solve your comprehension difficulties?

6. What strategies do you believe an efficient listener of Japanese (as a foreign language) uses?

7. If you knew someone who was having difficulty with listening comprehension, how would you try to help that person?

8. What could you do to improve your own listening skills?

9. Which do you find easier to comprehend - an audiovisual tape or an audio tape?
## Appendix 4-A: Summary of L1 strategy use

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## Appendix 4-B: Summary of L2 strategy use

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355 351
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355/352
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Appendix 4-C: L1 verbal protocols

1. YOKO

TEXT 1 (News: Panda)

「東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の午前老
衰のため日にました。」

I wonder if this is an evening program? (ALAN)

「フェイフェイは１２年前の昭和５７年に日中国交正常化１０周年を記念して中
国から送られました。」

There was an announcer on TV up till now, but now they're going to tell us about the
panda's death so I anticipate that we'll see images of the panda at the zoo when it was
alive. (ANTC)

Perhaps because the pandas are from China they have names like Fei-Fei or Tong-Tong
..... I wonder if they were from a western country, they'd be named John etc., I've been
wondering about this. (ELAB; RJE INF)

「そして、その２年前後には息子のユウウも生まれ、一家で人気を集めていまし
た。しかしフェイフェイの年齢は２７歳、人間にすると８０歳を超す高齢です。
this month, I thought I should go back to my old state. I had been following a routine of daily tasks that felt like stress. I felt like I was getting used to this state. I thought I should do something to change it. I decided to try a new approach.

It didn’t die of disease but of old age, so it lived 80 years and died happy, it wasn’t a bad way of dying ..... I think it’s sad though. (R/E INF; R/E INF)

TEXT 2 (Drama: Haru yo koi)

「春希：帰ってこないのかな。」
これは日本のすごい昔の話かなって思う。家の造りから。
I wonder if it’s an old Japanese story judging from the style of house. (INF)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。
母：知ってても言えないんでしょう。お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って辛いの。」
何が辛いのか分からんけど、やっぱり家の造りと服装と髪形から戦前の話かなって、何となく。
I wonder about what’s hard here, but the house styles, clothes, and hairstyles indicate it’s a story happening before World War 2. (INF)

「春希：あーあ、いつまで帰ってこないつもりなんだろ、お父さん。
母：大学の入試の時期が終わるまで帰ってこないんじゃないの。お父さんが帰ってこないと入学金、払えないでしょう。
」
この女の子は今から大学に入学する女子高生なんやなあ
This girl’s a high school graduate about to study at a university. (INF)

「春希：お父さん、本当に怒ってんのね。
母：きっと、大丈夫よ。いい方法があるわよ。
To be in university in the olden times for an average person must have been very expensive ..... And judging from that girl’s facial expression she’s confused and worried about which direction to take. (ELAB; INF)

「春希：それに、もし入学金の工面ができて、私が大学に行ったら、お母さんとお母さん、うまく行かなくなるでしょう。お父さん、だって本当に怒っているの。母さんの立場うんと悪くなるわよ。」
それやったら自分で分かってねんやったら諦めればいいなんて思ったけど .....やっぱりそれでも行きたいんやったら大学行きなさいっていう言葉をちょっとは期待してるっていうのを何となく分かるような気がする。
I thought if she knows about it she can give up going to university ..... she still wants to go and expects someone to tell her that she can go. I understand that feeling. (R/E INF; INF)

「母：春希を本当に大学へ行かしたいと思っている。あんたが大学、入学する日を楽しみにしてる。」
いいお母さんやなぁ。
What a kind mum! (R/E INF)

TEXT 5 (News: Siberian Tiger)
「中国に住む野性のシベリア虎は、90年代以降30頭ほど確認されただけで、」
虎って言ったら、日本やったら、動物園ぐらいにしかいないけれど、このシベリア虎っていうのは、今、貴重って言ってたから、今からちゃんと子孫を残して行くのが大変やなと思いました。
When you say tiger, in Japan they only exist in zoos. But this Siberian tiger’s valuable, so
I thought that it would be difficult to keep this species alive. (ELAB)

「年々数が少なくなっています。この為、」
今、息が白かったから季節的に冬かな。

I wonder if it's winter season since I can see the white breath. (INF)

「中国政府は動物園で飼育していたシベリア虎を集め、ある訓練を始めました。」
光が明るいかから、結構朝の映像かと思う。

I think this is a morning film as the light is so bright. (INF)

「この訓練を始める為、中国では初めての」
なんか中国人らしい服装やな。

It looks like a typical Chinese-person’s dress. (R/E INF)

「サファリパークを哈尔ピン市内に新しく作りました。」
日本のサファリパークと同じようにバスで移動して見るような動物園。
It's a similar style safari park as in Japan. You move around in a bus and look around. (R/E INF)

「このサファリパークは３０万ヘクタールもあり、」
やっぱり、さっき言ったみたいに冬の映像やと分かった。
(As I said before, this is a winter film. (COM)

「３０頭のシベリア虎は、今ここで訓練を受けています。」
こわ！、何か、小さい時にバスに乗って行ったのを思い出した。
Wow! I just remembered what it was like to go on a bus as a child. (ELAB)

「サファリパークでは、放し飼いにすれば、虎は本能で」
おおすごい、なんか追いかけたら可愛そう。
Wow! it seems cruel to chase it. (R/E INF)
「他の動物を追いかえると考えていましたが、餌を」
ああー、食べてる、怖い！
Wow! It's eating, how scary. (RIE INF)

「自分で取った事がない虎は、獲物の急所を知りません。」
虎を知らないで虎は、やっぱり野生の虎やったら、一回噛んだら、そこを噛んだら、すぐに死んで自分が食べられるっていうのがわかるけれど、でも飼育された虎だったら、急所がわからないから、多くの食べるまでにすごい時間がかかるってしまうようなあ ..... やっぱり、すごくっていうのが分かる。
If it's a wild tiger, it will know instinctively that the prey would be killed with one bite. But a tiger in captivity wouldn't know about this and as a result, it would take a lot of time for it to kill ..... I understand the ferocity of it. (ELAB; R/E INF)

「結局、人間が虎に肉を与えることになります。」
でも、このままずっと野生のまま野生に戻れなくなったら、結局は人間に手伝わないといけなくなるから、やっぱり、動物には良くない ..... 人間が好き勝手しすぎやと思う。
If it's kept like this, it can't go back to the wild and humans must help it ..... I think humans are being too selfish. (ELAB; R/E INF)

「サファリパークはシベリア虎を何とか野生に返す為に、この訓練はまだまだ続けるそうです。」
でも、多分、難しいやろなぁと思います。
But I think it would be hard. (R/E INF)

TEXT 6 (Drama: Kanamono ya)
「叔母；私が東京で見たスーパーって言うのはね とにかく体育館みたいに広い大きな売り場ですね。」
これは、ドラマか、それか昔話みたいな感じで、おばあさんが子供とかに話し
This looks like a drama or a folk story with grandmother talking to children. (ALAN)

「そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っているの。」
ちょっとだけ音がするから、なんか、動きながら話してるんじゃないかと。
There's some noise so perhaps they're talking while they're walking. (INF)

「姉：じゃあ、デパート見たいなもん？」
やっぱり男の子の声がするから、子供とか、そういうなんで昔の話をおばあさんがしているような気がする。
I hear a boy's voice so I think there're children listening to grandmother tell a story. (INF)

「叔母：デパートと違うところは 値段が安くなっていうことかしら。大量に仕入れて、セルフサービスで とにかく安く売りまをするのが うたい文句。
姉：セルフサービス？」
もう一人、女の子が出てきたから、孫とか、そういう風な感じで、暖かい感じで話しているような
Another girl's came in so I think grandmother's telling story to grandkids in warm atmosphere. (INF)

「叔母：いちいち売り子さんがつかなくてね、お客様が自由に好きなものを選んで買い物するのよ。」
子供が知らない事を教えてあげてるから、おばあさんもすごく楽しそうな感じがする。
Grandmother looks really happy because she's talking about stuff that the kids don't know. (INF)

「弟：お姉ちゃんわかる？」
なんか、ちょっと、なまっている様な感じがしたから、田舎の方の子供かな ..... 男
There's a bit of an accent, so I wonder if they're kids from the country ..... I know the boy and girl are brother and sister. (ALAN; COM)

「姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。」
やっぱり、田舎の子供に髪町はすごいだよねということを、おっがあちゃんか誰かが教えてあげていて、セルフサービスとか、そういうすごい事ができるんでっていうのを田舎の子に言っている。
Country kids get told by grandmother or someone that the city is an amazing place including things like self-service. (SUM)

「姉：だといいけど。」
でも、子供はやっぱりなんか田舎で育っているから、すごい都会にあこがれてて言うより、心配の方が今は強いような気がする。
I know these kids were brought up in the country ..... so I think now the feeling of worry is stronger rather than being impressed by city life. (COM; INF)

2. YASUKO

TEXT 1 (News: Panda)

「東京の上野動物園の」
日本のニュースで最初のオープニングの音楽っぱかたったかなあ。
This is a Japanese news and the opening is very musical. (ALAN)

「雄のジャイアント、パンダ、フェイフェイが今日の未明老衰のため死にました。
フェイフェイは12年前の昭和57年に日中友中華化10周年を記念して中国から送られました。」
ああ、パンダがああ、私、あの時、お父さんと一緒にパンダ見に行けばよかった。
Oh, it's a panda. I should have gone with my dad that time to see them. (ELAB)
「昭和61年には壱のフンフンとの間に念願の赤ちゃん、トントンが誕生しました。そして、その2年後に息子のユウユウも生まれ、一家で人気を集めていました。」

中国のパンダやから、名前が日本とは違う ...... 花子とかつけたら面白いのに。It's a Chinese panda so the name is not Japanese ...... If it was given a Japanese name like Hanako it would have been interesting. (ELAB; R/E INF)

「しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱しきった状態が続いていました。上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」

人間でも私のおじいちゃんがこの間亡くなってそれを考え出した ...... そんなニュースやのに、こんなゆっくりとしゃべっている人は何も感じへんのかな ...... 周りが騒がしかったから、これまっずっとブラウン宮の中の奥はそのリポーターみたいになってると。

(It made me think of recent my grandfather’s death ...... But I wonder if the commentator feel nothing about the news as she’s talking unaffected ...... Judging the noise surrounding her, I guess she acts as a reported in a camera. (ELAB; R/E INF; INF)

TEXT 2 (Drama: Haru yo koi)

「春希: 帰ってこないのかな、どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。

母: 知ってでも言えないんでしょう。お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って幸いの。」

これは日本のテレビ番組で、戦争中の出来事で ...... どこ行ってるかって聞いてているのは、最初お父さんのことかと思ったけど、もっとさんのことや ...... その中でお父さんが人間関係に組み込まれて、親と子が揉んでいるところ。

This is a Japanese TV program during the World War 2 ...... First I thought they're talking where-about of her father but I realise that it was not about father but about Momoya ......
It's the moment of trouble between parents and their daughter. (ALAN; COM; SUM)

「春希：あーあ、いつまで帰ってこないつもりなんだろ、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。お父さんが帰ってこないと入学金、払え込めないでしょう。」
娘はお父さんに頼むことがあんねんけど、お母さんはそれにあまり賛成してない様子で、それに対して娘が声高くてお母さんに非難の念みたいなのを受けてい る。
The daughter has something to ask to her father but mother doesn't seem to be happy with it. Therefore, the daughter is angry with her mother. (SUM)

「春希：お父さん、本当に怒ってるのね。
母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：春希。
春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。」
結構娘は親思いのところがある ..... でも親は娘にすべてのことをしてあげたいって感じ。
She is a good daughter considering her parents' standpoint ..... But her parents want to do everything they can do for her. (R/E INF; INF)

「お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。
母：母さん、春希を本当に大学へ行かしたいと思っている。あんたが大学、入学する日を楽しみにしてる。」
私が大学に行く時にお母さんと話したのと同じ様なことを話してるなど。
They're talking about the same things I talked about with my parents when I was about to enter the university. (ELAB)

TEXT 5 (News: Siberian Tiger)
I wonder if it's necessary to catch an animal in the wild and then train them ..... I wonder if such news is worth broadcasting as I've never heard of animals like wolves being trained in Japan. (R/E INF; ELAB)

Even when the government say that we must build safari parks for the tigers sake, I think it's government excuse and economics comes into it ..... It's same with Japanese government. (ELAB; R/E INF)

To go around on a tour bus is the same as Japan and purpose of doing this is to make money after all ..... For who are they doing this? ..... This s not intended to return the tiger to the wild but simply to make money. (ELAB; R/E INF; R/E INF)
Training is impossible with all these people watching and I feel there’s no meaning to what is being done. (R/E INF)

「サファリパークでは、放し飼いにすれば、虎は本能で他の動物を追いかけると考えていましたが、何を自分で取った事がない虎は、」
確かに、野性じゃ無い奴を獲物を追いかけさせることによって、本能を目覚めさせるというのは難しいなと思うけど、それを人に見せるとというのは主旨からはずれるでしょうかと思います。
I think it would be good to train a domesticated animal to catch its prey but to show the process of training to the public is out of question. (R/E INF)

「獲物の急所を知らせません。結局、人間が虎に肉を与えることになります。」
羊かなんかがくわえられてるんやけど、痛そうやし、見ててあまり、気持ちのいいもんやないと思います ..... 結局、野性じゃったら寒いのも暑いのも適応できることに、暖房が効く部屋へ入れてるっていうのは虎のためやと思うけど、人間の自己満足としか思われへん。
It’s got a sheep or something in it’s mouth, it looks like it hurts and I don’t feel good ..... Although the tigers are capable to adjusting the outdoor temperature in the wild, to house them in an air conditioned cell is not really for the sake for the tiger but perhaps it more for the human beings self satisfaction. (R/E INF; R/E INF)

「サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続けるそうです。」
あまり、興味の無いニュースやったなあという感じ ..... 虎と聞いても、来年は虎の年やから、このニュースやってるのかのと思うけど ..... 全体的には興味の無いニュースやったと思います。
It was not very interesting news ..... I think that because next year is the year of the tiger so they’re broadcasting this news ..... But overall I think it’s pretty uninteresting new. (R/E INF; ELAB; R/E INF)
TEXT 6 (Drama: Kanamono ya)

「お母さん、私が東京で見たスーパーって言うのはね。とにかく体育館みたいに広い大きな売り場でね。そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っているの。」
誰がしゃべってるの ...... スーパーは東京に限らずても今どこにでも色々あると思います ...... それに対して、どうこうあんまり、思わんと思います。

Who's talking? ...... Supermarkets aren't just in Tokyo, they exist everywhere ...... I think it's nothing special. (R/E INF; ELAB; R/E INF)

「姉：じゃあ、デパート見たいなもん？
お母さん：デパートと違うところは値段が安いっていうことかしら。」
今スーパーは結構高いです。

Supermarkets are quite expensive now. (R/E INF)

「大量に仕入れて、セルフサービスでとにかく安く売り出しているのがうたい文句。」
今やったら、ジスカウントショップのほうが安いんと違うか、いつの時代の話かなあと思うけど。

Aren't discount shops cheaper than supermarkets now? I wonder which time are they talking about? (R/E INF)

「姉：セルフサービス？
お母さん：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。」
なんや、セルフサービスという言葉を知らんというのが、だいぶ昔の話やなんか思える ...... それと、このお母さんの口調自体がすごえらそう ...... 自分のお母さんはいたらこんな感じ感動してね事はもっとうれしそうに話すんやけど、このお母さんはすごい落ち着いていて ...... ああ、この人がお母さんやったら嫌やなと思いますね。

I think this is an old story as they're not familiar with the term 'self service' ...... This

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mother’s way of talking is really big ..... If it was my mother, she’d be happier when she

talks about something impressive like this ..... I wouldn’t like this person if she was my

mother. (INF; R/E INF; ELAB; R/E INF)

「弟：お姉ちゃんわかる？」
姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。
姉：だといいけど。」

男の子と女の子と３人おるけど、この男の子、何か、いけてないというか、声と

からでも若いねんやろなとか思う ..... 今の３人の会話から思うようなことは

ドラマ風やな ..... 普通にしゃべってたら、本当に感動したとか分かるように

言っているはずなのに、あまり面白くなかったという感じですね。

There are three boys and girls, but the boy is not very cool and he’s not young judging

from his voice tone ..... From their conversation, this is a drama ..... They talk in an

artificial manner, if this really happens, they’ll talk in ways that appeal to the audience.

(INF; ALAN; R/E INF)
Appendix 4-D: L2 verbal protocols

The Below Average Proficiency Group (BAP):

1. SHARON

TEXT 1 (News: Panda)

「東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の末日老衰のため死にました。」

A panda died and something else died I think. (IKEY)

「フェイフェイは12年前の昭和57年に日中国交正常化10周年を記念して中国から送られました。」

Sounds like a lot of animals. (INF)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。そして、その2年後には息子のユウユウも生まれ、一家で人気を集めていました。しかしフェイフェイの年齢は27歳、人間にすると80歳を越す高齢です。このため今年の10月ごろから食欲が落ち初め、今月に入ってから衰弱した状態が続いていました。上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」

TEXT 2 (Drama: Haru yo koi)

「春希：帰ってこないのかな、」

Who won't come home? ..... I wonder who won't come home. (R/E INF; REPT)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。
母：知ってても言えないんでしよう。お父さんに口止めされているよ、百瀬さん。お父さんと私たちの間には入って辛いの。」

Talking about the father. (IKEY)
「叡希：あーあ、いつまで帰ってこないつもりなんだろう、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。お父さん帰ってこないと入学金、払えないってでしょう。
叡希：お父さん、本当に怒ってんです。」

Taking about the father. The father got mad at her for something. (IKEY; TRANSL)

「母：きっと、大丈夫よ。いい方法があるわよ。
叡希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：叡希。
叡希：それに、もし入学金の工面ができて、私が大学行ったら、お父さんとお母さん、うまく行かなくなるでしょう。お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。
母：母さん、叡希を本当に大学へ行かしたいと思ってる。あんなのが大学、入学する日を楽しみにしてる。」
I wonder what she's sewing? (R/E INF)

TEXT 5 (News: Siberian Tiger)
「中国に住む野性のシベリア虎は、90年代以降30頭ほど確認されただけで、」
I wonder what the word is to, torta ..... oh, must be lions. (REPT; INF)

「年々数が少なくなってます。この為、中国政府は動物園で飼育していたシベリア虎を集め、
Someone went to the zoo and saw some lions maybe. (INF)

「ある訓練を始めました。この訓練を始める為、中国では初めての」
They started some kind of ..... I don't know. (IDTC)

「サファリパークをハルピン市内に新しく作りました。このサファリパークは30万ヘクタールもあり、」

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It says haru, harubin ..... looks like a lot of people went sightseeing ..... maybe to the zoo and they saw some lions. (REPT; DESS; INF)

「30頭のシベリア虎は、ここでお練りを受けています。
サファリパークでは、放し飼いにすれば、虎は本能で他の動物を追いかかけると考えていましたが、餌を自分で取った事がない虎は、獲物の急所を知りません。
結局、人間が虎に肉を与えることになります。」

It must be feeding time in the zoo maybe. (INF)

「サファリパークはシベリア虎を何とか野性に戻す為に、この訓練はまだまだ続くそうです。」

TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね」
She's talking about a supaa. (IKEY)

「とにかく体育館みたいに広い大きな売り場ですね。」
And it was as large as the oval or something. (TRANSL)

「そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っている。
姉：じゃあ、デパート見たいなもん？
叔母：デパートと違うところは 値段が安いっていうことかしら。」
Sounds like a conversation between a mother and a son, or a couple may be. (INF)

「大量に仕入れて、セルフサービスで とにかく安く売りますっていうのが うたい文句。
姉：セルフサービス？
叔母：いずれ売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。」

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Isn’t that normal, you just pick whatever you want and buy it. (R/E INF)

「弟：お姉ちゃんわかる？」
姉：よく分からん。
弟：けど、となり町にできるんだけど。この町と違うで関係ないって。」
I didn’t understand; that had no relation. (SE-LCONF)

「姉：だといいけど。」

2. ALICIA

TEXT 1 (News: Panda)
東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の末明老衰のため死にました。」
Um, that was obviously the introduction bit ..... it was very quick ..... I’m probably used
to watching and listening at the same time for getting my information. (ALAN; IDP-TXT; DCOMB)

「フェイフェイは12年前の昭和57年に日本が正規化10周年を記念して
中国から送られました。」
Um, there were a lot of numbers and figures there ..... I’m not sure whether it was the
year or an amount. (R/E INF; SE-LCONF)

(Panda’s cry)
Uh, strange background noises. (R/E INF)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生
しました。」
I caught akachan which is baby ..... maybe it’s some sort of baby animal. (IKEY; INF)

「そして、その2年後には息子のユウユウも生まれ、一家で人気を集めていま
した。しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。"

Ni juu nana sai ..... maybe, it's the age of the animal, or maybe it's the zoo thing again ..... yeah that it might be any sort of baby animal, probably a live one by the sound of it. (IKEY; INF; COM)

「このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱してきった状態が続いていました。」
No, I didn’t catch anything she said then ..... it's going a bit fast for me. (SE-LCONF; IDP-TXT)

「上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんです、今日の未明寝るように息引き取りました。」
Um, my vocab isn’t good enough to pick up everything she was saying ..... maybe about the habits of the animal or something like that. (SE-LCONF; INF)

TEXT 2 (Drama: Haru yo koi)
「春希：帰ってこないのかな、どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。」
Typical mother and daughter talking, or that’s what it seems to me ..... the mother’s doing something else and just sort of listening with one ear to whoever’s talking. (INF; DESS)

「母：知ってても言えないんです。お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って辛いの。」
It’s interesting looking at the traditional Japanese room in the background. (RIE INF)

「春希：あーあ、いつまで帰ってこないつもりなんだろう、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないかの。」
I caught university ..... so obviously, I think she would be a student ..... and talking about
her father. (IKEY; INF; IKEY)

「お父さん帰ってこないと入学金、払え込めないでしょう。
春希：お父さん、本当に怒ってんのね。
母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：春希。」
Um, I'm not understanding everything they say ..... but it just seems like an interaction between the family sort of, the mother giving advice to the daughter. (SE-LCONF; INF)

「春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。お父さん、だって本当に怒ってい るもの。母さんの立場うんと悪くなるわよ。
母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」
She doesn't seem to be getting much of an answer from her mother, or she's not happy with the answer from her mother ..... I was watching her facial expressions more carefully than trying to understand everything she said ..... and she didn't seem to be happy with the answer she was getting. (INF; DCOMB; INF)

TEXT 5 (News: Siberian Tiger)
「中国に住む野性のシベリア虎は、90年代以降」
It's a nice picture of a tiger anyway. (DESS)

「30頭ほど確認されただけで、年々数が少なくなっています。」
I didn't understand what she was saying ..... I was more involved with watching the picture ..... so I didn't pick up the meaning there. (SE-LCONF; DCOMB)

「この為、中国政府は動物園で飼育していたシベリア虎を集める。」
Talking about the zoo I think ..... probably about the tigers. (IKEY; INF)
Opening of a Chinese safari park or something ...... it looks very official and very formal. (INF; R/E INF)

It's 30 hectares or something ...... the bus is going through, typical tourist behaviour, staring out of the windows. (IE; R/E INF)

Oh, that looks a bit dangerous, I wouldn't want a tiger coming up to me like that. (R/E INF)

I was looking at the tiger catching the sheep ..... so I sort of missed what she was saying ..... but I think it would probably relate to that. (DCOMB; SE-LCONF; INF)

Um, it may be talking about feeding the tigers meat ..... or maybe that's their diet. (INF; INF)

That final shot of the tiger upside down was strange but it was amusing just to see that. (R/E INF)
TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね」

It sounded like *supaa*, like supermarket ..... um, the person doesn't sound very lively ..... sounds either, maybe its someone that's old, or not feeling well, or tired. (TKNOWL; INF; INF)

「とにかく体育館みたいに広い大きな売り場でね。そこに食料品から日用品、衣類、雑貨に至るまで」

Talking about daily food, or necessities, or some type of ingredients maybe. (INF)

「何でも大抵の物は揃っているの。
姉：じゃあ、デパート見たいなんもん？
叔母：デパートと違うところは 値段が安いっていうことかしら。」

I think they're talking about going to the supermarket and maybe getting, buying groceries that type of thing. (INF)

「大量に仕入れて、セルフサービスで とにかく安く売りますすっていうのが う たい文句。
姉：セルフサービス？
叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。」

Um, it sounded like some sort of, when guests come in they're treated well, or it sounded like 'silver service' ..... but I'm not sure if that was right or not. (INF; SE-LCONF)

「弟：お姉ちゃんわかる？
姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。
姉：だといいけど。」

I don't know if they have changed scene there or not, or what happened to the person that was the older sounding person. I'm not sure exactly what's going on now. (SE-LCONF)

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TEXT 1 (News: Panda)

This music just reminds me of basically an introduction to television news .... which is, you know, sort of either Channel 7 or, anything like that. (ALAN; ELAB)

「上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の未明老衰のため死にました。」

Umm, I basically got _kyoo_, she's obviously talking about today's weather ..... I virtually tried to listen to the whole paragraph, sentence to try and figure out exactly what she's going to talk about, and it was obviously in _Tokyo_. (IKEY; DCOMB)

「フェイフェイは1 2年前の昭和57年に日中交流正化10周年を紀念して中国から送られました。」

There was some of the vocab that I didn't pick up 'cause I didn't know much about it ..... I picked up _Chuugoku_ which is China and _gakusei_ which is student, or _okokusei_, I'm not sure about that ..... I'd have to listen to it again. (SE-LCONF; IKEY; SLfFM)

「(Panda's cry)」

I don't know what that sound is. It sounds like something that would be at a zoo or a theme park, or something. (INF)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。」

I got _akachan_ which is obviously baby, and _tong tong shimashita_. I'm not too sure what that is ..... it might be some sort of idiom which is, like, _cha_ when leaves are falling or something like that, like thunder. (IKEY; ALAN)

「そして、その2年後には息子のユウユウも生まれ、一家で人気を集めています。」
Ni juu nana sai, so obviously I picked up how old it is, umm obviously 27 .... judging by the sound, it's some sort of animal, or something like that. (IKEY; INF)

「人間にすると80歳を超す高齢です。このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱しきった状態が続いていました。」

I was just trying to listen to the whole lot of it to try to understand an overall picture of it ..... but unfortunately, because I didn't know much of the vocab, umm, I couldn't really pick up what was actually said. (DCOMB; SE-LCONF)

「上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での」

I got sasumi or it sounds similar to natsu yasumi but yasumi I got is holiday so, sasumi I'm not too sure of, it's probably a completely different word .... but because a lot of the vocab in this particular tape I'm unfamiliar with, I'm finding it a little hard to pick up bits even though I can pick up familiar words obviously, but not all of it. (TKNOWL; IDP-TXT)

「治療を続けていたんですか、今日の未明寝るように息を引き取りました。」

Hikitorimashita. (IKEY)

TEXT 2 (Drama: Haru yo koi)

「春の：帰ってこないのか、」

Only seeing the first two seconds of the show, she looks like she's a little bit tired. Or in the way that she said ..... oh you know that, that sort of, her intonation of what she was virtually saying is though she's a little bit weary or a bit tired. (INF; INF)

「どこへ行ってるんだろう。」

It looks, just the way possibly she was saying it, the sound of it, the way the intonation was going up and down, it was almost like she has a problem but she didn't quite know
what to do and it was almost like, well what am I going to do? (INF)

「百瀬さん、本当に知らないのかしら。
母：知ってても言えないんでしょう。」
And, it's almost like, she's there saying that it will be okay and don't worry about it. (INF)

「お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って辛いの。」

I picked up otoosan so they're obviously talking about someone's father, or her own father to be precise ..... so, just have to see exactly what emerges from that. (IKEY; SELA)

「春希：あるか、いつまで帰ってこないつもりなんだろ、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。」

She obviously has some sort of problem with trying to find out what to buy, or something like that, for her father or something similar to that. (INF)

「お父さん帰ってこないと入学金、払え込めないでしょう。
春希：お父さん、本当に怒ってんのね。
母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：春希。
春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。」

I listened for a fairly long period of time to just to try to get a gist of basically what they were saying ..... I picked up certain words and images like otoosan, okaasan, I was thinking of mother, father, daigaku, uni ..... I was wondering, trying to work out exactly what the problem was that she was talking to her mother about, because some of the vocab I wasn't too sure about and ..... basically I think she is virtually talking to her
mother about or, it could actually be her grandmother or an aunt to find out you know, what she is going to do about her problem. (DCOMB; IKEY; SE-LCONF; SUM)

「お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」

Just listening to the way that she's speaking and trying to understand exactly what she's trying to say, it's obvious that she's, the tone of her voice is more so, that she's offering advice ..... and virtually saying that it will be okay, and virtually just trying to, not calm her down, but sort of just offer some advice. (INF; SUM)

TEXT 5 (News: Siberian Tiger)

「中国に住む野性のシベリア虎は、」

Umm, the news just as it would normally be the 6 o'clock news in Brisbane. (ALAN)

「90年代以降30頭ほど確認されただけで、年々数が少なくなっています。」

The types of adjectives that they're using to ah ..... I can only picture what they're like from seeing them at theme parks in Australia, like Dream World, and as being huge, dangerous, cute, cuddly. (IDTC; ELAB)

「この為、中国政府は動物園で飼育していたシベリア虎を集め、ある訓練を始めました。」

Some of the vocab I don't understand ..... I have to listen what to they're actually saying and by looking at the picture ..... I picked up Chugoku. (SE-LCONF; SLFM; IKEY)

「この訓練を始める為、中国では初めてのサファリパークをハルビン市内に」

The safari, I got the Chinese Safari Park where obviously the tiger was ..... When 'safari park' comes to mind, I immediately think of Africa and some of the big game parks that they have there. (IKEY; ELAB)
I can imagine that, just judging by the size of the hectares that they said that the safari park was, it would obviously be, although it seems relatively big, in comparison to say, South Africa, for instance, no where near as big ..... although it seems that it’d be a good tourist attraction. (ELAB; R/E INF)

Listening to it and comparing it with a zoo, and ummm, just virtually the visual video of it, umm it sort of virtually says to me that, even though the animals are obviously running free it’s obviously a lot different to a zoo. (SUM)

They’re feeding the tigers with meat ..... I could imagine that would be with most zoos, as it would be. (DESS; ELAB)

In the last couple of sentences I didn’t quite understand the vocab ..... but just by looking at the video, it obviously seems that it would be a fairly interesting place to go to ..... basically the safari park is something that is obviously a tourist attraction that’s able to let these animals run freely that are on show. (SE-LCONF; R/E INF; SUM)

TEXT 6 (Drama: Kanamono ya)

Looking at Tokyo was excellent, possibly, supaa, mita, Tokyoo ..... and I picked up some sounds, I couldn’t be sure what they are, it sounds like some cleaning sounds or a door or
something like that. (IKEY; INF)

「とにかく体育館みたいに広い大きな売り場でね。そこに食料品から日用品、
衣類、雑货に至るまで」

Umm, I just trying to pick up some words to try and put the whole thing together ..... I
think she's talking about umm, sort of days of the week and things that are happening
according to those days. (DCOMB; INF)

「何でも大抵の物は揃っているの。
姉：じゃあ、デパート見たいなもん？」

Umm, department store ..... maybe she'd possibly been to a department store or talking
something about the department store.  Depaoto. (IKEY; INF)

「叔母：デパートと違うところは 値段が安いうことかしら。」
She's talking about nedan which to me is prices and then I got atsui, so hot ..... but that
doesn't make any sense, so I'm just not too sure exactly what she's talking about ..... but
they're obviously talking about maybe she's talking about yasui instead of atsui I'm not
too sure. (IKEY; COM; ALAN)

「大量に仕入れて、セルフサービスで とにかく安く売りますっていうのが う
たい文句。」
Tsukarimasu is getting tired ..... so I'm not too sure about that or how it fits in. (IKEY;
COM)

「姉：セルフサービス？
叔母：いちいち売り子さんがつかなくてね、お客様が自由に好きなものを選
んで買い物するのよ。」

Something about okyakusan, umm the customers ..... maybe she had a hard day at work
and maybe before when it said atsui, maybe it was hot possibly working, maybe she's
just finished work or something. (IKEY; INF)
「弟子：お姉ちゃんわかる？。
姉：よく分からん。」

Wakara umm .... I'm not too sure but something like, it's not very good or she doesn't quite know what to do. (KEY; INF)

「弟：けど、となり町にできるんだろ。この町と違うで関係ないって。」

Just listening to the tone of his voice and the way he was saying things, possibly would suggest to me that he was trying to offer some sort of advice, or saying things will get better or something like that. (INF)

「姉：だといいけど。」

Da to ii kedo .... umm, it will be okay. It will become okay. (KEY; TRANSL)

4. BILL

TEXT 1 (News: Panda)

「東京の上野動物園の」

OK, we're in a Tokyo zoo. (KEY)

「雄のジャイアント、パンダ、フェイフェイが今日の未明老齢のため死にました。」

Something tame ni, which belongs to or in relation to. (KEY)

「フェイフェイは12年前の昭和57年に」

Now something happened twelve years ago. (INF)

「日中国交正常化10周年を記念して中国から送られました。」

Something came from China, something came from China about twelve years ago .... I wonder if it's the tiger I saw in the last video. (INF; REPT; COM)
"(Panda's cry)"
That's a really strange noise. (R/E INF)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。」
OK, somebody Tong-Tong had a baby. (IKEY)

「そして、その2年後には息子のユウユウも生まれ、一家で人気を集めています。」
Nigonen ..... what's that come out to? ..... nigonen. About ..... between two and five years ago? (IKEY; R/E INF; REPT; INF)

「しかしフェイフェイの年齢は27歳、人間にすると」
Something's 27 years old ..... and I hope it's the mum and not the baby. (INF; R/E INF)

「80歳を超す高齢です。このため今年の10月ごろから食欲が落ち初め、」
Shokuyoku, I wonder what's shokuyoku ..... Something to do with hungry? (REPT; INF)

「今月に入ってからは衰弱しきった状態が続いていました。」
Feeding time maybe .... it must be feeding time at the zoo. (INF; INF)

「上野動物園では」
Ueno ..... so Ueno's a suburb of Tokyo. (IKEY; ELAB)

「老いたフェイフェイが出来るだけストレスを感じずにいられるよう」
Did she say stress? ..... I'd stress if I were feeding tigers. (R/E INF; R/E INF)

「住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」
Going to feed them, and then it's time for bed maybe. (INF)
**TEXT 2 (Drama: Haru yo koi)**

「春希：帰ってこないのかな。」

Somebody didn't come home. (TRANSL)

「どこへ行ってるんだろう。」

And I wonder where he went. (TRANSL)

「百瀬さん、本当に知らないのかしら。」

母：知ってても言えないんでしょう。」

He's not here is he? (R/E INF)

「お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの間には入って辛いの。」

Oh, when mama and papa aren't here we're going to help you or something ..... she's got her hands on her chin, does that mean she's hiding something? (TRANSL; R/E INF)

「春希：あの、いつまで帰ってこないつもりなんだろう、お父さん。」

母：大学の入学の総切が終わるまで帰ってこないんじゃないかの、お父さん帰ってこないと入学金、払え込めないでしょう。」

Oh, she's upset 'cause her husband didn't come home, and mama's saying don't worry, it was the same with papa. (SUM)

「春希：お父さん、本当に怒ってるのね。」

But papa's mad ..... why is papa mad? (TRANSL; R/E INF)

「母：きっと、大丈夫よ。いい方法があるわよ。」

Oh, don't worry, she said, don't worry cause he's a good husband anyway. (TRANSL)

「春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。"
母：「春希。」
She's saying she wants to go to college.... mum says she's got allergy. (TRANSL; TRANSNL)

「春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。」
Ah, so if I go to university you guys aren't going to see me. (TRANSL)

「お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。
母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」
Sounds like going to college is an interesting thing. (R/E INF)

TEXT 5 (News: Siberian Tiger)

「中国に住む野生のシベリア虎は、90年代以降30頭ほど確認されただけで、年々数が少なくなっています。この為、中国政府は動物園で飼育していた」
Ok, we're at a China, zoo. (IKEY)

「シベリア虎を」
Safe, safe area, that's it. (IDTC)

「集め、ある訓練を始めました。
この訓練を始める為、中国では初めての」
Looks like a celebration, maybe an opening ceremony. (INF)

「サファリパークをハルビン市内に新しく作りました。」
Something very new here. (IKEY)

「このサファリパークは30万ヘクタールもあり。」
I've got a thirty hectare park ..... and a bus load of tourists. I wonder if they're from...
Japan? look at the size of that cat. (IKEY; R/E INF; R/E INF)

「３０頭のシベリア虎は、今ここで訓練を受けています。
サファリパークでは、放し飼いにすれば、虎は本能で他の動物を追いかけると考えていましたが。」
I can't understand the language ..... but the tiger's about to eat another animal ..... jibun de, he's going to eat all by himself..... he's going to eat this big sheep maybe. (SE-LCONF; DESS; IKEY; INF)

「(Tiger roaring)」
Here they're showing pictures of a tiger behind bars ..... and I don't like caged animals. (DESS; R/E INF)

「飢を自分で取った事がない虎は、獲物の急所を知りません。結局、人間が虎に肉を与えることになります。」
Tigers are meat-eating animals. (ELAB)

「サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続けるそうです。」
Why does this one look dead? (R/E INF)

TEXT 6 (Drama: Kanamono ya)
「叔母：私が東京で見たスーパーって言うのはね」
Somebody, sounds like grandma, lives in Tokyo, and she's going shopping at the supermarket. (INF)

「とにかく体育館みたいに広い大きな売り場ですね。」
And it must be a really big supermarket. (R/E INF)

「そこに食料品から日用品、衣類、雑貨に至るまで」
Oh, she's complaining cause she has to cook all the time. (INF)

「何でも大抵の物は焼っているの。」

Oh, taihen, obachan's got a bad life. (R/E INF)

「姉：じゃあ、デパート見たいなもん？
叔母：デパートと違うところは値段が安いうことかしら。」

OK, so she's talking to her grandkid and he wants to go to the department store and she says it's cheaper and close and they've got self service and that's why it's cheaper. (SUM)

「大量に仕入れて、セルフサービスでとにかく安く売りまっていますというのがうたい文句。
姉：セルフサービス？
叔母：いちいち売り子さんがつかなくてもね。」

Somebody sounds surprised that there's self service ..... Is this mama come home to older sister? (INF; R/E INF)

「お客様が自由に好きなものを選んで買い物するのよ。
All by yourself you can pick out what you want. (TRANSL)

「弟：お姉ちゃんわかる？
Ha! Onechan ..... so it's his older sister. (KEY; COM)

「姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。」

He sounds like Ryo kun. (ELAB)

「姉：だいたいけど。」

Why is there the sound of a rooster in the background? (R/E INF)
5. BRETT

TEXT 1 (News: Panda)

「東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが今日の末明老衰のため死にました。」

They're talking about the panda, a zoo in Tokyo. (IKEY)

「フェイフェイは１２年前の昭和５７年に日中交正常化１０周年を記念して中国から送られました。」

I can't understand but I'm trying to pick up individual words ..... it's a bit fast for me. (DCOMB; IDP-TXT)

「 (Panda's cry)」

That must be some sort of animal. (INF)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。そして、その2年後には息子のユウユウも生まれ、一家で人気を集めていました。しかしフェイフェイの年齢は２７歳。」

I'm not sure what they're saying ..... talking about ages or maybe ages of the animals. (SE-LCONF; INF)

「人間にすると８０歳を超る高齢です。このため今年の１０月ごろから食欲が落ち初め、今月に入ってからは衰弱しきった状態が続いていました。上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんですが、今日の末明穏るよう」

Oh, I can't really understand it but I'm trying to imagine what they're talking about the zoo, Tokyo and Ueno. (IKEY)

「に息を引き取りました。」

TEXT 2 (Drama: Haru yo koi)
「春希：帰ってこないのかな。」
Just guessing it's a traditional house from the picture. (INF)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。」
I don't understand what she said ..... but I am, about where something is something. (SE-LCONF; IDTC)

「母：知ってても言えないでしよう。お父さんに口止めされているのよ。」
Maybe they're talking about their husbands. (INF)

「百瀬さん。お父さんと私たちの間には入って辛いの。」
Seems strange, one's in kimono, one's sort of western .... it looks a bit contradictory. (R/E INF; R/E INF)

「春希：あれ、いつまで帰ってこないつもりなんだろ、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。お父さんが帰ってこないと入学金、」
Just from the word I'm picking up, I'm thinking maybe one of the otoosan, daigaku that's all I can understand. (IKEY)

「払え込めないでしょう。
春希：お父さん、本当に怒ってんのね。」
Maybe it's mother and daughter ..... before I thought it was two friends. (INF; COM)

「母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。
母：春希。
春希：それに、もし入学金の工面ができて、私が大学に行ったら、」
Umm, I'm not sure what they're saying but it seems she's asking for advice. She's younger, that's the impression I get. (INF)
I can't really understand but just I'm feeling she's complaining about something from the tone of her voice. (INF)

「うんと怒るわよ。
母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」

I get the impression that the younger one's asking advice from the older one, the older one finally advised her. (INF)

TEXT 5 (News: Siberian Tiger)
「中国に住む野生のシベリア虎は、90年代以降30頭ほど確認されただけで、年々数が少なくなっています。」
I can't really understand what they're saying but I can guess from the picture. (DCOMB)

「この為、中国政府は動物園で飼育していたシベリア虎を集め、ある訓練を始めました。」
I'm just guessing it's about a zoo because I heard the word doobutsu ..... that's the only one I can recognise. (IKEY; SE-LCONF)

「この訓練を始める為、中国では初めてのサファリパークをハルビン市内に」
Ah, I still don't understand but I guess from the pictures of the ladies with the coasts ..... about something, they don't like about the animals killing the animals. (DCOMB; INF)

「新しく作りました。このサファリパークは30万ヘクタールもあり、30頭のシベリア虎は、今ここで訓練を受けています。サファリパークでは、放し飼いにすれば、虎は本能で他の動物を追いかけられと考えていましたが。」
Ah, this is a bit strange ..... But I know what they're talking about...and I don't
understand these pictures much. (R/E INF; IDTC)

「餌を自分で取った事がない虎は、獲物の急所を知りません。」
I don't know why, but that reminds me of home, the sheep. (ELAB)

「結局、人間が」
This must be a zoo or something ..... I'm having trouble understanding. (INF; SE-LCONF)

「虎に肉を与えることになります。」
サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続けるそうです。
Oh, I can guess what they're talking about but I had trouble understanding ..... so maybe most of it I was just watching. (SE-LCONF; DCOMB)

TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね」
Just sounds like an old person talking about something ..... Tokyo. (INF; IKEY)

「とにくく体育館みたいに広い大きな」
I can't work out if it's a man or a woman. I cannot work out from the voice. (SE-LCONF)

「売り場でね。そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の」
Oh, I think they're talking about some sort of food or meals. (IKEY)

「物は揃っているの。」
姉：じゃあ、デパート見たいなもん？
叔母：デパートと」
I can tell that this is a younger man ..... but I still can't tell whether the other person's
male or female. (INF; COM)

Oh, I picked up one word the *nedan*, talking about some sort of prices or something. (IKEY)

Oh, it's an older woman talking about shopping or the service in the shops I think..... I can tell from the voice, it's a woman definitely. (INF; COM)

「姉：セルフサービス？」
叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。
弟：お姉ちゃんわかる？
姉：よく分かるね。」
Oh, now I can tell there are three people, older woman, younger man and I think younger woman. (COM)

「弟：けど、とあり町にできるんだよ。この町と違うで関係ないって。
姉：だといいけど。」
Oh, I'm not sure what they're doing and I can't understand their conversation really. (SE-LCONF)

6. MICK

TEXT 1 (News: Panda)

「東京の上野動物園の雄のジャイアント、パンダ、」
Talking about something at Tokyo or belonging to Tokyo. (IKEY)

「フェイフェイが今日の末明老衰のため死にました。フェイフェイは12年前の昭和57年に日中交正常化」
Talking about a junior school. (IKEY)

「10周年を記念して中国から送られました。」 (panda's cry)

Sounded like a door opening ..... a squeaky door which I have at my garage. (INF; ELAB)

「昭和61年には雌のファンファンとの間に念願の赤ちゃん。」

She's commenting about mendai ..... I don't know what mendai is but it maybe babies or a baby screaming. (IKEY; INF)

「トントンが誕生しました。そして、その2年後には息子のユウユウも生まれ、一家で人気を集めています。しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。このため今年の10月ごろから食欲が落ち初め、」

Juugatsu, something about small ..... Juugatsu, Juugatsu, Juugatsu, Juugatsu, October, something small in October. (IKEY; REPT)

「今月に入ってからは衰弱しきった状態が続いています。上野動物園では老いたフェイフェイが出るだけストレスを感じずにいられるよう」

Doobutsuen again, something about the zoo ..... maybe going there. (IKEY; INF)

「住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」

Umm, something about an existence. (INF)

TEXT 2 (Drama: Haru yo koi)

「春希：帰ってこないのかな。」

Ah, the scene immediately brings to mind old Samurai movies, the picture, the setting.

(ELAB)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。」
Just going by action, she seems to be bored ..... she seems bored. (INF; REPT)

「母：知ってても言えないんでしよう。お父さんに口止めされているのよ、百瀬さん。お父さんと私たちの関には入って辛いの。」

She's mentioning about her father and he might be doing something, I don't know. (IKEY)

「春希：あーあ、いつまで帰ってこないつもりなんだろう、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。お父さん帰ってこないと入学金、払え込まないでしょう。」

We're associating the daigaku and the father ..... probably the father works at the uni and he might be home soon. (IKEY; INF)

「春希：お父さん、本当に怒ってんのね。
母：きっと、大丈夫よ。いい方法があるわよ。
春希：私ね、お母さんに苦労かけてまで大学にいきたいと思ってないのよ。」

Mother's chastising the daughter for her impudence and she's trying to condemn what the mother said. (SUM)

「母：春希。
春希：それに、もし入学金の工面ができて、私が大学に行ったら、お父さんとお母さん、うまく行かなくなるでしょう。お父さん、だって本当に怒っているもの。」

She may be trying to go to a university? ..... she's talking about the relationship between the mother and father. (INF; SUM)

「母さんの立場うんと悪くなるわよ。
母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」

So she's talking about the university again ..... maybe the daughter's inquiring about the
university and she's saying it'd be all right to study at the university to that extent. (IKEY; SUM)

TEXT 5 (News: Siberian Tiger)

「中国に住む野性のシベリア虎は、90年代以降30頭ほど確認されただけで、」
She's talking about a date, about some animals which I see. (IKEY)

「年々数が少なくなっています。この為、中国政府は動物園で飼育していたシベリア虎を集め、」
I gotta catch the doobutsuen ..... so she must be talking about animals within a zoo. (IKEY; INF)

「ある訓練を始めました。この訓練を始める為、中国では初めてのサファリパークを」
Something to do with Chinese, ah people, ah, at the park. (IKEY)

「ハルピン市内に新しく作りました。このサファリパークは30万ヘクタールもあり、30頭の」
Sanjuuman, thirty-thousand hectares comes to mind so, a big park ..... reminds me of Taronga Park Zoo. (IKEY; ELAB)

「シベリア虎は、今ここで訓練を受けています。サファリパークでは、放し飼いにすれば、虎は本能で他の動物を追いかけると考えていましたが、」
I can't catch the words ..... but I think maybe she's describing how the tiger catches it's food. (SE-LCONF; INF)

「餌を自分で取った事がない虎は、獲物の急所を知りません。」
I got and it .... oh, the word shirimasen ..... maybe about how it attains its kill. (IDTC; IKEY; INF)
That session reminds me of a zoo .... I'm in a zoo, circus where I've seen animals before.

(ELAB; ELAB)

「人間が虎に肉を与えることになります。サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続けるそうです。」

Tigers had a feed and a good rest. (DESS)

TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね」

A guy's introducing himself at a supermarket. (INF)

「とにかく体育館みたいに広い大きな売り場ですね。そこに」

I have to listen to it a bit more ..... it sounds more like a woman, an older woman explaining about something big. (SLFM; INF)

「食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っているの。」

I heard *nichiyoohin*, daily groceries ..... so she will probably explain about daily groceries you can get, daily groceries at the supermarket. (KEY; ANTC)

「妹：じゃあ、デパート見たいなんですか」

A man speaks and asks about the department store ..... and she says you can go to a number one department store. (DESS; TRANSL)

「値段が安いっていうことかしら。大量に仕入れて、セルフサービスでとにかく安く」

I think she got a word *saabisu* ..... it's in English, abbreviation for service ..... you can get good service there maybe. (KEY; TKNOWL; INF)
About being a guest or customer at the store doing shopping. (SUM)

A lawyer is talking to his wife or sister, “Did you get that?” She says “Did you get that to mum?” (SUM)

It seems to me they're planning or trying to speak softly, not to offend the mother or whoever that lady was speaking. (SUM)

The Above Average Proficiency (AAP) Group

7. DAVID

TEXT 1 (News: Panda)

The panda in, something about a zoo in Tokyo .... and the panda Fei-Fei died ....

I can just picture it in my mind, a dead panda in a zoo, it's been in there for twenty something years. It just slipped my mind just then. (IKEY; TRANSL; VIS)

She came originally from China .... I heard the word Chugoku. (TRANSL; IKEY)

「昭和 61年には甥のファンファンとの間に念願の赤ちゃん、トントンが誕生
I can't sort of process that together at once ..... but it's talking about the successive children that she had during the period in which she was alive ..... I heard umaremasita ..... ni juu nana it said ..... it was 27 years old but in human terms she lived to 80 odd years old. (SE-LCONF; SUM; IKEY; IKEY; TRANSL)

このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱しつった状態が続いていました。」

After entering into this month, a something condition ..... which obviously means, I suppose if she died then she must have become sick or displayed some sort of unusual behaviour. (TRANSL; ELAB)

「上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」

I only picked up the last bit, she started breathing like she was slowly breathing, like she was tired ..... which obviously means it's describing how she died or the way in which they observed her dying. (TRANSL; SUM)

TEXT 2 (Drama: Haru yo koi)

「春希：帰ってこないのかな、どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。

母：知ってても言えないんでしょう。お父さんに口止めされているのよ。」

I understood that ..... well obviously the younger girl is worried and is wondering when the father is going to come back and she's obviously oblivious to the whole thing from her body language ..... and said that she'd been deceived by her father or led astray or told a lie. (SE-CONF; SUM; TRANSL)
Something about daigaku .... oh, she said something about the cost of university ..... maybe he won't come back. (IKEY; IKEY; INF)

Something about if she goes to university the father and mother won't be able to get on as well. (TRANSL)

She wants her daughter to go to university but the daughter's concerned about the mother's viewpoint ..... Tachiba ga warukunaru, her standpoint in the home will become worse. (SUM; TRANSL)

Told her to look forward to starting university. (TRANSL)

Something about China and obviously it's something about tigers .... and I heard something about 30 animals. (IKEY; IKEY)
It must have something to do with how tigers are becoming extinct because it talks about in Siberian or somewhere like that ..... and it refers to how their numbers are becoming less and less. (INF; TRANSL)

I heard safari park ..... I picked up the words 'something, something no tame .....' so it could mean something to do with how they're trying to protect or preserve the species in the form of a safari park. (IKEY; IKEY; INF)

Something about in captivity ..... the humans must keep giving the tigers food ..... and it was obviously in a cage ..... and I heard that something, something will continue ..... so it means that the keeping of lions in captivity will keep continuing. (IKEY; TRANSL; DESS; IKEY; SUM)
She's talking about the *supaa*, a supermarket that she saw in Tokyo ..... I can tell by the tone of her voice that she's very surprised at it and talking in wonder about it and she goes on to talk about how it was like a *taikukan*, like a gym and the size of it. (IKEY; SUM)

「そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃えているの。」

*How she was astounded by the size of it, I can still tell by her voice how she's marvelling at it ..... I picked up a few words, *nichiyoo hin* everyday things ..... so I guess she's talking about all the different types of products that were on sale there. (SUM; IKEY; SUM)*

「姉：じゃあ、デパート見たいなんん？
姉母：デパートと違うところは　値段が安いっていうことかしら。」

*She was overwhelmed by how many there were, anything you could think of ..... the greatest difference between it and a department store was the price. (SUM; TRANSL)*

「大量に仕入れて、セルフサービスで　とにかく安く売りますっていうのがうたい文句。
姉：セルフサービス？」

*I picked up self-service and *yosuku* .....therefore I guess, associating those, she's saying that because it's all self-service and you take everything yourself then you can buy things more cheaply. (IKEY; SUM)*

「叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。」

*She said that customers can go through the department store *jiyuu*, freedom or free to*
pick whatever they like ..... and I have visions of customers pushing trolleys, looking at shelves and picking off whatever they please. (TRANSL; VIS)

「弟：お姉ちゃんわかる？
姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。」

I heard someone saying that they don't understand and that it's got nothing to do with this town ..... I don't know where it's going to go from here. (TRANSL; ANTC)

「姉：だといいけど。」

8. BREANNA

TEXT 1 (News: Panda)

「東京の上野動物園の」

Ueno doobutsuen ..... I've been there, yay! (IKEY; ELAB)

「釈のジャイアント、パンダ、フェイフェイが今日の未明老齢のため死にました。」

Someone died! (IKEY)

「フェイフェイは12年前の昭和57年に日中日交正常化10周年を記念して中国から送られました。」

Something from China ..... I don't know but maybe it's a panda? (IKEY; INF)

「(Panda's cry)」

Something's sick! (INF)

「昭和61年には釈のファンファンとの間に念願の赤ちゃん。」

A baby was born ..... I don't know when. (TRANSL; ANTC)
「トントンが誕生しました。そして、その後には息子のヨウユウも生まれ、一家で人気を集めていました。」
And another son was born two years later. (TRANSL)

「しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。」
Nijuunananasai, 27 years old ..... so convert that to human years .... I don't know how old.
(IKEY; TRANSL; ANTC)

「このため今年の10月ごろから食欲が落ち初め、今月に入ってからは衰弱しきった状態が続いていました。」
I can't understand anything they just said. (SE-LCONF)

「上野動物園では老いしたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた」
I don't know but doobutsu, the doobutsuen they're talking about ..... Ueno doobutsuen and stress relief ..... I don't think the two go together personally ..... because I've been there and it didn't really seem to happen. (IKEY; IKEY; COM; ELAB)

「飼育部屋での治療を続けていたんですが、今日の未明寝るように息を引き取りました。」
I don't know but if it was Ueno doobutsuen and they're trying to talk about how they have stress relief for the animals or putting the animals to the best test I disagree ..... because when I went to Ueno doobutsuen it struck me how small the cages were and how dirty and how ughh ..... that's all I can think about. (R/E INF; ELAB; COM)

TEXT 2 (Drama: Haru yo koi)
「春希：帰ってこないのかな、どこへ行ってるんだろう。」
Mother and daughter or daughter and mother in law; I think she's waiting for her husband. (INF)
She's keeping something back, I'm not sure. (INF)

Oh, it's her father that she's wanting, or her husband maybe. (INF)

The father's angry ..... I don't understand what he's angry at. (TRANSL; ANTC)

They're trying to overcome a problem because there's something they can do, somewhere they can go. (SUM)

I don't understand why she wouldn't go well with her parents if she went on you know, exchange. (ANTC)

The parents want the kid to go but the kid doesn't want to go ..... it's foreign to me because I've always wanted to go, the other way 'round. (SUM; ELAB)
TEXT 5 (News: Siberian Tiger)

「中国に住む野生のシベリア虎は、90年代以降30頭ほど確認されただけで、年々数が少なくなっています。この為、中国政府は」
The Chinese government .... I don't understand but, obviously something about these beautiful big tigers, maybe they're endangered. They probably are. (IKEY; INF)

「動物園で飼育していたシベリア虎を集め、ある訓練を始めました。」
この訓練を始める為、」
Kunren, I don't know what it means ..... maybe protection? (IKEY; INF)

「中国では初めてのサファリパークをハルピン市内に新しく作りました。」
Is this a park within a ..... why are those buses so close to the tigers? I don't understand. (IDTC; R/E INF)

「このサファリパークは30万ヘクタールもあり。」
OK, it's a big park ..... as large as thirty thousand hectares ..... now I'm getting it. (R/E INF; SE-CONF)

「30頭のシベリア虎は、ここでの訓練を受けています。」
サファリパークでは、」
Oh, it's a safari park ..... now I'm getting it. (KEY; SE-CONF)

「放し飼いにすれば、虎は本能で他の動物を追いかけると考えていましたが、飼を自分で取った事がない虎は、」
Oh I like this place..... OK, finally somewhere they have a proper safari park and I think this might even be in China ..... so it's a good move. (R/E INF; INF; SE-CONF)

「獣物の急所を知りません。結局、人間が虎に向を与えることになります。サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続け るそうです。」
I don't know but I think there is a comparison between just the normal caged tigers where they just feed them meat and the other sort where they had them in a safari park like they just showed before ..... I feel sorry for these ones here personally. (SUM; R/E INF)

TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね とにかく体育館みたいに」

The supermarkets in Tokyo look like something. (KEY)

「広い大きな売り場ですね。そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っているの。」

They're all arranged ..... I don't know if she's trying to say they're arranged in a strange order or they're arranged weirdly or what. (TRANSL; ANTC)

「姉：じゃあ、デパートみたいなもの？

叔母：デパートと違うところは 價段が安いっていうことかしら。」

She's saying that with department stores and supermarkets, the difference is that one's cheaper ..... I don't know which one she means is cheaper, I'm suspecting she means the supermarkets are cheaper. (TRANSL; INF)

「大量に仕入れて、セルフサービスで とにかく安く売りますっていうのが うたい文句。」

She wants to complain about the prices ..... but I don't know if she means the department or the supermarket. (INF; ANTC)

「姉：セルフサービス？

叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。

弟：お姉ちゃんわかる？

姉：よく分からん。」
I'm glad he asked because I don't understand either! (R/E INF)

「弟：けど、となり町にできるんだろ。この町と違うで関係ないって。
姉：だといいけど。」
I don't understand some things, but I don't know what. (ANTC)

9. JENNY

TEXT 1 (News: Panda)

「東京の上野動物園の」
OK, something about Tokyo, animals, zoo. (IKEY)

「雄のジャイアント、パンダ、フェイフェイが今日の末年老衰のため死亡した。フェイフェイは12年前の昭和57年に日中友好使化10周年を記念して」
OK, something about, something about teachers and students. (IKEY)

「中国から送られました。昭和61年には雄のファンファンとの間に念願の赤ちゃん」
Nengan, nengan no akachan .... that's some kind of animal's baby, I think ..... I don't know what nengan is. (REPT; INF; SE-LCONF)

「トントンが誕生しました。そして、その2年後には息子の」
Ninengo, ninengo ..... oh, two years ago perhaps. (REPT; INF)

「ユウユウも生まれ、一家で人気を集めていました。しかしフェイフェイの年齢は27歳、人間にすると80歳を超す高齢です。」
27 years old and 18 years old. (IKEY)

「このため今年の10月ごろから食欲が落ち初め、」
Shokuyoku is that their appetite? (INF)
Something about feeling, stress at the zoo ..... maybe the animals feel stressed at the zoo if there's people watching them. (KEY; INF)

I didn't really understand the last bit at all. (SE-LCONF)

TEXT 2 (Drama: Haru yo koi)

OK, someone hasn't come home yet. (TRANS)

They're saying so many times he's not coming home and they're saying it in so many different ways. (SUM)

Ryuugakin I don't know if I got that word right, ryugakin ..... but I understand what it was ryugakin ..... oh, something, it has -in on the end so I presume that it's some kind of person but I don't know. (REPT; REPT; INF)

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OK, she wants to go to university or something like that. I'm not really quite sure. (INF)

「春希：それに、もし入学金の工面ができて、私が大学に行ったら、」

Oh she's been? (COM)

「お父さんとお母さん、うまく行かなくなるでしょう。」

Ikanakunare ..... i-ka-na-ku-na-ru ..... she didn't go. (REPT; TRANSL)

「お父さん、だって本当に怒っているもの。母さんの立場うんと悪くなるわよ。
母：母さん、春希を本当に大学へ行かしたいと思ってる。あんたが大学、入学する日を楽しみにしてる。」

Something at the end, she said that she's looking forward to going or something like that.

(TEXT 5 (News: Siberian Tiger))

「中国に住む野生のシベリア虎は、」

OK, oh, there's something about the animals in, in Chuugoku ..... some, some something's living there. (IKEY)

「90年代に30頭ほど確認されただけで、年々数が少なくなっています。」

OK, the, the numbers of these animals are, they're depleting ..... so maybe extinction. (TRANSL; INF)

「この為、中国政府は動物園で飼育していたシベリア虎を」

OK, so because of this they're going to ..... they're going to help the animals so they don't become extinct ..... Chinese something. (REPT; SUM; IKEY)

「集め、ある訓練を始めました。この訓練を始める為、中国では初めてのサファリパークを」
OK, for these animals, they're, they're having a safari park ..... There's this word kun, I didn't understand it. (SUM; SE-LCONF)

「ハルピン市内に新しく作りました。このサファリパークは30万ヘクタールもあり。」
It's a big park. (R/E INF)

「３０頭のシベリア虎は、今ここで訓練を受けています。」
I think kun means the animals they've got there. (INF)

「サファリパークでは、放し飼いにすれば、虎は本能で」
Oh, that's not very nice..... they've obviously let them live in a more natural environment. (R/E INF; R/E INF)

「他の動物を追いかけると考えていましたが、飼を自分で取った事がない虎は、獲物の急所を知りません。結局、人間が」
Kekkyoku, kekkyoku ..... I've heard that before and can't remember what it was ..... kekkyoku. (REPT; SE-LCONF; REPT)

「虎に肉を与えることになります。」
サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ続けるそうです。」
And they're, they're making these parks so the tigers don't have to live in situations like this any more, I think. (SUM)

TEXT 6 (Drama: Kanamono ya)
「叔母：私が東京で見たスーパーって言うのはね とにかく体育館みたいに広い大きな
OK, she sounds like an old woman and she's just gone to the supermarket in Tokyo and it sounds like a gymnasium ..... so maybe she usually shops at smaller shops, so this is a
new experience. (INF; INF)

「売り場ですね、そこに食料品から日用品」

Hyoukuryoin... kin, what that means, hyoukuryokin. (REPT)

「衣類、雑貨に至るまで何でも大抵の物は揃っているの。
姉：じゃあ、デパート見たないもん？
叔母：デパートと違うところは 僕が売りつくすことしから。」

OK, she's gone to the department store and the prices are cheap and there's something
about it ..... her voice sounds like disbelieving or suspicious. (SUM; INF)

「大量に仕入れて、セルフサービスで とにかく安く売りますっていうのがう
たい文句。
姉：セルフサービス？
叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選
んで買い物するの。
弟：お姉ちゃんわかる？
姉：よく分からん。
弟：けど、となり町にできるんだろ。この町と違うで関係ないって。

I don't really understand what he's saying, it's kind of a bit slurred, I can't pick it up.
(SE-LCONF)

「姉：だといいけど。」

10. BELINDA

TEXT 1 (News: Panda)

「東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが」

A giant panda in a zoo ..... all I can think of is the pandas that I saw in Japan that were
really big and quite cute. (IKEY, ELAB)

「今日の未明老衰のため死にました。フェイフェイは１２年前の昭和５７年に
Talking about so many years before hand ..... maybe a panda died or something ..... I didn't really get it. (IKEY; INF; SE-LCONF)

The panda came from China. (TRANSL)

(roar of panda)

It reminds me of the noises that the panda made when I was there watching them in the zoo in Japan. (ELAB)

Talking about a baby panda ..... so maybe a mother had a baby and it sounded like it was quite playful. (IKEY; INF)

I presume that Yuu-Yuu is the name of the panda though I didn't really know. (INF)

Comparing the 27 years old of the panda is like 80 years old, something in human length, human age ..... so it's pretty old. (SUM; R/E INF)

Something about October, something about this month. (IKEY)

Something about October, something about this month. (IKEY)
As much as they can they're going to try and reduce the stress of the panda .... I don't
know what stress a panda could have though. (TRANSL; ANTC)

「住み慣れた飼育部屋での治療を続けていたんですが、今日の未明寝るように
息を引き取りました。」
About letting it sleep .... so maybe they're going to try put it away to sleep. (TRANSL;
INF)

TEXT 2 (Drama: Haru yo koi)

She said that someone wouldn't come home and she's sitting with her mother ..... I think
maybe she's engaged or something and still living at home waiting for her fiancee or
something ..... I just noticed the way they're sitting and it made me think of Japan and
the way that I had to sit like that. (TRANSL; INF; ELAB)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。
母：知ってても言えないんでしょう。お父さんに口止めされているのよ、」
She said something about her father ..... and what he used to say to her about speaking
maybe. (KEY; INF)

「百瀬さん。お父さんと私たちの間には入って辛いの。
春希：あーあ、いつまで帰ってこないつもりなんだろう、お父さん。」
They're talking about the father and when he plans to come home ..... they're probably
worried about him or angry with him or something. (SUM; INF)

「母：大学の入学の締切が終わるまで帰ってこないんじゃないかの。お父さん帰
ってこないと入学金、払え込めないのでしょう。」
She said if the father doesn't come home she won't have to do something ..... I really did
not catch ..... I'm wondering what she's sewing. (TRANSL; SE-LCONF; R/E INF)
The father's angry with her ..... so maybe she's waiting for him to come home so she can apologise or something. (TRANSL; INF)

Talking about university or something .... I'm not sure if the father wants her to go and she doesn't want to go or the other way around and they've had a fight over it. (IKEY; COM)

She said he's really angry about the university situation that if she goes she can't be like them or be a good mother or something ..... I'm still wondering what the lady's sewing. (TRANSL; ANTC)

It was about her wanting to go or probably not wanting to go to university and the father wants her to go on exchange or something. (SUM)

I'm thinking about China ..... and then a picture of a tiger came up but I don't know why. (IKEY; VIS)
They said about the numbers decreasing ..... so maybe they're at a really dangerous low level of extinction or something. (TRANSL; ELAB)

「この為、中国政府は動物園で飼育していたシベリア虎を集め、ある訓練を始めました。」
I didn't really understand much of that but I presume they're talking about the tiger and what they're living like or whatever. (INF)

「この訓練を始める為、中国では初めてのサファリパークをハルビン市内に」
Maybe they're talking about how to increase the numbers or something and talking about a safari park ..... a park that just opened in China. (INF; IKEY)

「新しく作りました。このサファリパークは30万ヘクタールもあり、」
A 30 hectare safari park ..... I presume they have buses to go around it in as in other zoos or something because that's pretty big. (IKEY; ELAB)

「30頭のシベリア虎は、今ここで訓練を受けています。」
サファリパークでは、放し飼いにすれば、虎は本能で他の動物を
I wasn't really listening to that, I was watching the tiger chasing its food ..... maybe they let them get their food the natural way chasing rather than giving them cut bits of meat. (DCOMB; INF)

「追いかけると考えていましたが、餌を自分で取った事がない虎は、」
And I think they just said that they do that. (COM)

「獲物の急所を知りません。結局、人間が虎に肉を与えることになります。」
And then they're giving them cut bits of food ..... I don't know why but because they're in cages now rather than out in the park? (DESS; R/E INF)

「サファリパークはシベリア虎を何とか野性に返す為に、この訓練はまだまだ

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Yeah, cute tiger. (R/E INF)

**TEXT 6 (Drama: Kanamono ya)**

Talking about a supermarket in Tokyo ..... reminds me of when I went shopping there. There were lots of supermarkets there. (IKEY; ELAB)

「とにかく体育館みたいに広い大きな売り場ですね。」
As wide as a gymnasium ..... a place with a counter type of thing and pretty much all of the shopping centres are like that in Tokyo ..... they're all pretty big. (TRANSL; ELAB; R/E INF)

「そこに食料品から日用品、衣類、雑貨に至るまで何でも大抵の物は揃っている。」
A shop that had everything from groceries to everyday types of things ..... it's pretty much how I remember they were like. (TRANSL; ELAB)

「姉：じゃあ、デパート見たいなもん？」
「叔母：デパートと違うところは 優段が安していていうことかしら。」
About it being cheap ..... I don't know whether she was saying that it was or wasn't ..... but I thought they were. (TRANSL; COM; COM)

「大量に仕入れて、セルフサービスで とにかく安く売り出してしまうのが うたいた文句。」
They sell things cheaply and you get it yourself ..... so it sounded alright. (TRANSL; R/E INF)

「姉：セルフサービス？」
「叔母：いちいち売り子さんがつかなくてもね、お客様が自由に好きなものを選んで買い物するのよ。」
That you take and you get things you like for shopping ..... she sounds like a grandmother ..... she's really impressed with this shop. (TRANSL; INF; R/E INF)

「弟：お姉ちゃんわかる？
姉：よく分からん。
弟：けど、となり町にできるんだろ。」
I didn't hear what he said at first, but he's obviously the younger brother because he called her oneechan, older sister, and he asked a question ..... I didn't hear what he said and she answered with something I didn't understand. (TKNOWL; SE-LCONF)

「この町と違うで関係ないって。
姉：だといいけど。」
He sounded like he was angry at her or something. (INF)

11. TONY

TEXT 1 (News: Panda)

「(music)」
The first thing in my mind even though the teacher has told me there is no picture, I'm trying to switch my audio senses on ..... no matter what I'm trying to focus all my attention on my audio, it's very difficult when you cut off your visual senses. (SELA; IDP-TXT)

「東京の上野動物園の雄のジャイアント、パンダ、フェイフェイが」
OK, straight away I know it's talking about a zoo, about a giant panda ..... It's verbalised in English ..... it's very easy for me to pick up things in Japanese when they say it in English and you know what they're talking about ..... if you know the subject it's very easy to understand the dialogue. (IKEY; ALAN; SLFM; SLFM)

「今日の未明老衰のため死にました。フェイフェイは１２年前の昭和５７年に日中交」
It's very fast ..... you're trying to grab sections of words as you can. (IDP-TXT; DCOMB)

「正常化 1 0 周年を記念して中国から送られました。」

Some really weird noise, maybe some animal is making that noise. (INF)

「昭和 61 年には雌のファンファンとの間に念願の赤ちゃん、トントンが誕生しました。」

I heard some baby ..... maybe she's having a baby, it's a very weird sound. (KEY; INF)

「そして、その 2 年後には息子のユウユウも生まれ、一家で人気を集めています。しかしフェイフェイの年齢は 27 歳。」

Niju nana sai, something is 27 years old ..... it's very quick. (KEY; IDP-TXT)

「人間にすると 80 歳を超す高齢です。このため今年の 1 0 月ごろから食欲が落ち着き、今月に入ってからは衰弱しきった状態が続いていました。上野動物園では老いたフェイフェイが出来るだけストレスを感じずに」

I know it's at Ueno zoo and they're talking about stress that is put on .... this lady is very, very fast, it's very difficult to pick up. (KEY; IDP-TXT)

「いられるよう住み慣れた飼育室での治療を続けていたんですが、今日の末期療法のように息を引き取りました。」

Immediately when you take the visual away from me, it's just so difficult ..... you're just trying to grab words and when you're holding a thought in your head you go "yep that's the word" and then all of a sudden you're about two or three sentences further on and you just feel yourself drowning in a sea of words. (IDP-TXT; DCOMB)

TEXT 2 (Drama: Haru yo koi)

「春希：帰ってこないのかな。」

Straight away, traditional style housing no matter even if I see this as a movie or
whatever ..... it's very, very Japanese with the *tatami* mats, *shoji* screens and they're kneeling down. (DESS; R/E INF)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。」
It has to be set in olden times ..... they're wearing traditional kimonos and the lady is doing typical ladies' work. She's needling something. (R/E INF; DESS)

「父: 知ってても言えないんでしよう。お父さんに口止めされているのよ、百瀬さん。」
It could be striking me as maybe a Japanese style soap opera or something ..... she's talking about her father ..... that's what ladies do when they sit down. (ALAN; IKEY; ELAB)

「お父さんと私たちの間には入って辛いの。」
The expression on the young girl's face, she's very worried about something. She's very, she seems very defensive. (INF)

「春希: あーあ、いつまで帰ってこないつもりなんだろ、お父さん。
母：大学の入学の締切が終わるまで帰ってこないんじゃないの。お父さん帰ってこないと」
I can understand some of the Japanese words, saying the father hasn't, isn't returning home..... You can see that they're very worried about or concerned about someone close to them. (TRANSL; INF)

「入学金、払えないでしよう。
春希: お父さん、本当に怒ってるね。」
I know that he's being angry, but she's trying to talk too. Obviously this is a mother and daughter ..... I've just gleaned that now. That's probably a bit slow. (INF; SE-LCONF)
Their whole expression has changed. Their topic has changed. They seem a bit happier now, a bit more relaxed. (INF)

She's still saying he's very angry ..... but her mother seems to have relaxed. But she still seems apprehensive. (TRANSL; INF)

Here's a tiger. It's interesting seeing a tiger. This tiger's just walking ..... pretty scary creatures if you ask me. (DESS; R/E INF)

I can tell it's Chinese only through listening to it. (INF)

Straight away it's gone from a tiger to someone cutting a tape, for some reason ..... seems like it's an opening ceremony or something ..... that's what it symbolises when you see someone cutting a tape. (DESS; INF; ELAB)
Straight away I can see, I don't even have to know that they're opening a zoo. (SE-CONF)

A bus load of tourists, reminds me of what happened in Japan last year when the tunnel crashed. (ELAB)

(Laughing) They're all sitting there peering out at the tiger; all crowding over each other, but you see they wouldn't go outside. (DESS)

It looks very scary, the tigers jumping up on the car, I think I'd like to be inside as well. (R/E INF)

I've never seen that before, seeing a tiger jump up on a car. That would be scary. (R/E INF)

There's a sheep in the same pen as a tiger ..... why did they do that? (DESS; R/E INF)

(Laughing) The tiger has just caught ..... I hope this is not in the zoo, I hope this is in real life. (DESS; R/E INF)

This is very, very strange footage ..... but it strikes me that Japan would show this kind of
thing. I don't think you would see it too much on western style news. (R/E INF; ELAB)

"(Lion roaring)"

Aah, immediately this gets me really angry, I hate seeing animals so strong as that being put in cages and metal bars. It's a very striking picture. (R/E INF)

「結局、」

There is this guy just feeding him slabs of meat, just, it's not right. (R/E INF)

「人間が虎に肉を与えることになります。」

The tiger is upside down. It's a very strange camera angle they've got but quite humorous. (R/E INF)

「この訓練はまだまだ続けるそうです。」

TEXT 6 (Drama: Kanamono ya)

「叔母：私が東京で見たスーパーって言うのはね　」

Sounds like an elderly lady's voice ..... I picked up supaa in Tokyo. (INF; IKEY)

「とにかく体育館みたいに広い大きな売り場ですね。」

She's explaining the size of the store or something like that. It's wide and big. (SUM)

「そこに食料品から日用品、」

Aah that's great! ..... I've just learned these two words in the past week ..... shokuryohin and nichiryojin ..... they're talking about groceries and they're talking about a supermarket even though I can't see what is happening. (R/E INF; ELAB; IKEY; INF)

「衣類、雑貨に至るまで何でも大抵の物は揃っているの。」

姉：じゃあ、デパート見たいなもん？
Now I've heard a male's voice. They seem to be discussing about, maybe it's a new department store in their area. (INF)

Oh something about self-service ..... it's funny when Japanese people verbalise English words - it just makes it so much easier ..... but it's really not Japanese, is it. (KEY; SLFM; R/E INF)

Just picking up words like *sukimono* and *kaimono*, things they like, things they want to buy ..... not much more I can glean from it just from listening. (KEY; SE-LCONF)

The change in their voices. Their voices have changed, they seem to talking about something a bit more serious than their supermarket. (INF)

Very slow, their voices have, the lady's voice has dropped. Something she's concerned about or something she's a little bit unsure about. (INF)

**12. GARY**

**TEXT 1 (News; Panda)**

(Music)

I think about karaoke bars in Japan because of the music. (ELAB)
Straight away I'm thinking the image she's talking about the panda and the zoo or the animals, so I'm getting the picture of black and white ..... recalling memories of a picture of a zoo, a Chinese zoo in Beijing. (VIS; ELAB)

So they're from the China ..... I visualise the map of China and Japan coming across. (TRANSL; VIS)

So I'm looking or visualising now the roar of the panda ..... talking about the panda and baby's coming out and having birth. (VIS; TRANSL)

The changes in the voices and the sound of the background are affecting how I listen to the tape as well ..... so the roar of the panda, roaring, it's sort of interfering a little bit with how I was comprehending. (IDP-TXT; DCOMB)

Now they're talking about the students looking at the panda. (SUM)
「今月に入ってからは衰弱しきった状態が続いていました。」

When I hear tsuite I think about how the word popped into my mind and I automatically convert the preceding phrase into about that topic in English ..... so now I'm getting ready for the next phrase she's talking about, because obviously there was an end in the last phrase. (DCOMB; ANTC)

「上野動物園では老いたフェイフェイが出来るだけストレスを感じずにいられるよう住み慣れた飼育部屋での」

The katakana word in the middle of the sentence really stands out to me so it makes comprehension a little bit easier ..... Ears don't have to drive for every single word to pick up trying to pick up the meaning of the sentence. (SLFM; DCOMB)

「治療を続けていたんですが、今日の未明寝るように息を引き取りました。」

The word also mime stands out because it's articulated so clear ..... but so unclear, the meaning to me is so unclear. (IKEY; IDP-TXT)

TEXT 2 (Drama: Haru yo kol)

「春希：帰ってこないのかな。」

As soon as I hear kanaa I reflect back to when I'm in that situation with Japanese and they're stressing over what they're doing or whether or not something is gonna to happen or what to do ..... so I empathise with them in the current situation ..... and it's such a typical stress and tone in the voice that it's quite easy to pick up the meaning. (ELAB; R/E INF; SE-CONF)

「どこへ行ってるんだろう。百瀬さん、本当に知らないのかしら。
母：知ってても言えないんでしょう。」

Typical to me, typical role-model mother figure in a Japanese house ..... I reflect back to my home-stay and the consultative role my home-stay mother had in the family ..... she was always at the kitchen table or the lounge room sofa. (R/E INF; ELAB; ELAB)
When I see the younger actor I think of the generation gap in Japan at the moment ..... maybe it's my own perception but I perceive the difference in a culture and changes are happening ..... I am interested to hear what she has to say as compared to what the mother has to say ..... and whether or not what they say is similar to what my perceptions are of what I think they should be saying. (R/E INF; ELAB; ANTC; ANTC)

Getting into the dilemma of what to do with overseas studying and conflict ..... seems similar to my home-stay family situation where conflict is resolved in some way through the mother reconciling the daughter or son not to do something and trying to maintain peace in the family. (SUM; ELAB)

There's something, something about the tone, the girl speaks in and the mother speaks in, that makes me focus more on the girl's voice than the mother's voice ..... her voice seems to be more attractive or more easy to listen to for my ears. (SELA; R/E INF)

When she's talking about school I just visualise school, the uniform, children, school kids walking to school on bicycles in Japan in the morning, millions of bikes in a school yard, at the train station ..... similar images of school life in Japan, university life in Japan when I was there. (VIS; ELAB)
The stress that she uses on different words like mono at the end of the sentences ..... and the words like desho, ne and once again these endings, it makes me think whether it's assertive or a question or whatever ..... and I think of conversation that I hear around university. (ALAN; ALAN; ELAB)

When I listen to the mother's voice I don't pick up as clearly as I do the words of the daughter ..... I think this is some sort of way I learnt the language or what I listened to maybe my friends and there seems to me some sort of cross generational difference in the way they speak. (R/E INF; ELAB)

TEXT 5 (News: Siberian Tiger)

I'm just thinking that when I see her face, it's familiar and she's a very clean speaker so it's easy for me to pick up the words .... and I heard China or where we're looking now. (R/E INF; ALAN; IKEY)

When I hear hodo I think of 'to what degree' ..... so I think of the numbers, you see, the number, to what degree she's talking about so it's something to do with quantity, size, or these sort of things will be coming up. (IKEY; ANTC)

When I hear Chuugoku I was ..... reminiscing about China, being in Beijing when I was there ..... when I hear the word 'government' I see the stereo-typical Mao-Tse Tung type of figure in my mind. (IKEY; ELAB; ELAB)

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So tame ..... I always identify the word tame and reflect on, or think about, what's coming next ..... for what purpose were they doing that. It's sort of like an instant trigger for meaning in my mind. (IKEY; ANTC; SELA)

So here, about the park ..... I visualise the park and obviously the pictures help you do that as well but I wasn't looking at the pictures. I still visualise safari park or similar type of environment. (IKEY; VIS)

When I hear the dimensions it's hard to visualise these dimensions because you're concentrating on the very narrow vision the camera gives you. (R/E INF)

At this stage, when the visuals are so dramatic it's hard to concentrate on what she's actually saying ..... so when you see a lion actually attacking the sheep or whatever it is, my concentration goes away from pure listening to the more visual and therefore the meaning's not clear. (DCOMB; DCOMB)

When they're talking about the meat-feeding process I'm actually in awe of the tiger and what it's actually capable of doing, what's it catching ..... The cage also inspires that sort of fear in me. (R/E INF; R/E INF)
NOW THE IMAGE IS CUTE AND I'M THINKING ABOUT HOW CUTE THE LION IS ..... AND I'M TAKING
MORE IN ABOUT WHAT SHE'S SAYING RATHER THAN WHEN THE IMAGE WAS THE MORE FEROCEOUS
IMAGE ON THE SCREEN. (R/E INF; DCOMB)

TEXT 6 (DRAMA: KANAMONO YA)
「叔母：私が東京で見たスーパーって言うのはね」
I visualise probably someone like my last home-stay's mother's mother and probably
wearing a kimono ..... talking about the supermarket, just the sort of Seven Eleven style
of supermarket in Japan. But it's hard to find groceries, all the rest of it. (VIS; ELAB)

「とにかく体育館みたいに広い大きな売り場ですね。そこに食料品から日用品」
The phrases like ereba and the conditional ending ba stands out ..... so I try to work out
the meaning backwards from that and then forwards. (IK; DCOMB)

「衣類、雑貨に至るまで何でも大抵の物は揃っているの。
婶：じゃあ、デパート見たいなもん?
叔母：デパートと違うところは」
So from the tone of his voice, sort of the response, the tone of the old woman's voice,
they're trying to discover something ..... he's asking her if she's tried a department
store ..... must be complaining about something she couldn't find at the supermarket.
(INF; TRANSL; INF)

「値段が安いていうことかしら。大量に仕入れて、」
Kasihra stands out because I actually used kasihra after I first heard my female friend
use it in Japan and everyone laughed because I used a female expression ..... but she's
talking about price so she's worried about cost and images of people - frugal people
worried about the cost come into my mind ..... I'm thinking why she should worry
about cost, she should just go and buy it. (ELAB; VIS; R/E INF)
So now she sounds like a type of complaining women and she's obviously complained about something or someone has complained about something to her ..... so then there was an interjection by another young female voice so the tone of the voice makes me think she's startled at something the mother, the older lady said. (INF; INF)

So I visualise the younger man turning to the sister and sort of saying "do you know about this?" or "can you sort this out?" ..... and the younger sister's 'no' definitely stonewalling. (VIS; R/E INF)

I hear the word kankeinai ..... It really stands out because it's a set phrase. It's used so globally in Japanese ..... So basically I can get the meaning of the sentence from the word kankeinai so 'no relation with' or 'nothing to do with', this sort of English expression, then I related to the sentence because meaning becomes clear. (IKEY; ALAN; DCOMB)

These kedo endings once again are similar to kana, kashira ..... these sort of endings where people are contemplating whether or not something's right ..... kedo, once again it's a set phrase in Japanese ..... It's quite easy to listen to. My ears actually relax on listening to something so set. I can prepare for the next phrase coming along and this makes it's sort of like a respite ..... If there's a long line of words that I don't know it's almost impossible to get the meaning. It's a very frustrating learning experience but if there's a few words or phrases that I know interspersed in the passage, it's a much more
valuable experience and much easier to learn than when words are completely unknown to you. (TKNOWL; ALAN; ALAN; SLFM; DCOMB)