

**TEACHING STRATEGY USE  
FOR ORAL COMMUNICATION TASKS TO ESL LEARNERS**

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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**ABSTRACT****Teaching Strategy Use for Oral Communication Tasks to ESL Learners**

This thesis investigates the effects of strategy training on ESL learners' strategy use and performance on oral communication tasks. Research into the teaching and learning of speaking in the ESL context is relatively neglected and strategy training is unheard of in very many L2 oral classrooms. A review of strategy research pertaining to the speaking skill has identified unresolved issues, leaving many unanswered questions.

To address these issues, this study has adopted a quasi-experimental design and an interventionist study has been implemented in the junior ESL classroom in Hong Kong. The study has identified two major categories of strategies (i.e. direct and indirect) for learners' use in group discussion tasks. Three intact groups were involved in the intervention: one received training in the use of direct strategies, one in indirect strategies, and one had no strategy instruction. A multi-method approach (i.e. task ratings, questionnaires, observations and stimulated recall interviews) has been used to assess the impact of the intervention on students' strategy use and task performance.

The findings show that that it may be useful to teach ESL students in the use of direct and indirect strategies for oral communications tasks. Direct strategy use may be related to language improvement whereas indirect strategy use may be related to task effectiveness and language improvement. It may be desirable to help low-proficiency students to develop strategic competence to compensate for their lack of linguistic competence. Last but not least, it may be desirable to adopt a systematic, eclectic approach to assessing the impact of strategy training and to incorporate the stimulated recall methodology to the teaching and research of the speaking skill as a unique avenue to students' thoughts and learning processes.

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## List of Abbreviations

C	Control Group
CS	Communication Strategies
E1	Experimental Group 1
E2	Experimental Group 2
EFL	English as Foreign Language
ESL	English as a Second Language
H	High-proficiency
L	Low-proficiency
LLS	Language Learning Strategies
LTM	Long-term Memory
L1	First Language
L2	Second Language
M Ed	Master of Education
NT	Non-targeted
RQ	Research Question
SILL	Strategy Inventory for Language Learning
SLA	Second Language Acquisition
SR	Stimulated Recall
SRI	Stimulated Recall Interview
SS	Speaking Strategies
STM	Short-term Memory
T	Targeted
TESL	Teaching English as a Second Language
TESOL	Teaching English to Speakers of Other Languages

## CHAPTER 1 INTRODUCTION AND SIGNIFICANCE OF THE STUDY

### 1.1. Introduction

The present study aims to investigate the impact of strategy instruction on second language (L2) learners' strategy use and task performance on L2 oral communication tasks. This introductory chapter provides a background to the study, outlines a preliminary investigation as well as the present research and justifies the significance of the research. The chapter also provides an overview of the structure of the thesis and ends with a summary of the potential contributions that the present study aims to make.

### 1.2 Background

Spoken English is still a relatively neglected area in the English language classroom especially at the secondary level in the Hong Kong context. The ability to read and write in the language is regarded as the *sine qua non* for one's language proficiency, and consequently, a lot more class time is devoted to the development of the reading and writing skills than the listening and speaking skills. To underscore the importance of oral skills, and bring about positive washback into classroom teaching, the Hong Kong Examinations Authority has introduced a small group discussion component into its public examinations. The majority of the teachers are already familiar with the format of the oral examination. However, many have been trying to cope with the difficulty of helping students develop interactive speaking skills notwithstanding the adoption of a task-based approach to English language teaching and learning which aims to resolve some of the problems (Education Department, 2002). While most teachers focus on designing meaningful tasks for students to practise group discussion skills, they are not aware of the role of speaking strategies or the value of strategy training in promoting interactive speaking skills.

In order to address the need for developing students' speaking strategies, a preliminary study was conducted in 1997 with a view to testing the feasibility of implementing strategy training in the upper-intermediate secondary classroom in Hong Kong (Lam, 1998; Lam & Wong, 2000). 58 sixth form students were trained in the use of strategies

during group discussions. Key strategies identified by students and teachers for group discussions and selected for training included: seeking clarification, clarifying oneself, and checking others' understanding. To assess the impact of strategy training on task performance, the students were asked to tape a group discussion task on a pre- and post-training basis. The transcripts of the post-training recordings were reviewed, and compared with those of the pre-training discussion to examine whether training had been effective. The findings indicated that there was a greater use of interaction strategies and more genuine interaction in the post-training discussions.

The results of the preliminary study have lent support for the view that strategy intervention may be feasible in the secondary ESL oral classroom. In a broader perspective, the study has also raised important questions worthy of further exploration. They include:

- What categories of strategies may be pertinent to L2 oral communication tasks?
- Would students use the strategies recommended to them?
- What would be the impact of the training in the use of these strategies on task performance? Would strategy use be related to improvement in task performance?
- What factors might affect student's uptake of the taught strategies and task performance?
- What methods of investigation would be appropriate in assessing strategy use and gauging the impact of strategy instruction?

These questions are of interest to strategy research in the ESL context in general, and in particular, to strategy interventionist studies that have a focus on the speaking skill. These studies, however, receive scant attention in the language learning field.

### **1.3 The present study and its significance**

In an attempt to answer some of the afore-mentioned questions, the present research investigates the impact of the teaching of speaking strategies in the secondary ESL classroom. Specifically, there are three areas of investigation. First, the study examines the impact of strategy training on learners' strategy use in oral communication tasks.

Second, it studies the impact of the strategy training on task performance. Third, it investigates whether the proficiency level of the students makes a difference to the impact on strategy use and task performance. The study is intended to offer some understanding of the relationships between strategy training, learners' strategy use, task performance, and proficiency level.

The present investigation aims to contribute to the knowledge base of strategy training research in the language learning field - with a particular focus on the speaking skill - with respect to the identification of types of speaking strategies for teaching in the oral classroom. At this point, it is necessary to clarify the relationship between learning strategies and strategies for oral communication. According to Cohen (1998), "second language learner strategies encompass both second language learning and second language use strategies. Taken together, they constitute the steps or actions consciously selected by learners either to improve the learning of a second language, the use of it, or both" (p.5). Cohen (1998) subsumes communication strategies, which are relevant to the present study, under language *use* strategies. That is, learning strategies and communication strategies may be respectively used by second language learners to improve the learning of the target language and to enhance the use of the target language through communication.

Despite the attention devoted to learners' strategy use and the considerable amount of research into strategy training, there are still unresolved issues (McDonough, 1995; Ellis, 1997). The first issue is related to the problem of validating the content and nature of strategies., As Ellis (1997, p.87) succinctly puts it, "not enough is known about which strategies and which combinations of strategies work best for L2 acquisition" (Ellis, 1997, p.87). Regarding what to teach, different theoretical underpinnings and focuses have produced different classification systems which each claims to have been validated by empirical data (O'Malley, Chamot, Stewner-Manzanares, Russo & Kupper, 1985a/b; O'Malley & Chamot, 1990; Oxford, 1990; Oxford & Burry-Stock, 1995; Rubin, 1981). As a result, there has been a lack of consensus on the categories of strategies that are considered to be important to language learning and subsequently to training. Perhaps as LoCastro (1995) succinctly observes: "within the qualitative tradition, a classification of learning strategies - or of anything for that matter - developed for a particular learning



environment cannot be brought without question and testing into a different learning context” (1995, p.173). This indicates that no single, existing classification of strategies should be taken as a straitjacket for strategy training without challenge. In the present study, therefore, a strategy selection framework will be developed to identify two broad strategy types pertinent to L2 learners’ strategy use in oral tasks. The framework will then be modified on the basis of empirical results of the study.

In addition, it is important to investigate the impact of groups of strategies rather than isolated strategies on task performance. As a response to Rees-Miller’s (1993) critical appraisal of the effect of strategy training, Chamot and Rubin (1994, p.772) state that “strategies are most useful when used effectively together so that success depends not only on the use of an individual one but on the effective management of a repertoire of strategies”. Hence, investigating the effect of training groups of strategies may be desirable. In fact, as Ellis (1994) proposes, it may be high time to study strategies in terms of clusters instead of in isolation and to investigate their relative importance to the learning outcome. In the language learning field, there has been evidence that complexes of strategies might be differentially related to various levels of linguistic and communicative competencies (Politzer & McGroaty, 1985). Gu and Johnson (1996) also report on identifying clusters of strategies conducive to vocabulary learning. Hence, the proposed study was intended to address the issue of the impact of speaking strategies in broad categories and not just in isolation on learners’ strategy use and performance on oral tasks.

The other unresolved issue is the outcomes of strategy training, which have not been unequivocally established. There have been mixed reactions and results. In a critical review, Gu (1996) reports that there have been no conclusive findings with regard to the relationship between strategy training and language performance. The major problem was that strategy use was assessed basically in terms of frequency of use with little information as to how the strategies were used in different contexts. Gu (1996) points out that the other problem was the lack of a systematic approach to strategy training. The empirical studies were “largely fragmentary, unsystematic, as well as narrow in scope”. (ibid., p.22) On the other hand, quite a few professionals and researchers have reported benefits of strategy training. For example, in an investigation into the effects of providing

opportunities for reflection, self reporting and self-monitoring among university students in Hong Kong, Nunan (1997) found that opportunities to reflect on their learning led students to a greater sensitivity to the learning process over time. Students were also able to make greater connections between their English classes, and content courses conducted in English. Given the mixed responses, the present study therefore aims to explore further the outcomes of strategy training.

A number of factors might have influenced the effectiveness of strategy training (Ellis, 1994; McDonough, 1995). One major factor is the proficiency level of the learners. The third unresolved issue is the relationship between strategy use and proficiency level, which has been found to be complex and far from one way (McDonough, 1999). There have been a number of studies on the correlational relationships between strategy use and proficiency level (Abraham & Vann, 1987; Anderson & Vandergrift, 1996; Bialystok, 1981; Dreyer & Oxford, 1996; Huang & van Naerssen, 1987; O'Malley et al., 1985a/b; Rost & Ross, 1991). Nonetheless, the causal relationship between strategy use and proficiency level has not yet been established. The relationship is not one-way i.e. proficiency level may have a spiral and an ascending effect on strategy use (Green & Oxford, 1995). That is, more proficient learners may be able to use more strategies, and the more frequent use of strategies may in turn bring about proficiency enhancement effect. This study, which focuses on the development of the speaking skill in language learning, explores the possible influences of learners' proficiency level on strategy use and task performance.

The present study also aims to bridge a gap in strategy training research. Williams & Burden (1997) and Cohen (1998) rightly report that there has been rather less attention devoted to strategy training concerned with productive strategies of speaking and writing. In a similar vein, regarding strategy use and the English language skill areas, McDonough (1999) points out that there is a mass of work on reading and writing, but far less on listening and talking strategies. Interventionist studies pertaining to the speaking skill are particularly lacking. In recent years, there has been some interest in providing training in the use of strategies for speaking in a foreign or second language; a few strategy training studies have produced some positive results (Bejarano, Levine, Olshtain & Steiner, 1997; Cohen, 1998; Dadour & Robbins, 1996; Dörnyei, 1995; Lam & Wong, 2000). This

indicates that more research that gives an exclusive focus on the speaking skill is definitely needed.

Last but not least, a study of the impact of training in the use of selected categories of speaking strategies has practical significance. If strategy training is proved to be effective in helping students perform better in specific oral tasks, then strategies-based instruction may be promoted and implemented in the Hong Kong ESL curriculum. There have been a few studies trying to understand the kinds of strategies favoured by ESL learners in the local context at both primary and secondary levels (e.g. Au, 2003; Hepburn, 1992; Mok & Wheeler, 1997; Wong, 1996) and only Nunan (1996; 1997) has attempted to implement strategy training with students at university level. Other than this, interventionist studies at primary and secondary levels are almost unheard of. The results of this study therefore have important potential pedagogic implications in the local context and in the ESL context in general. Last, strategy training material, which was unavailable locally, has been developed by the researcher and piloted at different phases by teachers and students in the present study. The strategies-based instruction material produced from the study is now kept in the English Language Centre at the Hong Kong Institute of Education for public consumption (Lam, 2003). In this way, the study has practical significance.

#### **1.4 Overview of the thesis**

The thesis consists of seven chapters. Chapter 1 provides a background to the study which is necessary to the understanding of the present research. The significant contributions that the study aims to make are highlighted. Chapter 2 focuses on the review of the literature. It firstly defines strategies and in particular strategies for a study of L2 speaking for the distinct purposes of the present investigation. The chapter then reviews relevant strategy training research with a view to illuminating our understanding of the status of knowledge of this area. Unresolved issues worthy of further investigation are identified in four areas including, the identification of strategy types for training, outcomes of strategy training, proficiency level and methods of investigation. In response to the need to identify broad strategy types for training, the chapter also delineates - on the basis of an evaluated review of the literature - a theoretical framework for selecting

major categories of strategies for the present investigation. Subsequently, the strategies targeted for training in the present study are defined and explained.

Chapter 3 and Chapter 4 focus on the research questions, design and methods of the present study. Chapter 3 complements Chapter 4 in that the former explicates the theoretical bases for the research questions, design and methods whereas the latter describes the implementation aspects of the design and the methods. Chapter 3 first formulates the research questions for the present study on the basis of the unresolved issues identified in existing strategy training research and of the direct and indirect strategy groups proposed in Chapter 2. The theoretical bases of the research questions are discussed around three research themes: (1) strategy training and strategy use; (2) proficiency level and strategy use; (3) strategy training, proficiency level and task performance. To answer the research questions, a quasi-experimental design and a multi-method approach to data collection are proposed. Specifically, section 3.3 justifies the appropriacy of a quasi-experimental design to study the effects of strategy training on strategy use and task performance. Section 3.4 argues for a systematic approach to synthesising multiple methods of investigating strategy use, which was identified as necessary and yet missing in the field in Chapter 2. The selection of each of the research methods (i.e. rating task performance, using questionnaires, observations, stimulated recall interviews) is also justified in the context of the present study. Chapter 4 is the methodology chapter and complements the theory-based Chapter 3. The methodology chapter focuses on the implementation side of the research design and the four research methods. The chapter describes the procedure of implementing the interventionist study using the quasi-experimental research design. It also outlines the procedures for collecting data by each of the four research methods in order to answer the research questions from a multiple perspective. The method of analyzing each type of data is also presented.

Chapter 5 and Chapter 6 also complement each other in that the former is the results chapter whereas the latter is the chapter that discusses the findings. Chapter 5 is the most voluminous as it presents and explains results from each research method used for assessing the effects of strategy training on strategy use and task performance. The last section in the chapter is a section of synthesis as it brings together all the findings from

the four research methods and answers the research questions from a multiple perspective. Also, key issues of interest are signalled at the end of each section for in-depth discussion in Chapter 6. That is, Chapter 6 provides an argued response to the key findings presented in Chapter 5 and discusses the key issues arising, which are organized under the three research themes. The quasi-experimental design and the adoption of a multi-method approach to collecting data on task performance and strategy use are also appraised.

Chapter 7 concludes the thesis. It begins with a recapitulation of the interventionist process. It then highlights major findings. The contributions of the study to the knowledge base of strategy research are encapsulated in summary statements. Finally, the limitations of the study and the directions for future research are included.

## **1.5 Conclusion**

In a nutshell, strategy interventionist studies that investigate the impact of training in the use of strategies on L2 oral communication tasks are sparse and consequently only a little is known about strategies for a study of L2 speaking. There are unresolved issues and unanswered questions that warrant further investigation. This study therefore intends to contribute to the knowledge base of strategy research particularly in the ESL context with an exclusive focus on the speaking skill. It is expected that the present research advances our understanding of possible strategies for use on L2 oral tasks, of the teaching of these strategies and learners' response to the teaching, of L2 learners' perceptions and understandings of these strategies, and of individual learner differences to strategy use.

## **CHAPTER 2                    STRATEGY TRAINING RESEARCH AND STRATEGIES FOR A STUDY OF SPEAKING IN A SECOND LANGUAGE**

### **2.1      Introduction and Overview of Chapter**

In Chapter 1, several unresolved issues relating to strategy training research were outlined. This chapter focuses on the literature review and serves two main purposes. First, it reviews important studies in strategy research with a view to understanding the status of the knowledge relating to those unresolved issues raised in Chapter 1 and to pointing out key areas that warrant further research for the present study. Second, in response to one of the unresolved issues relating to the identification of strategy types for training, the chapter proposes - on the basis of an evaluated review of existing classification schemes - a framework for the selection of strategies which are of particular interest to the present investigation.

To begin with, section 2.2 defines strategies and in particular strategies for the distinct purposes of the present study. Section 2.3 reviews relevant strategy training research in accordance with the key issues raised in Chapter 1. That is, section 2.3.2 reviews studies related to the identification of strategy types for training. Second, section 2.3.3 reviews studies to help us understand the status of the outcomes of strategy training. Third, section 2.3.4 highlights studies that focused on strategy use and proficiency level. Section 2.3.5 briefly outlines methods of investigation employed by previous studies and their problems. After having established the status of current strategy research, the chapter moves on to sections 2.4 and 2.5 which develop a strategy selection framework to be applied to the speaking skill in response to unresolved issues relating to the identification of strategy types discussed in section 2.3. Section 2.6 then summarises and concludes the chapter.

### **2.2      Definitions of strategies for the present study**

#### **2.2.1    Introduction**

This section provides key definitions which are necessary to the understanding of the kinds of strategies that the present research aims to explore. The significance of these strategies in relation to language learning is also highlighted.

### 2.2.2 Strategies for a study of speaking in second language

#### Definition of strategy

“The word strategy comes from the Greek term *strategia* meaning generalship or the art of war. More specifically, strategy involves the optimal management of troops, ships, or aircraft in a planned campaign.” (Oxford 1990:7) Put simply, a strategy is “a plan for success.” (MacIntyre 1994:190) The succinct statement indicates some kind of action plan to achieve goals. Moreover, the kind of goal that strategies aim to achieve is one of success-orientation. “Strategies play a role because we not only want to achieve global goals, but want to do so in an effective manner.” (van Dijk & Kintsch 1983:65) Strategies are then effective action plans intended to achieve optimal success.

#### *Learning strategies (LS)*

In the learning field, a similar notion of optimality is evident in the following definitions (Riding and Rayner 1998:79):

“... learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.”(Oxford 1990:8)

“Learning strategies may thus be seen as cognitive tools which for the individual are particularly helpful for successfully completing a specific task. This approach leads to the concept of the strategic learner.” (Riding and Rayner 1998:79)

As indicated in these definitions of learning strategies (LS), the principal goal of strategic actions is to make learning “easier, faster ...effective” (Oxford 1990:8) or to enable the learner to complete a specific task “successfully” (Riding and Rayner 1998:79). It is therefore evident that LS are success-oriented.

In addition, LS involve the notion of intention and choice. The deployment of LS requires that the learner chooses to perform the strategic action (MacIntyre 1994:190). If no choice exists, it is difficult to conceive those actions as 'strategic'. Making choices inherently involves making conscious decisions. It follows that LS are the actions chosen by students that are intended to facilitate language learning.

Wenden (1991:18) also defines LS as the "mental steps or operations that learners use to learn a new language and to regulate their efforts to do so." However, steps or operations employed by learners are not necessarily restricted to mental ones. LS, as pointed out by Weinstein and Mayer (1986:315), are "behaviours and thoughts that a learner engages in during learning and that are intended to influence the learner's encoding process." This definition extends the learning process to any steps, mental or behavioural. That is, strategic intentions may be realised as observable "behaviours" or unobservable "thoughts".

Let us now define communication strategies (CS) as the present study concerns strategies for speaking and CS are commonly associated with learner strategies when learning to speak an L2.

### *Communication strategies (CS)*

While there is a general agreement that the main function of CS is to handle difficulties or breakdowns in communication, there is no universally accepted definition of CS. Bialystok (1990) considers problematicity as the most basic feature cited in the definitions of CS. It is the idea that "strategies are used only when a speaker perceives that there is a problem which may interrupt communication" (p. 3). The notion of problematicity is particularly apt as most L2 speakers spend a great deal of time and effort struggling to make up for their L2 deficiencies during on-line speech production.

According to Bialystok (1990:4), the other defining criterion is consciousness which is "implicit in most of the definitions proposed for communication strategies" (p.4). That is, the speaker is aware to some extent of having employed CS to resolve problems during communication.



Bialystok's (1990) third defining criterion for CS is intentionality which "refers to the learner's control over a repertoire of strategies so that particular ones may be selected from the range of options and deliberately applied to achieve certain results" (p.5). It is clear from this criterion that the speaker has some control over the strategy that is selected and that the choice is responsive to the perceived problems of language production. The reader will remember that this is in fact similar to the notion of intention and choice as discussed in the preceding section regarding LS. Let us now draw a distinction between LS and CS.

### 2.2.3 Significance of strategies

#### *Learning strategies (LS) and communication strategies (CS)*

A common view is held that LS contribute to the development of interlanguage (IL) systems per se whereas CS are used by the speaker to handle difficulties or breakdowns in communication (Corder 1983). While LS may be deployed by learners to enhance learning effectiveness, CS are concerned more with language use than language learning and they may or may not lead to language learning (Cohen 1998). (Also see section 1.3.) It is commonly held that the main purpose of CS is to help the L2 speaker get by the communication. While CS are important in keeping the communication going, an L2 speaker may only deploy CS to 'fix' a communication problem without attempting to learn the L2. Rubin (1987) states that there is no evidence that CS contribute directly to learning; they do not help the learner obtain, store, retrieve and use the language the way that LS do.

Nonetheless, Faerch & Kasper (1983b) outline conditions under which CS may contribute to learning. First, they explicate the two processes which are involved in SLA. The first process is one in which "the learner gradually develops his IL system by establishing hypothetical rules (hypothesis formation) and by testing them out (hypothesis testing)." (p.53). Depending on the feedback during the learning process, the rule is either rejected or incorporated into the IL system. Faerch & Kasper (1983b) continue to argue that CS are deployed presumably when the learner experiences a problem and his IL system does not yet contain the appropriate rule during the planning

stage of speech production. The second process is one of automatization in which “the learner increases the availability of IL rules by using them in formal exercises or in communication” (p. 54). The second process concerns language use and typically occurs during the speech production stage.

In order that CS may lead to learning, there must be hypothesis formation taking place during the planning phase and/or production phase of speech production. Therefore, according to Faerch and Kasper (1983), the basic condition for CS to have a potential learning effect is that they are governed by achievement, rather than by avoidance because there can be no hypothesis testing if a learner chooses to avoid developing a plan during the planning phase of speech production. Similarly, if learners avoid using a particular item during the production phase because of uncertainty about its correctness, this clearly does not lead to automatization.

In a similar vein, Corder (1981; 1983) argues that successful strategies of communication may eventually lead to language learning if teacher encourages “resource expansion strategies” which are success-oriented. It is an attempt to increase one’s resources by one means or another in order to realize his communicative intentions. For instance, successfully “borrowing items” from one’s mother tongue may be accepted by the interlocutor as ‘well formed’ in the target language and may consequently be integrated into the learner’s inter-language system repertoire. This can be regarded as learning. In contrast, if the L2 speaker adopts an avoidance approach by not taking any risk, by not developing any plans, by not changing any goals, then there will be a communication breakdown and in turn there will be little chance for language learning. More recently, Oxford (1996) similarly argues that CS may contribute to learning during active participation in communicative events if the intent of the speaker is to establish and try out hypotheses about the target language. The arguments thus far suggest that, though CS are not primarily orientated towards language learning, they can result in such learning.

Last, the general objective of the communicative approach to language teaching is the development of the ability to use an L2 to communicate meaning. Aspects of communicative approach considered important are the development of interpersonal communication skills and command over socio-linguistic, discourse and strategic

competence. After all, people invariably report on how well they can speak or use the target language (oral/aural skills) and not with how much they know about the language, which is the main concern of learning. In fact, strategic competence has been considered pivotal to language competence. The following section explicates, in general terms, that strategic competence is also part of language proficiency.

### *Strategic competence as language competence*

The literature in the last decade focused on the compensatory nature of CS (see, for example, Bialystok, 1990; Bongaerts & Poulisse, 1989; Dörnyei, 1995; Dörnyei & Scott, 1997; McDonough, 1999; Rost & Ross, 1991). For example, Canale and Swain (1980), citing research on CS, include strategic competence as providing a compensatory function when the linguistic resources of the L2 user are not adequate. Strategic competence was therefore confined to CS that “may be called upon into action to compensate for breakdown in communication” (ibid., p.99). The key role of CS seemed to lie in helping the L2 speaker to keep going only.

While the compensatory role of CS in opening opportunities for L2 speakers to learn to communicate is valuable in its own right, a broader view has recently been taken of CS as elements of an overall strategic competence. Canale (1983), for instance, extends this view of strategic competence to include mastery of not just strategies to perform a compensatory function but “to enhance the rhetorical effect of utterances (ibid., p.339). The enhancement effect of CS is therefore viewed as positive and strategic competence is positive in facilitating communication. In a similar vein, Dörnyei and Thurrell (1991, p.17) gives a positive note to CS by defining strategic competence as one’s “ability to get one’s meaning across successfully to communicative partners, especially when problems arise in the communication process”. That is, strategic competence is referred to as a “means to enhance effectiveness of communication” (Kasper & Kellerman, 1997, p.21; Swain 1984, p.189) and as “effective means of performing a communicative act” (Yule & Tarone, 1990, p.181). The notion of efficacy and goal-directedness is clear.

Bachman (1990) goes further to underscore the importance of strategic competence. Whereas Faerch and Kasper’s model (1983) describe the use of CS in interlanguage

communication, Bachman (1990) extends his definition of strategic competence to include all communicative language use and not just that in which language abilities are deficit, defining strategic competence as

“the capacity that relates language competence, or knowledge of language, to the language user’s knowledge structures and the features of the context in which communication takes place. Strategic competence performs assessment, planning, and execution functions in determining the most effective means of achieving a communicative goal.” (ibid., pp.107-108)

Bachman’s definition indicates a pivotal role played by strategies in relating different aspects of language use. Strategy is viewed as the central part of language competence, and the role of strategic competence is crucial in achieving a communicative goal by the most “effective means”. This underscores the significance of strategies to the development of communicative language ability.

Last, Bachman and Palmer (1996, p.70) conceive strategic competence as “a set of meta-cognitive components, or strategies, which can be thought of as higher order executive processes that provide a cognitive management function in language use”. Specifically, Bachman and Palmer incorporated goal setting, assessment and planning in their definition of strategic competence. This inclusion of a meta-cognitive component in the definition is particularly relevant to the present study in the sense that students were engaged in oral communication tasks and that the executive ability of setting goals, assessing task requirements and planning for effective handling of the tasks is of paramount importance to task performance.

#### 2.2.4 Summary

As McDonough (1999, p.3) explicates, “Applied Linguistics theorists have attempted to integrate the notion of learning and CS in particular in theories of communicative competence... such a strategic ‘competence’ is part of what is needs to be taught and tested in overall language teaching operation”. It was on this underlying premise that the present research was initiated. It is argued that the direct strategies selected for training in the present study embrace an element of learning potential and the indirect strategies

include a major meta-cognitive component as well. The arguments will be developed in sections 2.4 and 2.5 later.

## **2.3 Strategy training research**

### **2.3.1 Introduction**

We have seen in this chapter that communication and language learning are related. In view of this, research studies in the language learning field which are relevant to the speaking skill are reviewed. The purpose of this section is to identify specific topics for further research, to bridge major research gaps, to situate the present interventionist study in the field, and above all, to generate research questions presented in section 3.2. The review is presented in accordance with issues raised in section 1.3 (i.e. strategy type, training outcome, proficiency level, methods of investigation).

### **2.3.2 Identification of strategy types for training**

In studies of human learning in general, several broad strategy types for enhancing learning effectiveness have been identified: primary strategies for text processing; support strategies for assisting the primary strategies (Dansereau, 1985; Dansereau, Brooks, Holley & Collins, 1983); strategies for specific learning skills; and strategies for developing an efficient executive controller of learning (Derry & Murphy, 1986). Results of strategy training have been positive in general. For example, in Dansereau's (1985) comprehension/retention experiment, the experimental group revealed significantly greater positive precourse-postcourse changes than did the control group on short-answer and multiple choice test measures. Dansereau et al. (1983) and Dansereau (1985) contend that the use of primary and support strategies are beneficial to text-processing. One would wonder, however, whether the results will be equally positive if the interventionist study focuses on the training of those skills and strategies advocated by Derry and Murphy (1986).

There have been many descriptive studies about learners' strategy use in the language learning field, but a lot less attention has been given to interventionist studies (McDonough, 1999). One of the major problems is that there has been little consensus as

to which types of strategies are more conducive to learning and should therefore be selected for training (Ellis, 1997). There are at least three major taxonomies: first, a tripartite system including cognitive, meta-cognitive and social/affective strategies (Chamot, 1993; Chamot, Barnhardt, El-Dinary & Robbins, 1996; O'Malley & Chamot, 1990; O'Malley et al., 1985a/b; Wenden & Rubin, 1987); second, a dichotomy of direct and indirect strategies (Oxford, 1990); and third, a distinction between language learning strategies and language use strategies (Cohen, 1998). (A detailed discussion of the different strategy classification schemes will be dealt with in section 2.4 where a strategy selection framework is derived and delineated for the purposes of the present research.)

Based on their own categorization schemes, researchers made decisions on the types of strategies they believed were useful to language learning and hence were worth teaching. In particular, some training studies were conducted mainly to validate the effectiveness of the taxonomies developed by the researchers themselves. For instance, there have been interventionist studies attempting to identify, classify and train strategies believed to be effective to language learning strategies (Chamot, 1987; O'Malley & Chamot, 1990; O'Malley et al., 1985; Oxford, 1996a; Rubin, 1981; Wenden & Rubin, 1987).

Let us take the O'Malley et al.'s (1985) study as one example. One of the primary purposes of the two-phase study was to assess the effectiveness of strategy training on listening and speaking tasks. Strategies selected for the listening task and the speaking task were partly based on the tripartite taxonomy i.e., meta-cognitive, cognitive, and social-affective strategies. Listening strategies selected for training included selective attention (meta-cognitive), note-taking (cognitive) and co-operation (socio-affective) and strategies selected for the speaking task included functional planning (meta-cognitive) and co-operation (socio-affective). The selection was also partly based on findings from earlier studies relating to listening and speaking skills e.g. Ausubel, 1978; Dansereau et al., 1974; Stevick, 1984; Weiland & Kingsbury, 1979 (cited in O'Malley et al. 1985a/b, p.569).

One would question, however, whether strategies or combinations of strategies that are chosen on the basis of other taxonomies would have produced similar results or enhanced the training effects (Skehan, 1989). This comment highlights the difficulty of comparing

results across studies in which the selection of strategies for training is based on different classification systems. Moreover, the arbitrary selection of a few strategies from any categories for training may affect the validity of strategy training.

We now turn to another study based on a similar taxonomy. Criteria for strategy selection from each of the cognitive, metacognitive and socio-affective strategies in the pilot training study reported in Chamot (1993) were similarly not clearly spelt out. Although some strategies were taught in all classrooms, other strategies were taught for only some of the foreign languages. The rationale behind the choice was not explicitly stated.

In the main study reported in Chamot et al. (1996), strategies were identified after consultations and collaboration with the foreign language instructors and classroom trials. In general, the selection of strategies was left to the discretion of the instructors who responded to the demands of the learning tasks. While task knowledge needs to be considered with regard to strategy training (Brown, Bransford, Ferrara & Campione, 1983; Wenden, 1993; 1996), there were no systematic approaches to considering these task demands in the context of the tripartite classification scheme in the selection of strategy types for training. In this way, similar to the O'Malley et al.'s training studies (e.g. 1985; 1990), the rationale behind the selection of specific strategies under each category was not well grounded. This raises the question as to whether a systematic approach towards the choice of strategies for training may produce better training effects. If so, what approaches should be taken in the selection of strategy types for training to enhance the efficacy of teaching and the impact of the interventionist?

To sum up, at least two problems have arisen. First, different strategies were selected on the basis of different classification schemes. This raises the taxing question as to which schemes researchers should rely on and why when identifying strategy types of training. Second, even when a specific scheme is selected, the rationale for the selection of individual strategies under each strategy category for training is not strong either. Hence, the selection of both broad strategy types and specific strategies seems to be unsystematic and ad hoc in the field. Oxford et al. (1990, p.200) believe that strategy training should not just involve the teaching of one or two strategies in an ad hoc fashion, but rather include a spectrum of strategies over a period of time.

### Unresolved issues for further research

Given the relationship between communication and learning, the aforementioned unresolved problems regarding the identification of strategy types for training are relevant to the selection of strategies for the present study as well. As the key unanswered question is what combination of strategies is best for learners, it follows that there is a need to explore the impact of groups of strategies in interventionist studies.

Rather than arbitrarily relying on one classification scheme, a strategy selection framework was drawn up from several major taxonomies in the language learning field for the distinct purposes of the present study. In the framework, two broad strategy types (i.e. direct and indirect strategies) were classified and used to select specific strategies for training. The specific strategies under the 'direct' category and 'indirect' category were also systematically identified. (In order not to disrupt the main line of argument in this section, the development of framework and the specific strategies selected will be justified in detail in sections 2.4 and 2.5.)

#### 2.3.3 Outcome of strategy training

There have been a vast number of studies relating strategy use and learning outcome but not many are related to the speaking skill. The studies can be categorized into two types: descriptive and interventionist. The former deals with the relationship between promotion of strategy use and improvement in learning outcome and task performance. The latter focuses on the impact of training in the use of categories of strategies or specific strategies on strategy use and task performance. There are far more descriptive studies than interventionist studies (McDonough, 1995). One reason is that reactions to strategy training have been mixed and the value of strategy training has not been fully recognised (Cohen, 1998; McDonough, 1999). This indicates that there is insufficient work being done on strategy training and more empirical studies are needed to validate the effects of strategy training. This was also one of the key reasons for conducting the present research.



In the following sections, the descriptive and interventionist studies relating to the speaking skill are reviewed to see what insights they may give into the training of SS.

### *Descriptive studies*

Wong-Fillmore's (1976) reports a nine-month ethnographic study with 5 Mexican children in an English-speaking school in the United States. During the observation period, each child was paired with an English-speaking schoolmate for an hour per week. The verbal interactions between them were audio-recorded and notes were taken by the researcher herself to investigate the speech development of the Mexican children throughout the period. Wong-Fillmore found that there were major differences in the children's development of speech to their approaches to learning a second language. She accounted for the differences as being related to "the interaction between the nature of the task of learning a new language, the strategies that needed to be applied to the task, and the personal characteristics of the individuals involved" (1976, p.227). The findings seem to support the argument that strategy use is related to speech development of young children in an ESL context. It also appears that strategy use should be mapped to the nature of learning tasks. This way, the study highlights the role of strategy use in the development of L2 oral skills and the relationship between strategy use and task demands.

Saville-Troike's (1987) study also looked into the way young ESL learners developed their social speech in L2 classroom environment in Asia. The 9 children were from China, Japan and Korea. None of them had any knowledge of English prior to enrolment. During the first six months of exposure to English, their utterances in class were collected by a wireless radio microphone system attached to their collars. Their behaviours were either video-taped or audio-taped. It was found that the children used a number of strategies in their 'private' speech when they remained 'silent' most of the time. Saville-Troike (1987) reports a variety of intra-personal learning strategies including, (1) repetition of others' utterances, (2) recall and practice, (3) creation of new linguistic forms, (4) paradigmatic substitution and syntagmatic expansion, and (5) rehearsal for overt social performance (ibid., p.567). There was also evidence that by the time the children resumed communicating with English speaking people, their English utterances were found to be relatively complex. On the basis of this, it was hypothesized that there are constructive

times when children appear to be ‘silent’ but in fact, during the ‘silent period’, there is an active language learning process in which learning strategies are deployed to process input data. Saville-Troike’s (1987) findings indicate that strategies that may be effective for developing L2 speaking skills for young learners seem to be oriented towards “recall”, “repetition”, “practice”, and “rehearsal”. Interestingly, these strategies are quite different from those recommended by Cohen (1990, p.71) as the most useful speaking strategies for older ESL learners. They were strategies “for utilizing the language you have control over”, “for avoiding that which you do not”, “for engaging your interlocutors as coaches and assistants in getting your message across”.

The evidence from the two descriptive studies [i.e., Saville-Troike (1987); Wong-Fillmore (1976)] shows that young learners do intuitively employ SS to help them learn to speak in the ESL context and that active strategy use may facilitate the development of L2 oral skills. It follows that it may be worth promoting strategy use by explicit instruction in the classroom. The main objective of following interventionist studies was to examine the effects of strategy training.

### *Interventionist studies*

There has been attention attracted to strategy training in the language learning field (Hosenfeld, 1981; Wenden, 1982; O’Malley, Russo & Chamot, 1983). More recently, there is support for the view that strategies can be identified and categorised and that learners can be taught to use them to good effect (Oxford, Crookall, Cohen, Lavine, Nyikos, & Sutter, 1990; Nunan, 1996; 1997). The premise underlying most of the strategy training studies is that we can identify strategies used by good language learners and then teach these strategies to learners, thereby enhancing learners’ ability to use them so as to perform better in language tasks (Chamot, Barnhardt, El-Dinary & Robbins, 1996). Nonetheless, the reaction to strategy training has been mixed and the outcome of interventionist studies is far from definitive. (Ellis, 1994; McDonough, 1995; 1999; Oxford, 1996a). There are few empirical studies that could be drawn on to demonstrate that such training has irrefutable benefits (Cohen, 1998; Nunan, 1999).

Strategy training pertaining to the speaking skill

In the limited number of skill-specific strategy training studies that aimed to improve the learning of the individual language skills by the application of strategies, more attention has been given to the learning of vocabulary, reading and writing but not to L2 oral tasks (Cohen, 1998; Ellis, 1997; Nunan, 1999). A reference list of important studies relating to skills other than speaking is as follows:

- Teaching of vocabulary e.g. Brown and Perry (1991);
- The teaching of reading e.g. Carrell, Pharis, Liberto (1989); Fraser (1999); Kern (1989); Rusciollelli (1995);
- The teaching of writing e.g. Oxford (1990);
- The teaching of listening comprehension e.g. Rost and Ross (1991); Thompson and Rubin (1996)

The number of interventionist studies on the teaching of speaking remains small and the effectiveness of training varies with qualified success. We now visit these studies and highlight some of their inadequacies to support the rationale for more research in strategy training with a focus on speaking.

Let us review studies on instruction in the use of general strategy use on speaking performance. For example, O'Malley et al. (e.g. 1985; 1987; 1990) have conducted a number of important training studies. The primary aim of O'Malley et al.'s (1985) study was to determine whether strategy training was effective in ESL classroom settings. Results showed that in the post-training speaking test, the first group that received meta-cognitive, cognitive and social/affective strategy training improved significantly more than the control group, with the second group that had only cognitive and social/affective strategy training somewhere in between the two. The impact of strategy instruction, however, was not unequivocally clear (O'Malley et al., 1985a/b). The studies seemed to have produced promising findings with regard to the speaking skill.

Recently, based on the transactional speaking component of the O'Malley et al.'s (1985a/b) studies, Varela (1997) investigates the effects of strategy instruction in a middle school ESL-science classroom. It was compared with a similar classroom that received equivalent instruction without the learning strategies component. In the

interventionist classroom, students were taught strategies to assist them in presenting an oral report on their science fair projects. The strategies included using graphic organizers, selective attention, self-assessment and self-talk. After two weeks of instruction, students in the strategies group not only reported using significantly more strategies than the control group students, but the videotaped performance of their science fair reports showed significant improvement over their performance prior to the strategies instruction.

It is interesting to note that, whereas O'Malley et al.'s (1985a/b) studies investigated strategy instruction and task performance, Varela's (1997) examined strategy training on both strategy use and task performance and reported positive results in the frequency of strategy use of the experimental group. The finding is particularly valuable as it has cast some light on the teachability issue i.e. strategies appeared to be teachable as reflected by students' uptake.

The effects of strategy training on strategy use and performance were also investigated in Dadour and Robbins's (1996) study. Their training course aimed to improve the speaking skills of prospective English teachers in Egypt. The 15-week course provided the subjects with instruction on using effective learning strategies. Each 3-hour training session had a main goal related to strategies for a specific linguistic/conversational speaking skill, and subordinate goals related to developing learners' functional/affective speaking skills. Results showed that strategy training had a positive effect on the speaking performance of the experimental group at both first- and fourth-year levels; there were specific differences in terms of fluency, vocabulary, and grammar but not in pronunciation. The experimental groups were also found to use more strategies of all kinds. The frequency of strategy use was measured by the *SILL* (Oxford, 1990), which is a self-report strategy questionnaire. Hence, actual strategy use was not measured.

The second study reported by Dadour and Robbins (1996) used a Problem-Solving Process Model to teach learning strategies to learners of foreign languages in Japan. The Model followed a four-step approach i.e. Planning, Monitoring (Regulating), Problem-Solving, and Evaluation (Chamot, Robbins & El-Dinary, 1993). During each lesson, the teacher modelled the use of strategies and gave students an explanation for the use of these strategies with particular tasks. Six weeks into the semester, a questionnaire was

administered to 46 students and findings indicated that 78% students wanted to learn more strategies for speaking. However, similar to the study in Egypt, Dadour and Robbins (1996) relied on a self-report instrument i.e. a questionnaire to gauge strategy use. The results might have indicated perception of rather than actual strategy use by the learners. One point is common to both of Dadour and Robbins's (1996) studies: only university-level students, who might already have possessed effective strategies prior to the training course, were involved. It seems necessary to conduct strategy training with far less proficient and younger learners.

Dadour and Robbins's (1996) studies did not attempt to link strategies with specific task types. Yet, effective strategy selection has been found to be closely associated with task type, task demand and text type (Chamot et al., 1996; Ross & Rost, 1991; Wenden, 1995). A finely-tuned link between strategy type and task type is yet to be established.

Attempting to address the missing link between specific strategies and task types, Cohen (1998) reports on a study with intermediate learners of French and Norwegian at the University of Minnesota who were either participants in a strategies-based instruction treatment group, or comparison students receiving the regular ten-week language course. Both groups filled out a pre-treatment questionnaire and then on a pre-posttest basis completed the SILL, performed a series of three speaking tasks, and responded to a Strategy Checklist upon completion of each of the three speaking tasks, namely self description, story telling, and city description. 21 of the experimental and comparison group students also provided verbal report data while they filled out the posttest strategy checklists, giving reasons for their responses and reactions to the instruments. The most significant finding was that the experimental group outperformed the control group on the city description task but not on the other two tasks. As conceded by Cohen (1998, p.148): the three tasks chosen by the study were non-participatory i.e. involving only one participant. This apparently calls for more task types, preferably interactive in nature, to be tried out in other empirical studies.

The other major claim of Cohen's (1998) study is that it established a direct link between the frequency of strategy use of a given strategy and performance on the speaking task for which that strategy was chosen. However, it was found that the relationship between

reported frequency of strategy use (pre-post) and ratings of task performance (pre-post) was very complex. An increase in the use of certain strategies included on the strategy checklists was found to be linked to an improvement in task performance for the experimental group, in other instances only for the comparison group, and in some cases for both groups. These mixed results prompt further need for research in linking specific strategies to task performance. In addition, Cohen's (1998) study relied on subjects' reported data about strategy use. In future research, strategy use needs to be examined in or at least complemented by more objective means (Cohen, 1987; 1994; Cohen & Scott, 1996).

Perhaps Bejarano et al.'s (1997) study appears to be relevant in establishing some kind of direct link between strategies and performance for one particular task type i.e. group discussion and objectivity in data collection. Interaction strategies believed to have contributed positively to interaction and subsequently to language learning were used to train an experimental group for six weeks. Each group in the experimental and control groups was video-taped before and after the six-week period and an observation-tally form was developed to measure (1) overall participation and non-interactive participation and (2) use of interaction strategies in terms of frequency. Results indicated that the experimental group used significantly more interaction strategies than the control group and that there was a significant decrease in non-interactive participation. In this way, Bejarano et al.'s (1997) study could be considered to have established some link between interaction strategies and performance in group discussion.

While Bejarano et al.'s study has achieved some success in establishing a link between interaction strategies and interaction outcome, and in the use of objective data collection methods regarding strategy use, task performance was measured in terms of the overall participation of the group and the amount of interaction observed. It is reasonable that other measures, apart from observed frequency of strategy use, may be needed to paint a fuller picture of the impact of training.

We now turn to training studies which are confined to the teaching of CS to see how the findings may further illuminate our understanding of the outcome of strategy training pertaining to the speaking skill.

In the early 90's, there were mixed reactions to the training of CS. Kellerman (1991) is critical of the need to train CS. He maintained that it was not necessary to train students in the use of such strategies. For one thing, there are pre-existing CS in one's L1 to fill in gaps in vocabulary knowledge and the learners should be able to transfer those strategies to deal with similar problems in any L2 tasks. However, if students have difficulty in using such strategies in an L2 situation, then it is learners' lack of language proficiency in their L2 or there is a lack of positive atmosphere for strategy use that has impeded students' ability to deploy CS to solve lexical problems. Hence, Kellerman (1991) argues that it is desirable to strengthen L2 learners' linguistic competence or facilitate classroom atmosphere conducive to strategy use rather than to implement strategy training. Kellerman (1991) concludes, "there is no justification for providing training on compensatory strategies in the classroom ... Teach the learners more language and let the strategies look after themselves" (ibid., p.158).

Kellerman's (1991) view is in stark contrast to a study in the same year (Dörnyei & Thurrell, 1991). The latter supported the training of CS in L2 classroom on the grounds that the teaching strengthens learners' strategic competence, which is part and parcel of communicative language ability. Dörnyei and Thurrell argued that the teaching of strategic competence is particularly relevant to the foreign language classroom not least because students who possess a wide repertoire of linguistic knowledge may still fail in oral language examinations because they often lack the ability to keep going when there is a communication breakdown. Hence, according to Dörnyei and Thurrell (1991), the mastery of linguistic ability alone does not guarantee success in using an L2 in oral communication. With a view to helping teachers develop learners' strategic competence, specific strategies based on strategy types defined by Corder (1981) were identified for training. They included: "resource expansion or achievement strategies" such as paraphrasing or using circumlocution; "message adjustment strategies" such as getting off the point; conversational formulae such as "using fillers" to keep students going despite difficulties. Some classroom activities were also introduced to teachers to help them incorporate strategy training in the foreign language classroom. The study ended with a positive note on strategy training, concluding that "besides developing confidence, strategy training also facilitates spontaneous improvisation skills and linguistic creativity"

(Dörnyei & Thurrell, 1991, p.22). Nonetheless, there was no reporting on the results of the teaching to support the claim that the strategy exercises “improve the learners’ performance skills” (ibid.). Empirical evidence is needed to validate the value of strategy training particularly in this study in which teachers were asked to help L2 speakers to “get off the point” and evade answers in times of difficulties. One might doubt the validity of such kind of strategies-based instruction.

In response to the need for empirical evidence, Dörnyei (1995) relates a pilot 6-week training experiment with 109 students in Hungary in the use of three CS namely, topic avoidance and replacement, circumlocution, using fillers and hesitation devices. The main purposes of the research were to help learners in learning to use these strategies to cope with performance problems and improve performance skills in speaking. Results showed that there was improvement in measures related to both the quality and quantity of strategy use (quality of circumlocutions and the frequency of fillers and circumlocutions) in the oral post-test, which consisted of topic description, cartoon description and definition formulation. The study also addressed the teachability controversy and negative reactions to strategy training arising from Kellerman’s 1991 study, highlighting six interrelated procedures considered to be relevant to strategy training for speaking. They included: raising learner awareness; encouraging students to take risks; providing L2 models of strategy use; highlighting cross-cultural differences in strategy use; teaching CS by presenting linguistic devices to verbalise them; and providing opportunities to practise. Interestingly, Dörnyei compared these steps to strategy training in the language learning field, pointing out the striking similarities. In particular, the study shared the view of Oxford’s (1990) and Wenden’s (1991) in implementing ‘informed training’ because of the importance of awareness raising.

Dörnyei’s (1995) study provides some evidence for the view that strategic competence may be teachable and that patterns of students’ strategy use may be altered both qualitatively and quantitatively by training. In addition, the study provides the necessary insights into the value of strategy training, particularly in terms of awareness raising and scaffolding strategy use by linguistic help. Nonetheless, Dörnyei’s study focused on strategies which help the learner overcome communication problems without giving much emphasis on maximizing the language learning potential of the strategies. That is,



the various activities used in the training studies were geared towards the practising of the strategies per se; the focus was not on helping learners deploy the target strategies to produce any outcomes that one would normally expect in a learning task. Last, only three strategies were included in the experiment. It follows that the strategy base would need to be expanded to a much broader range.

#### Summary of unresolved issues for further research

First and foremost, the number of interventionist studies investigating the effects of strategy training is relatively small. Moreover, attention given to training studies pertaining to the speaking skill is rather less as compared to that given to other skill areas in language learning. Much research is therefore needed to bridge a major gap in strategy research by giving an exclusive focus on the speaking skill, particularly participatory, interactive skills.

Given the small number of studies, results are also far from definitive. Further investigation is called for to understand the impact of strategy training on learners' strategy use and to investigate the teachability issue i.e., are strategies teachable? Specifically, there is a need to relate strategy use and task performance in the context of oral communication tasks, on which L2 speakers learn to deploy strategies to communicate and to achieve task purposes. Last, learners' strategy use was largely tracked and assessed by only one or two means (e.g. observations, questionnaires, verbal reports). There is a need to use a multi-method approach to triangulate findings in order to get a fuller picture of strategy use (McDonough & McDonough, 1997).

#### 2.3.4 Strategy use and proficiency level

A few studies that are pertinent to the L2 oral skills have attempted to establish some general relationships between second language strategy use and oral proficiency.

##### *Chesterfield and Chesterfield (1985)*

Chesterfield and Chesterfield (1985) study the natural order of the acquisition of learning strategies used in children's verbal interaction. 14 very young Mexican American

children in bilingual classrooms were stratified in three proficiency groups in English and carefully observed during pre-school and first-grade studies. Results indicated that there was a natural order of development. First, largely receptive strategies such as repetition, memorization and formulaic expressions were acquired and in use. Then strategies that involved interaction with others were developed. The last to develop were strategies showing awareness and monitoring of grammar errors. That is, meta-cognitive strategies were found to be developed and used only by more advanced children. In addition, Chesterfield and Chesterfield (1985) postulate the natural order of the development of second language strategies, stating that children invariably start using memorization and repetition as their fundamental strategies in verbal interaction. Young learners are not able to use strategies which require an underlying competence or ability to manipulate syntactic and lexical forms into meaning units. Therefore, surface processing strategies such as repetition/mimicry and memorization/recall tend to be of dominant use. As children grow up, they add to their initial repertoire of LLS with more sophisticated ones like verbal interaction getters, formulaic expressions and last of all strategies showing awareness and monitoring of grammatical errors. Nonetheless, one would wonder whether the observational data from very young children could be considered comparable and complementary to data from adult learners used in the majority of other studies learning other second languages (McDonough, 1995).

*Abraham and Vann (1987)*

Abraham and Vann (1987) report a case study of one successful and one unsuccessful learner based on their respective scores in the Test of English as Foreign Language (TOEFL) test. The oral interviews were tape-recorded and coded for identification of strategy use based on the Rubin inventory (1981). The main categories of strategies used for coding included: clarification/verification; monitoring; inductive; deductive; practice; communication. The tallying of the frequencies of strategy use by the two learners showed a general pattern: the successful learner was better than the unsuccessful one in terms of the quantity and variety of strategy use in the oral interviews. Moreover, think-aloud protocols collected when the two learners were engaging in the four language tasks indicated that the successful learner was able to deploy strategies (cognitive and communication) more flexibly than the unsuccessful learner and that the successful

learner executed more CS, and in particular monitoring strategies. Last, it was found that flexibility (quality) of strategy use - in addition to frequency of strategy use - may also be related to proficiency level.

*Huang and van Naerssen (1987)*

In a study that involved older students of graduating majors in English in an EFL context in China, Huang and van Naerssen (1987) found that functional practice use (i.e., “thinking in English”, “speaking with other students, teachers, and native speakers”) showed statistically significant differences between high and low proficiency groups in oral communication. Students who performed better in the test of oral communicative ability in English (Royal Society of Arts Examination Board) reported employing more functional practice strategies in the 3-part questionnaire on strategy use derived from the Rubin (1975) and Stern (1975) strategy inventories. “Thinking in English” was the functional practice strategy that showed the highest correlation with oral performance. Moreover, multiple regression analysis indicated that functional practice strategies in general stood out as the major predictor of proficiency in the oral test. The result is not at all surprising given that “functional practice by its nature involves a primary focus on communication. Some functional techniques involve direct interaction with others, using the target language” (ibid., p.293).

*Bruen (2001)*

Whereas the aforementioned three studies concerned the learning of ESL, a recent study by Bruen (2001) obtained similar results. She reported a correlational study carried out to profile 100 effective Irish learners of German at undergraduate level. The primary objective was to identify the language learning strategies that may be associated with higher levels of oral proficiency in German. In addition, the study combined qualitative assessment using in-depth interviews with quantitative measurement using questionnaires to examine the ways the strategies were used by students. The findings indicated that Irish students who had achieved higher levels of oral proficiency in German used more language learning strategies, in particular more cognitive and meta-cognitive strategies. The study concluded that “successful oral communicators have a repertoire of different

strategies at their disposal ... Finally, the more proficient student implements these strategies in a structured, step-by-step manner and applies them in a wide range of situations and tasks” (ibid., p.223). Overall, the findings were consistent with those students conducted in the ESL context.

We have seen four studies that seem to have lent support for the argument that strategy use is associated with proficiency level. Overall, students of higher levels display a higher frequency of strategy use. Moreover, more proficient students appear to be able to exhibit higher quality of strategy use with flexibility and in a structured and step-by-step manner. One study claimed that meta-cognitive strategies are more likely to be used by learners of higher proficiency and that acquisition of second language strategies may be developmental for young children. Regarding correlation between specific strategy types and oral proficiency, one study found that strategies which by virtue of their nature have a focus on ‘communication’ (i.e. ‘Functional practice’ Bialystok, 1979; 1981) are reliable predictors of oral proficiency.

Despite the seemingly straightforward findings we have seen, it can be argued that the relationship between proficiency level and strategy use is not one of cause and effect. The substantial relationship is not one-way i.e. proficiency level may have a spiral and ascending effect on strategy use (Green & Oxford, 1995; McDonough, 1995). In other words, more proficient learners are able to use more strategies, and the more frequent use of strategies in turn may bring about proficiency enhancement effect. This view is in line with Skehan’s (1987, p.97) causal status of strategies i.e. “learner strategies do not determine proficiency, but are permitted by it. The use of learner strategies, that is, may not lead to higher accomplishments - instead one of the benefits of higher proficiency may be the capacity to use a wider range of strategies”. Skehan (1987) urged for the necessity to separate out the “two possibilities of strategies-as-caused and strategies-as-causal” (1987, p.92). The issue of causality is still unresolved; whether strategy use is caused by proficiency level or vice versa is yet to be explored.

Let us now review three studies that are confined to the use of CS to see whether they will cast more light on the issue.

*Tarone's (1978)*

Tarone's (1978) study focused on conscious CS of production. These were attempts "used by an individual to overcome the crisis which occurs when language structures are inadequate to convey the individual thoughts" (ibid., p.195). Nine students who came from Spain, Turkey and China and were studying English as their foreign language in the United States were involved in the study. They were graded in order of English proficiency. During the investigation, the students were asked to narrate in both their L1 and L2 stories that were depicted by illustration and designed to create a communication crisis for the learners. This was followed by an interview in which the subjects were asked about their knowledge of particular language forms and why they used one form instead of another during the story telling. All the verbalizations during the narration and the interviews were recorded. Tarone concluded the study by suggesting several hypotheses, one of which indicated that "strategy preference and second-language proficiency level may prove to be related, such that strategies of paraphrase could be increasingly preferred as successful second-language learners gain in proficiency" (ibid., p.202). It is interesting to note that 'paraphrasing' was singled out as a strategy that may be related to second language proficiency and not just to communicative effectiveness.

*Poullisse and Schils (1989)*

Poullisse and Schils (1989) investigate the use of compensatory strategies - as one type of CS - by the speaker to reach his/her communicative goal via alternative speech plans. The study was set up to investigate the effects of foreign language learners' proficiency level on CS used by these learners to solve lexical problems during communication. Three groups of Dutch learners of English at three different proficiency levels were tested on three oral tasks: a picture description task, a story telling task, and an oral interview with an English native speaker. There were interesting findings regarding the effect of proficiency level. High proficiency learners were found to use fewer CS than their low-proficiency counterparts. However, the type of CS chosen by learners did not seem to be associated with their proficiency level. Rather, the study found that it was more related to the kinds of tasks in which students were engaged. In a nutshell, "...proficiency level

proved to have only a limited effect on the choice of CpS. The data indicate that task-related factors are much more dominant in this respect” (ibid., p.42).

*Chen (1990)*

Chen’s (1990) report further investigated the correlation between proficiency level and learners’ strategy use. Chen conducted a study involving twelve English majors at Guangzhou Foreign Language Institute in China. The experiment was designed to explore the relationship between learners’ language proficiency and their strategic competence. The students were divided into two groups according to their English proficiency. A concept-identification task was adopted because it was believed that “communication strategies are considered to relate most closely to the lexical aspect of the target language” (ibid., p.159). The communicative task had 24 concepts (12 concrete and 12 abstract). Each student was required to communicate two concrete concepts and two abstract concepts to a native speaker interlocutor in an interview situation. The findings were not straightforward: the frequency, type, and effectiveness of CS employed by the learners varied according to the proficiency level. Specifically, the CS employed by low-proficiency learners significantly outnumbered those employed by their high-proficiency learners. Linguistic-based CS were more frequently used by the high-proficiency learners whereas knowledge-based and repetition CS were more extensively used by the low-proficiency counterparts. High-proficiency learners were also more efficient in their use of CS than were low-proficiency learners. Overall, Chen (1990) concludes that learners’ communicative competence may probably be increased by development of their strategic competence and recommends that strategy training be implemented.

The findings from the three studies which had a focus on CS were rather diverse. First, two studies showed that high proficiency learners used fewer CS than their low-proficiency counterparts. Interestingly, one study provided evidence that proficiency level did not appear to be associated with learners’ preferred strategy types. This finding is in sharp contrast with those from the other two studies which indicated that more advanced and proficient learners used more “Paraphrasing” or “Linguistic-based CS” than less proficiency learners. Last, it is interesting to note from one study that task type has more

effect than proficiency level in affecting learners' choice of strategy use. The findings from the three studies are therefore far from definitive and clear.

*An interventionist study (Rost & Ross, 1991)*

There have been few attempts to implement interventionist studies that aimed to examine the relationship between proficiency level and strategy use in the speaking skill. One study by Rost and Ross (1991) is relevant to the present research though the study focused on the listening skill because part of the research concerned whether "local and inferential questioning strategies" would be teachable to less proficient students. The study is therefore dealt with in greater detail.

Rost and Ross investigated the plausibility of teaching three proficiency-related clarification strategies in listening comprehension to Japanese learners of English at beginning levels. One key question relating to the teachability of strategies was: would local and inferential questioning strategies used by more proficient listeners be trainable so that the less proficient listeners who do not yet use them will use them after training? The result suggests that it is indeed possible to teach learners how to ask for lexical clarification in listening.

Two major interpretations concerning learner use of strategies in interaction emerged (Ross & Rost, 1991). The first interpretation maintains that strategy use is essentially a compensation device for a lack of linguistic knowledge/competence. The underlying rationale is that more proficient learners are able to chunk information and integrate new information into prior propositional and schematic representations they have in their immediate memory. They can then formulate discourse-level clarification questions (i.e. inferential questions) with relative ease because they can devote more attention to the overall story structure. Less proficient learners, on the other hand, lack the basic lexical knowledge and are forced to allot most of their attention to specific word meanings. However this kind of clarification of the lexical meanings very often does not result in gaining any new insight about the overall, schematic structure of the story. This is because less proficient learners easily experience an information overload due to their inability to process input in chunks.

Hence, one school of thought would maintain that L2 instruction should be geared towards overall increases in linguistic proficiency so as to minimise the learners' need for compensatory strategies. On the other hand, some would argue that L2 instruction should help the learners use the linguistic and interactive strategies that are likely to be effective for achieving immediate understanding. These two divergent views raise the interesting question as to whether we should help students to develop strategic competence to compensate for their lack of linguistic competence or whether students should develop their language proficiency first so that there is less need for strategy use.

#### Summary of unresolved issues for further research

The relationship between proficiency strategy use and proficiency level is complex. The issue of causality is still unresolved; whether strategy use is caused by proficiency level or vice versa is yet to be explored. There has been evidence to support the hunch that the frequency and quality of strategy use may vary according to proficiency level and that strategy use may be associated with task type as well. The findings from studies are far from definitive and clear. In addition, it is worth continuing to explore whether we should help students - particularly those who are less proficient - to develop strategic competence to compensate for their lack of linguistic competence.

#### 2.3.5 Strategy use and methods of investigation

As can be seen from the studies reviewed thus far, various research methods have been used for investigating strategy use. The major instruments include the questionnaire (Bruen, 2001; Cohen, Weaver & L-Y, 1996; Dadour & Robbins, 1996; Dörnyei, 1995; Huang & van Naerssen, 1987), observation (Bejarano et al., 1997; Chen, 1990; Chesterfield & Chesterfield, 1985; Dörnyei, 1995; Rost & Ross, 1991; Poulisse & Schils, 1989; Saville-Troike, 1987; Tarone, 1978; Varela, 1997; Wong-Fillmore 1976), interviewing (Abraham & Vann, 1987; Bruen, 2001; O'Malley et al., 1985a/b; Tarone, 1978), thinking aloud (Abraham & Vann, 1987; Cohen et al., 1996). All studies employed one or a combination of two of these instruments to gauge learners' strategy use. Let us briefly review the strengths and weaknesses of each of the four methods to identify unresolved issues for further research.



### *Questionnaire*

Using questionnaires to assess strategy use has a long established tradition. In fact, questionnaires are among the most prevalent ways to assess frequency of language learning strategy use. Bialystok (1981), for example, used a 12-item, structured rating scale to assess strategy use. Politzer (1983) publishes a four-point strategy scale, consisting of 51 items covering questions on general behaviours, classroom behaviours, and interactions outside the classroom. Politzer & McGroarty (1985) use a similar Behaviour Questionnaire consisting 66 items. The *Learning Strategies Inventory* (Chamot, O'Malley, Kupper & Impink-Hernandez, 1987) is a 4-point scale instrument consisting of 48 items and covering language skills areas such as listening, speaking, reading and writing. More recently, Cohen (1998) reports on a study that used a Strategy Checklist following each speaking task. Patterns of strategy use specific to each task were determined through the students' self-ratings of the frequency of use of different strategies. Perhaps, the most widely used strategy questionnaires that could be applied to the context of second language learning is the ESL/EFL version of *SILL* (the Strategy Inventory for Language Learning, Oxford 1986-1990). Notwithstanding the wide use of questionnaires to assess strategy use, the most obvious weakness is that self-reported data elicited do not necessarily reflect actual behaviours.

### *Observation*

To observe actual behaviours, observation was therefore used in many studies in early days between mid-70s and the mid-80s (Abraham & Vann, 1987; Chesterfield & Chesterfield, 1985; O'Malley et al., 1985a/b; Rubin, 1975; 1977; Wong-Fillmore, 1976). Observations may be done in an informal way whereby the researcher simply writes down field notes intuitively about learners' behaviours (Rubin, 1975). Alternatively, more sophisticated tools may be used including audio recorders (Wong-Fillmore, 1976; Chesterfield & Chesterfield, 1985) or video recorders (Rubin, 1977; Saville-Troike, 1987). Others, such as O'Malley et al. (1985a/b), devised observation guides to assist with this research method. For the obvious reason, observational methods can be used for clearly observable learning strategies (Cohen, 1998; Oxford, 1997). After all, external observational records may help to lend a more impartial, objective perspective to the

research study. The researcher notes down observations, which are entirely independent of any input from the learners. As Cohen (1998) points out, it is not uncommon that some learners may alter their strategy description when asked about strategy use according to what they think are socially desirable responses. While observations are useful in capturing certain kinds of observable behaviours, it is however agreed that this method cannot be used to investigate covert strategies. Nor can it be used to capture strategies related to the affective state of the learners (Cohen, 1987; 1998; Oxford, 1996).

### *Interviewing*

In the interviews, informants are asked to verbally describe their learning experiences that have occurred some time before the interview (Cohen, 1987; Wenden, 1982). Many interviews are based on the tasks that learners have just completed or reported to have completed some time in the past (Manghubai, 1991; O'Malley et al., 1985a/b; Tarone, 1977). Oxford and Burry-Stock (1995, p.2) are of the view that interviews, whether formal or not, provide personalised information on many types of strategies that would not be available through observation. Nonetheless, one major problem with interviewing is that students may report strategy use which does not always match actual behaviours. Moreover, interviewing, as suggested by Seliger (1983), is possibly more effective as a method to investigate language learning behaviours in general than a tool for uncovering mental processes as thinking aloud does.

### *Thinking aloud*

Thinking aloud is known as concurrent verbalisation (Ericsson & Simon, 1980), self-revelation (Cohen, 1987; 1991; 1995; 1998), simultaneous introspection (Faerch & Kasper, 1987), or introspection (Larsen-Freeman & Long, 1990). Thinking aloud is a technique used to investigate the subjects' mental processes when performing a task. During the process, the subjects are instructed to verbalise their thought processes freely and normally instantly. The think aloud protocols obtained are unedited (Cohen, 1998; Oxford & Crookall, 1989; Wenden 1982). The method has been used to investigate strategy use in language areas such as reading (e.g. Hosenfeld, 1977), vocabulary (e.g. Cohen & Aphek, 1977), listening (e.g. Young, 1996) and speaking (e.g. Cohen &

Olshtain, 1993). One major criticism of using the think-aloud method is that the process of inquiring about strategies may contaminate the nature of the mental processing, thus the strategies identified may not truly reflect learners' usual mental processes (O'Malley & Chamot, 1990). Last, learners' ability to articulate their thoughts varies a lot and this may affect the reliability of the instrument in gauging strategy use across individuals. Notwithstanding these weaknesses, the think-aloud method is considered the most direct way to access strategic thinking.

#### Unresolved problems for further investigation

We have seen that each research instrument has its strengths and weaknesses in assessing strategy use and that the studies we have reviewed employed mostly one to two types of instruments only. Recently, it is recommended that a triangulation of methods or an eclectic approach whereby one method can be used to offset the inadequacies of the others may be used (McDonough, 1995; 1999). All in all, it is generally believed that a synthesis of approaches to assessing strategy use may yield a fuller picture of learners' strategy use (Oxford, 1996). Notwithstanding this recommendation, there are few guidelines for an eclectic approach to investigating strategy use. One would wonder, for example, under what circumstances and on what language tasks questionnaires may best be used in conjunction with observations, interviews or think-aloud methods. Few attempts have been made to provide a systematic rationale for the combinations of types of research methods selected to investigate strategy use. It follows that further research adopting a systematic approach to the selection of research methods is warranted.

#### 2.3.6 Summary and discussion

So far, we have defined strategies for the purposes of the present study. Then we have reviewed strategy research around several topics including, identification of strategy types for training, outcome of strategy training, proficiency level and methods for investigating strategy use. Unresolved issues arising from the review of the literature have also been summarized under each topic. In reviewing strategy research relating to the identification of strategy types for training in section 2.3.2, we saw that there has been no consensus on the broad types of strategies identified for training. Let us now move on

to the development of a strategy selection framework based on a review of the literature in the following section 2.4. The framework will serve as a guide for selecting major categories of strategies for a study of L2 speaking. In section 2.5, the framework is then applied to the speaking skill and strategies targeted in the present study are also identified and explained.

## **2.4 Developing a theoretical framework for strategy selection**

### **2.4.1 Introduction**

In response to the unresolved issue regarding the identification of strategy types for training discussed earlier in section 2.3.2, this section derives a theoretical framework for categorizing major strategy types on the basis of existing classification schemes in both the general learning and language learning fields. The purpose is to identify broad strategy types for teaching in the present study.

### **2.4.2 Rationale and research tradition**

A strategy selection framework well-grounded in disciplined knowledge is important in that it provides a rationale and guide for strategies to be selected for training in my investigation. In the framework, some determining criteria are used to delineate major strategy categories. The determining criteria are conceptualized as parameters and they play the important role of making categorical distinctions among different strategy types. In drawing up the parameters, the literature relating to different existing classification schemes of strategies are reviewed and evaluated. On the basis of the review, basic parameters by which most classification schemes seem to have used to categorize strategy types are drawn up. Categories of strategies distinguished by these parameters are also proposed. These proposed categories are then applied to the selection of major types of strategies for training in the present interventionist study.

At this point, I should briefly explain the intellectual tradition in the approach used in drawing up my strategy selection framework. The procedure used is mainly a hypothetical-deductive approach which is particularly associated with the logic of science

as conceived by philosophers such as Popper (Magee, 1973). Popper’s view of scientific inquiry is also applicable to theory building in language learning (McLaughlin, 1987). McLaughlin suggested that theories of second language acquisition (SLA) can be placed along a continuum from deductive to inductive theories. Deductive theories begin with some “interim solutions” (1987, p.8) and then the “interim solutions” are either confirmed or disconfirmed via research. McLaughlin’s “interim solutions” parallel Popper’s “testable propositions” in that both are hypotheses driven by a proposed, new theory. Hence, the hypotheses are theory-driven and so is the overall research approach, which adopts a basically theory-then-research strategy as advocated by Long (1985).

The approach to setting up a strategy selection framework in this study fits into the tradition of hypothetical deduction. The proposed framework for categorising strategies for training (see Figure 2.1) is derived from previous works in the literature and serves as an “interim solution” (McLaughlin, 1987, p.8) to guide strategy selection. Based on the empirical results of the training study, the framework will be modified to accommodate new findings if necessary.

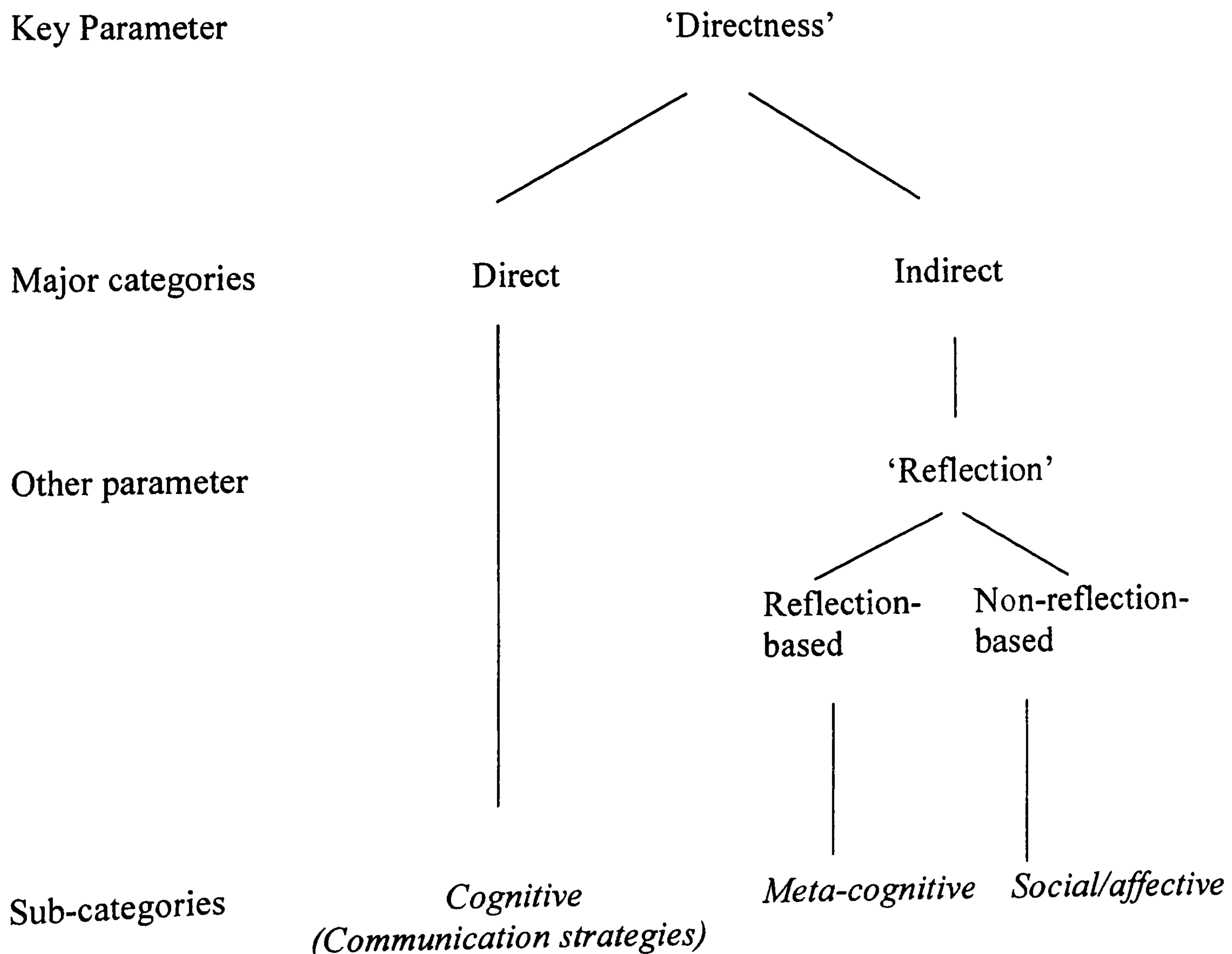


Figure 2.1 *A Framework for Categorising Strategies for Training: A Proposal*

### 2.4.3 Developing parameters to categorise strategies

The aim of this section is to explain the proposed framework (Figure 2.1) on the basis of the existing classification schemes of communication strategies (CS) and of learning strategies (LS). An evaluated review of taxonomies used in both communication and learning is relevant and necessary on the premises presented in section 2.2.3 that learning and communication are not entirely different and that deploying CS may lead to learning. In addition, “the ability to function in another language is generally characterized in terms of being able to speak that language” (Nunan, 1999, p.225). This way, learning to speak a second language may arguably be a pathway to learning the language. Taxonomies in both CS and LS fields are therefore reviewed in the following sections in order to investigate key parameters that seem to have been used to categorise strategies.

#### *In search of key parameters in CS research*

The taxonomies of CS identified in the literature vary significantly and as a result lists of CS that have been drawn up also differ a lot. A review of the CS literature indicates that a vast diversity of strategic language devices have been used to exemplify CS (Dörnyei and Scott 1997). (For an inventory of strategic language devices with descriptions, definitions and examples, see Appendix 1.) Take the first CS i.e. “Message abandonment” as an example for illustration. It is described or defined as “leaving a message unfinished because of some language difficulty”. A total of 33 types of CS with a wide range of accompanying language devices have been identified and described. The diversity is perhaps the best indicator that the classification schemes vary a lot in the field.

Over the year, at least 9 key taxonomies of CS have emerged from the 33 types of CS. Let us now compare them to see what common criteria seem to have been used to categorise CS. (For an overview of these 9 taxonomies, see Appendix 2.)

First, the comparison indicates that, in 3 out of 9 taxonomies (i.e. Faerch & Kasper 1983; Tarone 1977; Willems 1987), two clearly dichotomous classes of strategies are identified. The first type is used to adjust one’s message in response to one’s linguistic deficiencies. This may be done by altering, reducing, or even abandoning one’s message during

communication. Varadi (1973) regards this type of CS as “reduction strategies” and Tarone (1977) calls them “avoidance strategies”. The second type may be deployed in order to enable the speaker to convey the intended message in spite of the perceived linguistic deficiencies. Faerch and Kasper (1983) name them as “achievement strategies”. Hence, the first common factor used to classify CS is the use of the reduction-achievement distinction.

The other common factor is that the organizing principles in 5 out of the 9 taxonomies (i.e. Bialystok 1983; Faerch & Kasper 1983; Paribakht 1985; Tarone 1977; Willems 1987 as presented on the left-hand side of Appendix 2) primarily rest on certain properties of the language devices concerned. However, the kinds of descriptive categories described in these models of classification have been criticized as psychologically unfounded and often over-detailed and are no longer in common use (Dörnyei and Scott 1997).

We therefore outline 4 more recent taxonomies (i.e. Bialystok 1990; Dörnyei and Scott 1995; the Nijmegen Group; Poulisse 1993 as presented on the right-hand side of Appendix 2) to see what common factors may emerge with regard to strategy categorisation. The common factor shared by these 4 recent taxonomies is that the psycholinguistic processes of speech production are looked at. That is, instead of relying exclusively on the linguistic properties of CS to categorise strategy types as in the earlier models, the afore-mentioned 4 taxonomies analyse the mental processes underlying CS use (Dörnyei and Scott 1997).

Bialystok’s (1990) taxonomy is based on a psychologically plausible system of CS. She distinguishes analysis-based strategies and control-based strategies in accordance with her cognitive theory of language processing. Analysis-based strategies involve attempts “to convey the structure of the intended concept by making explicit the relational defining features” (p. 133). An L2 speaker, for example, may provide distinctive information about a concept when trying to convey its meaning. This way, the speaker manipulates the intended concept on the basis of its analysed knowledge. On the other hand, control-based strategies enable the speaker to hold the original intended content constant and manipulate the means of reference used to express the concept by, for example, resorting to L1 or using gestures.

Similarly, the Nijmegen Group proposes a taxonomy that focuses on language processing. According to Kellerman & Bialystok (1997), a CS taxonomy should be “informed by what is currently known about language processing, cognition and problem-solving behaviour” (p.31). There are only 2 main categories in the Nijmegen taxonomy i.e. conceptual and linguistic strategies. Conceptual strategies are used by the speaker to modify the intended meaning so that he/she can put meaning across with the available linguistic resources. Some common examples include approximation, circumlocution, semantic word coinage. Linguistic strategies, on the other hand, are deployed by the learner to modify the available linguistic devices. Kellerman (1991) re-labels linguistic strategies as code strategies. Examples of these include literal translation, code-switching, grammatical word coinage. The Nijmegen taxonomy is therefore one of conceptual and linguistic knowledge distinction (i.e. meaning and form).

Poullisse (1993) taxonomy is based on the argument that Bialystok’s (1990) classification and the Nijmegen taxonomy have not taken sufficient account of the processes involved in Levelt’s (1989) well-known model of L1 processing. Poullisse (1993) argues that Bialystok’s conceptual strategies are no different from code strategies from a psycholinguistic perspective to speech processing, and that the Nijmegen taxonomy needs revision. Poullisse’s (1993) modified taxonomy consists of 3 major categories. Substitution strategies refer to those that the speaker uses to omit or change features of a lexical chunk in search of a new lexical item (e.g. approximation, code switching). Substitution-plus strategies include substitution strategies together with some “out-of-the-ordinary application of L1 or L2 morphological and/or phonological encoding procedures” (p. 180). Re-conceptualization strategies involve a change in the preverbal message involving more than one chunk (e.g. circumlocution). It should also be noted that the three types of strategies identified in Poullisse’s (1993) model are lexical-compensatory strategies only.

Dörnyei and Scott’s (1995) taxonomy similarly focuses on problem-solving during speech production but includes with 3 rather different categories. Direct strategies “provide an alternative, manageable, and self-contained means of getting the (sometimes modified) meaning across” (Dörnyei and Scott 1997, p.198). Circumlocution is one good



example of direct strategies. Indirect strategies, on the other hand, are not strictly problem-solving or meaning-related devices but are important in preventing breakdowns in communication (Dörnyei and Scott 1997). One example is feigning understanding so that the conversation can be sustained. Interactional strategies involve the cooperation of both participants in solving problems in communication. A typical example is asking for and providing clarification of meaning between interlocutors.

The necessarily concise account of categories and sub-categories identified in recent taxonomies of CS supports the view that underlying mental processes involved in speech production are analysed and used to categorise major CS types. In particular, these taxonomies relate strategy use to current models of language processing and speech production.

So far, the discussion has illustrated that CS may be directly related to language processing. As such, the CS strategies are therefore termed ‘direct strategies’ in the present study in the sense that they are directly involved in language processing during speech production. (For a detailed discussion of the direct strategies drawn upon the Levelt (1989) model of speech processing, see section 2.5.2). On the other hand, indirect strategies defined for the purposes of the present study are not directly involved in speech production. Rather, they are meta-cognitive and socio-affective strategies that may be deployed to help L2 learners manage oral communication tasks (see section 2.5.3). The following review of LS research justifies the decision to use ‘directness’ as a key parameter to categorise and select strategies for training in oral communication tasks in this study.

#### *In search of key parameters in LS research*

Classification schemes of LS were already used in the early 80’s in the language learning field. Rubin (1981), for example, distinguishes between two types of strategy - one that contributes directly to the learning process and the other that contributes only indirectly. Rubin’s classification focuses on cognitive processes from general learning to see whether the “cognitive processes and strategies” are also used by learners in language learning. The six types of “cognitive strategies” are directly involved in the

comprehension, acquisition, retention and utilization of the target language; they are cognitive strategies by means of which the target language is directly processed. In contrast, the two processes which may contribute indirectly to learning focus on creating chances to learn or maximising opportunity of exposure to the language. They may not deal directly with the acquisition or retrieval of the learning material as such.

Wenden (1983; 1987; 1999) further adds “meta-cognition” to Rubin’s (1981) cognitive strategies. The kind of meta-cognitive knowledge which Wenden (1987) refers to is “the set of facts learners acquire about their own cognitive processes as they are applied and used to gain knowledge and acquire skills in varied situations” (1987, p.574). So the learner has to be able to keep control of his attention to his cognitive learning process. Such kind of executive ability to oversee and manage the general learning process introduced by Wenden (1987) was incorporated into the role of meta-cognitive strategies delineated in later taxonomies (Cohen, 1998; O’Malley et al., 1985a/b; O’Malley & Chamot, 1990; Oxford, 1990).

Notably, O’Malley and Chamot (1990) categorise learning strategies into “cognitive” and “meta-cognitive” strategies from a cognitive perspective, focusing on the underlying mental processes that the learner goes through. Meta-cognitive strategies “involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned” (1990, p.137). Apparently, the role of meta-cognitive strategies is to oversee the general learning process by enabling the learner to think ahead of the goal and demand of the learning task, to plan for some action to tackle the task, and to assess how well he has done the task (Purpura, 1997). In this way, meta-cognitive strategies do not deal directly with the learning material as such. In the context of oral communication tasks, they are those strategies that may be used by the learners to assess task demands and plan for ways to cope with the task. As these strategies are not directly involved in speech processing, they are defined as indirect strategies in the present research. In contrast, cognitive strategies “involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task” (O’Malley & Chamot, 1990, p.138). It would seem that the role of this strategy type is to deal directly with the learning material rather than to adopt an executive role in learning. Hence, it is the direct role played by “cognitive” strategies

that distinguishes them from the indirect role played by “meta-cognitive strategies in O’Malley and Chamot (1990)’s taxonomy. In oral communication, as discussed earlier, CS are directly involved in problem-solving during language processing, they are therefore considered direct strategies in this study. This way, the proposition that the parameter ‘directness’ of strategies in dealing with the learning material may have been used in making major categorical distinctions appears to hold.

O’Malley and Chamot’s (1990) bipartite distinction later developed into a tripartite taxonomy with a third category i.e. social/affective strategies. They “involve interacting with another person to assist learning or using affective control to assist a learning task” (1990, p.139). Social/affective strategies are not directly involved in the learning material but enable the learner to seek help from others or to think of ways and means to make himself more relaxed prior to or when engaging in an upcoming language task. In oral communication, strategies that may be deployed by L2 speakers to regulate their affective state and/or to help each other to cope with an L2 oral task are considered indirect strategies in this study as they are not directly involved in speech processing. This way, “social/affective” strategies are indirect strategies, taking a general role in maintaining an optimal condition for an L2 oral task.

At this point, it would be appropriate to propose the parameter ‘reflection’ to distinguish two types of indirect strategies i.e. meta-cognitive from social/affective strategies. The former seems to be reflection-based as they involve thinking, planning, monitoring, and evaluating. It is clear that some degree of reflection and self-awareness is required of the learner when deploying meta-cognitive strategies. Skehan’s (1998) featuring of meta-cognitive strategies as those that “are concerned with two things, reflection and flexibility” might help my argument. “Reflection represents the learner developing some degree of self-awareness in learning, and shows how a given learner may appreciate his or her strengths and weaknesses.” (1998, p.265). In this way, Skehan lends support to the view that meta-cognitive strategies demand some form of reflection on the part of the learner. Social/affective strategies, on the contrary, are not deployed to help the learner to be reflective about his learning but rather to enable the learner to cooperate with others or to exercise affective control to assist the learning task (O’Malley & Chamot, 1990). They

are, therefore, non-reflection-based. To sum up, the parameter 'reflection' may be used to sub-categorise indirect strategies.

#### 2.4.4 Summary

To sum up the arguments thus far, 'directness' seems to be the key parameter used in categorizing major strategies into direct and indirect strategies. Whereas direct strategies are typically cognitive strategies that deal with the learning material or target language, the indirect strategies are not involved in the manipulation of the material or language per se. In addition, the parameter 'reflection' appears to be used to sub-categorise indirect strategies and distinguish reflection-based meta-cognitive strategies from non-reflection-based social/affective strategies. Last, it should be remembered that differences in theoretical underpinnings seem to have produced different classification schemes. In fact, no single framework has yet been definitive.

In relating these key parameters emerging from LS to oral communication for the purposes of the present research, direct strategies are CS as they are directly involved in language processing during on-line speech production as discussed earlier. Whereas direct strategies typically deal with communication problems, indirect strategies are not involved in speech processing per se and may not be confined to problem-solving strategies. Rather, they subsume reflection-based and non-reflection-based strategies. Reflection-based strategies play a supportive role in helping the learners plan, monitor and evaluate oral tasks with a view to enhancing task effectiveness. Non-reflection-based strategies may be deployed by the L2 speaker to maintain an optimal affective state conducive to the conduct of the oral tasks.

## 2.5 Applying the framework to select strategies for a study of speaking in an L2

### 2.5.1 Introduction

This section explains how the provisional direct-indirect distinction may be applied to the categorization and selection of strategies for training in the present research. The nature and roles of strategies selected are also clarified. Then, target strategies taught to students in the present interventionist study are identified. Last, definitions of direct strategies and of indirect strategies used for the purposes of the present study are also produced. Section 2.5.2 focuses on direct strategies and section 2.5.3 indirect strategies.

### 2.5.2 Direct strategies for learning to speak

In section 2.4, direct strategies for language learning were defined as basically cognitive strategies by means of which the target language is processed or the learning material is manipulated. When applying the parameter 'directness' to the speaking skill for the purposes of the present study, direct strategies are cognitive strategies that may be involved in speech processing. That is, they are the speech processing strategies that deal directly with production and comprehension of speech. Let us now turn to a speech processing model for L1 to understand cognitive processes that are involved in speech processing. Then, we see how the model can be applied to L2 processing with a view to understanding the kinds of problems that an L2 speaker is likely to encounter and to situating the kinds of direct strategies that might help L2 learners to overcome those problems. It is also argued that direct strategies for speaking have potential learning value apart from enabling the students to overcome immediate communication problems.

#### *A speech processing model*

Levelt's (1989) speaking model can be used to espouse a number of highly autonomous processes involved in on-line speech production for L1 speakers. Basically, three cognitive, information-processing components are involved, beginning with a *conceptualizer*. In the conceptualizer, the selection and ordering of relevant information takes place and the intention of the speaker is adapted in such a way that they can be

converted into language (Levelt, 1989, p.9). The following utterance is an example adapted from de Bot (1992) to illustrate the model. “The train from London arrives at platform one”. We know from our world knowledge that the train regularly arrives here and there is more than one platform. The intention of the speaker to convey the message is stored in the conceptualizer. At the initial stage of conceptualization, planning already starts and a range of choices about intention and messages has to be made by the speaker (Bygate, 1998b). There are two levels of planning: macro-planning and micro-planning. Macro-planning deals with conceptual and propositional message content and results in speech-act intentions. Micro-planning shapes the form of the message by assigning a particular structure to the macro plans, resulting in the preverbal message (Dörnyei & Kormos, 1998; Littlewood, 1992).

The preverbal message - as the output of the conceptualizer - then becomes the input to the second information-processing component i.e. the *formulator*. This component is responsible for encoding the preverbal message by formulating its language representation. The encoding process begins by selecting the right words or lexical units and then carrying out grammatical and phonological encoding (Levelt, 1989, p.11). What happens in the formulator is lemma activation and subsequent mapping. The speaker retrieves the lemma whose meaning best matches the semantic information carried by the preverbal message. Then the selection of the lemma activates its syntax, which in turn, triggers syntactic building procedures. Hence, “Levelt considers semantic activation primary to form activation and sees lexicon as a mediator between conceptualization and grammatical or phonological encoding” (Dörnyei & Kormos, 1998, p.353). In Levelt’s model, the meaning of an utterance is primary, and the lexical items needed in the utterance are retrieved. The characteristics of these items then determine the application of grammatical and phonological rules. This is where the mapping of the lexical units with corresponding grammatical and phonological properties takes place. Put simply, semantic articulation comes before form articulation.

Using de Bot’s sentence as an example, the word “arrives” would need to be retrieved first and then this retrieval entails that there is subject, something or someone that arrives and there is no object and that adverbials of time and place may be optional (de Bot, 1992, p.5). Last, phonological mapping takes place by making use of the phonological

information of the lexical item contained in the lexicon. In short, Levelt places lexis at the centre of language processing (Bygate, 1998, p.24) with subsequent mapping of corresponding grammatical and phonological features. The output of the formulator is a phonetic plan to be passed on to the third component i.e. the *articulator*.

The *articulator* converts the phonetic plan into an actual speech plan (Levelt, 1989, p.12). The articulator will make sure that the sentence will actually be pronounced by activating and driving the entire speech mechanism. This will lead to the production of the sentence: “the train from London arrives at platform one”. So the product of articulation is overt speech.

Levelt’s model also accounts for monitoring in discourse. The output from the articulator is processed and temporarily stored in a speech-comprehension system (or parser) which is connected to an auditory system. With this connection, the parser can detect any mistakes that may have crept in (Levelt, 1989, p.13) both in the internal speech before articulation and in the external speech after articulation. The outcome of this process is fed back to the *monitor* situated in the conceptualizer. This provides speakers with a chance to evaluate their messages. Monitoring then renders it possible for the speaker to avoid some speech errors before articulation and to correct errors that occur after articulation.

The L1 speech processing model we have seen is information-processing based and similar to that espoused by Anderson (1983; 1985) to investigate cognitive learning and communicative ability (Littlewood & Liu, 1996). As information processing is cognitive, strategies that might play a role in facilitating the processing of speech are defined as direct strategies for the purposes of the present study.

We now turn to the different stages of speech production at which L2 learners are likely to encounter problems and suggest types of strategies that might help resolve those problems. It is argued that these strategies may have learning potential apart from helping L2 speakers to solve immediate communication problems.

Using Levelt’s (1989) model for L1 communication, Dörnyei and Kormos (1998) outline a framework of problem-solving mechanisms in L2 use, “focusing on how the

management of the four primary problem areas in focus (resource deficits, processing time pressure, deficiencies in own-output, deficiencies in other-performance) is related to the various phases of speech processing” (1998, p.356). The framework identifies four potential problems pertaining to the different phases of speech processing. Based on the model of Dörnyei and Kormos (1998), the present study proposes direct strategies that might help L2 learners during speech processing and justifies their possible benefits to communication and to learning. An overview of the proposal is drawn up in Table 2.1. (Definitions of the eight direct strategies targeted for training are in Appendix 3.) The content of the Table is explained in the section that follows.

*Table 2.1 Encoding on-line speech: processes, problems, direct strategies and their possible roles and functions (adapted from Dörnyei and Kormos 1998)*

Phases of speech production/comprehension	Potential problems	Direct strategies proposed for the present study	Possible benefits to communication and to language learning
<i>Conceptualizer &amp; formulator</i>  Planning and encoding the preverbal message	1. Resource deficits	‘Resourcing’  ‘Paraphrasing’	<ul style="list-style-type: none"> <li>▪ Providing language models for scaffolding and for possible internalisation</li> <li>▪ Promoting strategic competence</li> </ul>
<i>Conceptualizer &amp; formulator</i>  Planning and encoding the preverbal message	2. Processing time pressure	‘Using self-repetition’  ‘Using fillers’	<ul style="list-style-type: none"> <li>▪ Promoting strategic competence</li> </ul>
<i>Formulator &amp; articulator</i>  Monitoring the phonetic plan and the articulated speech	3. Perceived deficiencies in one’s own speech	‘Self-correction’	<ul style="list-style-type: none"> <li>▪ Directing attention to accuracy of form instead of meaning only</li> </ul>
<i>Articulator</i>  Post articulatory monitoring	4. Perceived deficiencies in interlocutor’s speech	‘Asking for repetition’ ‘Seeking clarification’ ‘Seeking confirmation’	<ul style="list-style-type: none"> <li>▪ Promoting interaction and negotiation of meaning necessary for L2 acquisition</li> </ul>

*Justifications for selecting target, direct strategies*

As can be seen in Table 2.1, the first problem i.e. “resource deficits” may occur both in the conceptualizer in which the preverbal message is planned and in the formulator in which the message is to be encoded lexically, grammatically and phonologically. Dörnyei



and Kormos (1998) postulate that, during the planning and encoding of the preverbal message, the fundamental problem that an L2 speaker encounters is insufficient knowledge of L2 vocabulary items. At the same time, the learner may also have insufficient grammatical and phonological knowledge to map the correct grammatical forms and sounds to the L2 lexical items.

Hence, to address the problem of “resource deficits” and of vocabulary retrieval in particular, it can be argued that direct strategies that might help learners at this stage may be those that serve as linguistic scaffolds in the form of ready-to-use content words, structures, and phrases. These strategies may help an L2 speaker not only to solve the immediate problem of ‘what to say’ or ‘how to say it’ but to promote the internalization of the suggested words or structures as a result of adequate exposure and practice. It is expected that students will be able to build on what is given in the notes to create their own utterances in the long run. The strategic use of the notes (i.e. “Resourcing”) was therefore taught in the strategy training to help the L2 speaker solve linguistic problems and to be internalized later. ‘Paraphrasing’ was also recommended for the obvious reason that the strategy may force students to use alternative linguistic structures to cope with deficiencies in their own linguistic resources. Learning to use ‘Paraphrasing’ as a strategy to keep the communication going is arguably a way to promote one’s strategic competence, which is, in turn, an integral part of communicative competence (For a full discussion of strategic competence and language learning, see section 2.2.3).

The second problem is related to the fact that L2 speech processing is far less automatic than L1 speech processing. It is likely that L2 speakers need to attend consciously to grammatical and phonological encoding. This results in “delayed production, and as a consequence, retrieval may take ‘more time than the production system will allow’ (de Bot, 1992, p.14)”. But L2 speakers are aware that they need to appear natural and cannot take an inordinate amount of time to process speech. Hence, L2 speakers need some stalling devices to gain time to maintain surface fluency (Bygate, 1987; Dörnyei & Kormos, 1998). So, the second processing problem is time pressure, which also arises during the planning and encoding of the preverbal message.

Therefore, I wish to argue that, to help students cope with processing time pressure, strategies that aim to enable L2 speakers to remain in the conversation and to gain time to think may be helpful. The use of certain conversational formulae or prefabricated conversational patterns such as fillers and hesitation devices is found to be effective in keeping the communication going (Rubin, 1987). The knowledge and confident use of fillers are a crucial part of learners' strategic competence (Dörnyei & Thurrell, 1991). For one thing, L2 learners may need these stalling devices to help them delay or gain time when they are at times of difficulty during conversations. Otherwise, language learners will likely to give up altogether and the communication will have to come to a halt. In the present research, "Using self repetition" and "Using fillers" were, therefore, recommended to the students. Learning to use these stalling devices may facilitate strategic competence and communicative competence overall (see section 2.2.3).

The third problem is "perceived deficiencies in one's own language output" (Dörnyei & Kormos, 1998, p.371). After the L2 speaker has completed lexical, grammatical and phonological processing, "the monitor inspects the language output both before articulation (pre-articulatory monitoring) and after articulation (post-articulatory monitoring)" (ibid., p.371). Hence, the L2 speaker typically faces the problem of monitoring of his own phonetic plan before articulation and overt speech after articulation.

To cope with the problem, 'Self correction' was recommended to students as the strategy has an obvious role of enabling the L2 speaker to regulate linguistic accuracy. That is, the speaker may be taught to monitor his/her speech by adjusting its accuracy in terms of language use. This way, it can be argued that it may facilitate language learning and has learning implications - apart from helping L2 speakers solve the immediate problem of "perceived deficiencies in one's own speech. In addition, 'Self correction' as a strategy may serve a similar function to 'repair' when the speaker or the hearer makes efforts to correct trouble spots in conversations (Richards & Schmidt, 1983).

The fourth problem that an L2 speaker may encounter in speech processing is "perceived deficiencies in the interlocutor's performance" (Dörnyei & Kormos, 1998, p.374). On the basis of the speech comprehension system (i.e. the parser) as a major component of the

monitoring process in Levelt's (1987) model, it was proposed that the other-performance-related problem-solving mechanism (i.e. meaning-negotiation mechanism) is triggered by problems in the interlocutor's rather than in one's own speech. In other words, the problem may arise when the L2 speaker does not hear or have sufficient L2 knowledge to understand the speech of his interlocutor. Hence, problems may occur after articulation.

It seems that, in order to resolve the problem of perceived deficiencies in interlocutor's speech, L2 students may benefit if they are taught strategies for meaning negotiation. Hence, the strategies incorporated into the intervention study included "Asking for repetition", "Seeking clarification" and "Seeking confirmation". These strategies for meaning negotiation may facilitate language learning. There is a good deal of evidence to suggest that using the target language for interaction plays an important part in learning the language. For example, there has been a lot of research on how second language acquisition (SLA) may take place through conversational interaction (Allwright & Bailey, 1991; Hatch, 1992; Long, 1983; Pica, 1987; 1994). Notably, the interactionist perspective to SLA lays much emphasis on interaction and meaning negotiation (Spada & Lightbown, 1999; 2002). The proposed strategies ("Asking for repetition", "Seeking clarification" and "Seeking confirmation"), when employed by an L2 speaker who perceives deficiencies in his/her interlocutor's speech, may force the speaker to refine what s/he says very carefully to make sure it is understood. It may be that the need to negotiate meaning forces the speaker to 'notice' (Schmidt, 1990) which grammatical or other aspect of what s/he said was not understood and may, therefore be wrong. So it may help in the acquisition of the form of the language. From the listener's point of view, negotiation of meaning provides input with opportunities to make it "comprehensible" (Krashen, 1985) as possible through asking for clarification, for repetition or for rephrasing. It follows that 'what is important for acquisition is the opportunity for learners to engage in meaning negotiation (Ellis, 2000; Long, 1996). This way, strategies that aim to facilitate negotiation of meaning may promote SLA on the part of both the speaker and the listener and have learning potential.

All in all, the proposed strategies might help an L2 speaker solve immediate problems in communication and might promote language learning in various ways such as by

providing linguistic scaffolding, by keeping learners going in pedagogic communication tasks, and by engaging learners in meaning negotiation.

### *Summary*

In summary, the eight direct strategies for speaking introduced in the training programme are meant to influence the encoding process at different stages of on-line speech production. They work directly with the language (i.e. on-line speech); they are the strategies by means of which speech is directly processed. Direct strategies for speaking targeted in the present study are defined as:

“those plans, behaviours or thoughts intended by the students to facilitate speech processing by helping them resolve some of the problems that they are likely to encounter at the different phases of on-line speech production. The facilitation is typically done during speech production and/or comprehension.”

### 2.5.3 Indirect strategies for learning to speak

In section 2.4.3, we saw that the parameter ‘directness’ may have been used to dichotomise direct and indirect strategies in the language learning field. Furthermore, it seems appropriate to use the parameter ‘reflection’ to sub-categorise indirect strategies into reflection-based “meta-cognitive strategies” and non-reflection-based “social/affective” strategies.

In this section, the notion of indirect strategies is applied to L2 oral communication tasks in the classroom. It is argued that meta-cognitive strategies are conducive to language learning in the context of pedagogic tasks. Then, examples of meta-cognitive strategies that might fulfill the strategic roles of facilitating students’ communication and learning are given and justified for training in the present study. Finally, the role and examples of socio-affective strategies that might play a supportive role in facilitating learners’ task performance are given. An overview of the proposed indirect strategies and their possible learning effects is presented in Table 2.2. (The definitions of the seven target indirect

strategies are in Appendix 3.) The content of the Table is explained in the section that follows.

Table 2.2 *Learning to speak in an L2 oral task: indirect strategies and their possible roles and functions*

Strategy sub-categories	Indirect strategies proposed for the present study *	Possible benefits to task performance and to language learning
Meta-cognitive	1. 'Problem identification' 2. 'Planning ideas in advance' 3. 'Functional planning' 4. 'Evaluation'	<ul style="list-style-type: none"> <li>▪ Developing an executive ability to manage a task (i.e. thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well he/she has learned)</li> <li>▪ Developing strategic competence</li> <li>▪ Enhancing task knowledge (i.e. understanding task purpose and demands)</li> <li>▪ Planning for learning (i.e. rehearsing linguistic structures prior to task proper)</li> </ul>
Social	5. 'Asking for help' 6. 'Giving help'	<ul style="list-style-type: none"> <li>▪ Maintaining an optimal social state conducive to successful task completion and possibly to language learning</li> </ul>
Affective	7. 'Positive self talk'	<ul style="list-style-type: none"> <li>▪ Maintaining an optimal affective/psychological environment conducive to successful task completion and possibly to language learning</li> </ul>

### *Meta-cognitive strategies for learning*

Meta-cognitive strategies in L2 oral communication tasks may contribute to the learning process in an indirect way. That is, they are not directly involved in the encoding processes of speech. According to O'Malley and Chamot (1990, p.137), meta-cognitive strategies enable the learner to "think about the learning process, plan for learning, monitor the learning task, and evaluate how well he/she has learned". This way, meta-cognitive strategies may enable the learner to develop an executive ability to think about and plan for an oral task. They may therefore play an indirect, supportive role in helping the L2 learners to manage a speaking task without playing any direct role in speech processing.

It can be argued that meta-cognitive strategies that play an indirect role in language learning are also important. For one thing, meta-cognitive strategies help the learner enhance his/her 'task knowledge' when engaging in a pedagogic task such as an oral

communication task. Flavell (1979) and Wenden (1995; 1999) consider “task knowledge” as a category of meta-cognitive knowledge. It is the kind of knowledge a language learner needs in order to develop executive control over the task. “Task knowledge comprises three components: (1) the purpose of a task, (2) the task’s demands, and (3) implicit in these considerations, a determination of the kind of task it is” (Wenden 1995, p.185). It follows that the learner must first and foremost determine the task’s purpose, next, classify it and then, assess how to go about doing it.

Let us apply the notion of task knowledge to a speaking task. The students need to understand the purpose of the oral task, and more importantly, the learning outcome(s) the participants in the communication are supposed to achieve. Next, the interlocutors/participants have to identify the requirements needed - in terms of both content and language - in fulfilling the task purpose(s). Finally, they may have to plan for the best possible ways and means to complete the task. Hence, task knowledge, as a component of meta-cognitive knowledge, is crucial to the successful completion of a task. Without such kind of meta-cognitive task knowledge, learners engaging in tasks are without direction (O’Malley & Chamot, 1990).

If meta-cognitive knowledge is necessary, it follows that strategies for helping learners to acquire the knowledge may also play an important role in the learning process. This view has some support from Flavell (1979) and Wenden (1999). To develop executive control over a learning task, the learner needs not only task knowledge, but also understandings of the nature and role of strategies that might be conducive to effective achievement of learning goals leading to successful task completion. This kind of knowledge is strategic knowledge.

Little’s (1996, p.30) notion of strategic competence best illustrates how “strategic knowledge” can be related to task knowledge to facilitate successful task completion. Unlike conventional theories of communicative competence which tend to limit the role of strategic competence to one which is called into play only when there is a communication breakdown, Little (1996, p.33) “extends the scope of strategic competence to embrace the assessment, planning and execution of communicative tasks”. This area of strategic competence allows the learner “to develop techniques of conscious

planning for communication i.e. to assume conscious, intentional control of its performance.” (ibid., p.30). Little’s notion of strategic competence is in line with Flavell’s (1979) and Wenden’s (1995; 1999) postulation of task knowledge. A learner has to assess a task to know its purpose and demands, to plan for ways and means to execute the task and then to execute it effectively. Most crucially, a learner has to develop techniques of conscious planning in order that task performance might be facilitated.

Given this view, it is the planning phase where the role of reflection-based, meta-cognitive strategies is likely to come into play. The description of meta-cognitive strategies as reflection-based is particularly apt because they involve the learner in thinking, planning, monitoring, and evaluating the learning process. All these processes involve intentional planning and they require the intentional deployment of meta-cognitive strategies on the part of the learner. Little’s (1996, p.27) comments on the role of strategies in intentional planning sum up my argument here.

“It is important to recognize the tools of intentional planning comprise what we have previously labelled “learning strategies”. In other words, when communicative tasks permit or require intentional planning, intentionally deployed learning strategies become part of strategic competence, which in this domain operates to some extent above the threshold of conscious awareness.” (ibid., p.27)

Strategies deployed in “intentional planning” are meta-cognitive strategies. They may support the on-line production of speech by helping the L2 speaker prepare in advance some of the task requirements (e.g. linguistic resources such as pronunciation, language structures; content plans such as preliminary ideas). The preparation will ease on-line encoding of speech as some of the language or content needed for an oral task may have already been prepared and practiced. Skehan (1998, p.73) also highlights the role of planning in easing on-line processing:

“Manipulations of processing conditions can be effective. The simplest effect is to use planning time to free up on-line processing resources while the task is subsequently completed. The more that is planned, ... the less computational work needs to be done during the task. Other things being equal, the result will be that more attention is available as a general purpose tool to achieve a variety of goals; greater fluency, complexity, or accuracy” (ibid., p.73).

If planning time can be used to engineer task conditions favourable to on-line speech processing to result in greater fluency, complexity, or accuracy in task performance, then it is reasonable to expect that language learning may be facilitated by meta-cognitive, planning strategies.

Regarding the effects of planning on task performance, Crookes (1989) and Foster and Skehan (1996) report generally positive findings, supporting the view that pre-task planning may bring about better learning outcomes in terms of consistently greater fluency and complexity and, less dependably, greater accuracy. Later, Wigglesworth (1997) researches the effects of planning time in the context of language testing, indicating that as little as one-minute planning seemed to result in task improvement though the effect was mediated by task difficulty. Mehnert (1998) investigates the effects of manipulating planning time. The results suggested that second language users may be able to use planning time in productive and sophisticated ways to benefit the learning outcome. Skehan and Foster (1997) further extend their own research into the effects of planning with three task types of personal, narrative and decision-making. It was concluded that pre-task planning is beneficial in its effects on task performance but the effects are complex and subtle. Recently, Foster and Skehan (1999) manipulate the source of planning (teacher-led, group) and the focus of planning (language, content) to examine their effects on task performance. The findings indicated that, while teacher-led planning seemed to result in greater accuracy as compared with the control group, group-based planning performed at a level comparable to that of the control. Furthermore, no clear patterns emerged regarding the effects of the focus of planning on task performance and this result implies further research is needed on the problem.

Taking stock of the afore-mentioned set of studies, I wish to argue that planning strategies - as examples of meta-cognitive strategies - might enable L2 learners to benefit their performance in an upcoming task. In a nutshell, indirect strategies for speaking can best be placed within the planning phase and have learning potential.

One last point relating to the planning phase should be mentioned i.e. the use of learners' L1. Swain and Lapkin (2000) include evidence in studies in the literature (e.g. Brooks & Donato, 1994; Anton & DiCamilla, 1998) and in their own works to support the argument



that judicious use of L1 may benefit learners when engaging in L2 tasks. From a socio-cultural perspective, students may provide each other with scaffolded help (Vygotsky, 1978). Moreover, the L1 may be used to establish and maintain inter-subjectivity (Rommetveit, 1985; Wertsch, 1985). This involves developing a shared perspective on the task, setting goals, and negotiating a positive co-operation to the activity. This way, the use of L1 may facilitate strategic learning in that students are encouraged to help each other to accomplish a common learning goal. As Swain and Lapkin (2000, p.268) conclude, "...L1 serves as a tool that helps students ... to understand and make sense of the requirements and content of the task; to focus attention on language form, vocabulary use, and overall organization." This comment was particularly relevant to the present study where students were asked to deploy strategies such as 'Problem identification', 'Planning ideas in advance', and 'Functional planning', the justifications for including these strategies in the interventionist study are explained in the following section.

#### *Justifications for selecting target, indirect strategies*

According to Little (1997), there are two aspects of task planning: prospective and retrospective. The prospective aspect "determines the linguistic and other requirements of the activity in question" and the retrospective aspect "is concerned with establishing how successfully the activity has been performed" (ibid., p.31). On the basis of Little's explication of the two aspects of control (i.e. prospective and retrospective), strategies that might enable the L2 speaker to do intentional planning before and after an oral task are likely to facilitate students in accomplishing the task.

It is argued that meta-cognitive strategies that may facilitate planning in the prospective phase include: 'Problem identification', 'Planning ideas in advance' and 'Functional planning'. 'Problem identification' aims to facilitate the global planning of an L2 oral communication task by enabling the learner to assess the purpose and requirements in completing the task. That is, the strategy deals with the question: "what am I supposed to achieve in the group discussion?" Next, the learners try out strategies such as 'Planning ideas in advance' and 'Functional planning' to assess and prepare for the content and language requirements for the task respectively. Students learn to do better by doing some advance planning. It is expected that the learners may deploy these three strategies

during the preparation phase prior to an L2 oral task, but it is also possible that a learner may do solitary planning while waiting for his/her turn to speak when the task is in progress.

“Evaluation” is proposed as a meta-cognitive strategy that may be deployed in the retrospective phase of planning (i.e. when an L2 task is completed or after one’s turn to speak during the task). ‘Evaluation’ may facilitate language learning because it promotes reflection and awareness-raising and learners may become better in future tasks.

In addition to reflection-based meta-cognitive strategies, non-reflection-based, indirect strategies i.e. socio-affective strategies may also be beneficial to student learning. Specifically, it is argued that L2 speakers should be given opportunities to learn “to seek help from others or find some means to maintain an optimal affective/motivational state conducive to learning” (O’Malley & Chamot, 1990, p.137). Strategies such as “Asking for help” and “Giving help” are defined as social strategies and may lead to language learning if students are willing to cooperate with peers in a group, to help each other with linguistic aspects of the task, and to offer scaffolded help (Cohen, 1998; Vygotsky, 1978). In addition, ‘Positive self talk’ is defined as an affective strategy that may help students maintain a favourable affective state either before or during an L2 oral task. The three socio-affective strategies taken together may be effective in enabling the L2 speaker to develop a social or psychological environment conducive to the successful completion of the discussion task, thereby enhancing task performance.

#### 2.5.4 Summary

As explained, the seven indirect strategies for speaking targeted in the present study are not involved in speech processing. It has been argued that indirect strategies may facilitate learning by helping the L2 speakers to develop an executive ability to manage a task (O’Malley & Chamot, 1990), to enhance their task knowledge (Flavell, 1979; Wenden, 1995; 1999), to develop their strategic competence (Little 1997), and to plan for better performance (e.g. Skehan & Foster, 1997). Indirect strategies for speaking targeted in the present study are defined as:

“those plans, behaviours or thoughts intended by the students to facilitate the conduct of an upcoming English task. The facilitation is normally done by intentional planning before or after an L2 oral task but it is possible that it may be done before or after one’s turn to speak when the task is in progress. The facilitation may also be done by the speaker intentionally maintaining an optimal social or affective state conducive to the conduct of the task.”

## 2.6 Conclusion

In Chapter 2, we have seen that regarding the main research problem of strategy training, there are unresolved issues. The identification of strategy types for training is one issue. It is not clear as to what categories of strategies may be important and should therefore be taught. Moreover, there are few criteria spelt out on which the selection of specific strategies under each broad strategy type may be based. Next, the reactions to strategy interventionist studies are mixed and the number of studies pertaining to the speaking skill is particularly small. As a result, the effects of training on learners’ strategy use and task performance are far from definitive. In particular, not enough is known about the teachability issue (i.e. whether strategies are teachable). In addition, there is evidence to indicate that proficiency level makes a difference to strategy use but the relationship is complex and definitely worth further exploration. Last but not least, the methods of investigating strategies are diverse and it seems desirable to employ a multi-method approach. Moreover, a well-grounded, systematic combination of methods to assess the impact of strategy training on learners’ strategy use is much in need.

In an attempt to address the problem relating to identification of broad strategy types discussed in section 2.3.2, this chapter has explained that major schemes for classifying strategies in the language learning field have not yet been fully and successfully validated by empirical evidence. The direct-indirect distinction derived for use in the proposed strategy selection framework (Figure 2.1) in the present study is therefore provisional. The framework will be modified (if necessary) on the basis of the findings from the study. Furthermore, the key parameter ‘directness’ has been applied to distinguish direct strategies and indirect strategies for the purposes of the present research. In addition, it has been argued that both direct and indirect strategies might play a role in helping language development. Subsequently, definitions for direct strategies and for indirect

strategies targeted for the present study have been produced. The target strategies under each of the two categories have also been defined and explained.

## **CHAPTER 3: THE RESEARCH QUESTIONS, RESEARCH DESIGN AND RESEARCH METHODS: THEORETICAL BASES**

### **3.1 Introduction and Overview of the Chapter**

The focus of Chapter 3 is on the theoretical bases for the research questions, the research design and methods in the context of the present study. This chapter serves three purposes. First, it generates research questions arising from the unresolved issues identified in Chapter 2. Then, to answer the research questions, this chapter proposes a research design and justifies the appropriacy of the design to investigate the research problem. This chapter also discusses the rationale for the selection of research methods considered appropriate to address the research questions. To maintain the line of argument of this chapter, the procedures of implementing the research design and of employing the different research methods to collect and analyze data will not be described in this chapter but in the following Chapter 4, which focuses on the methodological procedures.

This chapter comprises three main sections. Section 3.2 describes the theoretical bases for the research questions. Section 3.3 explains the appropriacy of a quasi-experimental design proposed to address the research questions. Section 3.4 argues for a systematic approach to answer the research questions using a multi-method approach. The rationale for the selection of each research method to investigate the research problem is also given. Section 3.5 concludes the chapter.

### **3.2 The research questions and their theoretical bases**

#### **3.2.1 Introduction**

As we saw in sections 2.3.2 and 2.3.3, the identification of strategy types for training and the effectiveness of teaching strategies have not been unequivocally established. Strategy training research with a focus on the speaking skill is also in much need. In addition, section 2.3.4 shows that proficiency level seems to be a major factor affecting strategy use but results are complex and far from definitive.

Hence, the primary objective of the present study is to investigate the impact of the training in the use of a selected set of strategies for learners' use on L2 oral communication tasks. Specifically, the effects on students' strategy use and task performance across two proficiency levels in the same course level are investigated. It is anticipated that the study will offer some understanding of the relationships between strategy training, learners' strategy use, proficiency level, and task performance in the ESL oral classroom. In short, this is an attempt to study both the learning process (strategy use) and the learning product (task performance).

This study addresses eight research questions which are organized and discussed under three main themes: (1) Impact of strategy training on strategy use; (2) Relationship between strategy training, proficiency level and strategy use; (3) Relationship between strategy training, proficiency level, and task performance. Sections 3.2.2, 3.2.3 and 3.2.4 are related to Research Themes 1, 2 and 3 respectively.

### 3.2.2 Research theme 1: The impact of strategy training on strategy use

A strategy selection framework has been developed and the key parameter 'directness' has been used to categorise strategy types. The framework has been applied to the speaking skill to identify direct strategies and indirect strategies as the major types of strategies selected for the study of L2 speaking for the present investigation. Altogether eight direct strategies - involved in speech processing - have been targeted for training. Similarly, a total of seven indirect strategies - meant to facilitate the conduct of the learning task and the internal state of learners - have also been targeted for study (see Tables 2.1 and 2.2 in section 2.5).

The first focus of the study is to investigate whether training in the use of the selected direct strategies and indirect strategies will have an impact on learners' strategy use. Furthermore, the study compares the impact of training in the use of direct strategies and indirect strategies on students' uptake of strategies on L2 oral communication tasks. Findings will be used to evaluate the adequacy of the proposed framework for strategy selection. The research questions are: (1) Will students who have received training in the use of *direct* strategies use more *direct* strategies as compared with students who have

not? (2) Will students who have received training in the use of *indirect* strategies use more *indirect* strategies as compared with students who have not? (3) Will training in the use of *direct* and of *indirect* strategies have different impacts on students' strategy use; and if so, in what way(s)? These three research questions aim to address the unresolved issues concerning: identification of broad types of strategies for training; effects of strategy training on ESL learners' strategy use in L2 oral tasks; teachability of the two groups of strategy types in terms of their student uptakes.

### 3.2.3 Research theme 2: Relationship between strategy training, proficiency level and strategy use

The second focus of the present study is to investigate whether proficiency level makes a difference to the effects of training on strategy use. In section 2.3.4, we saw that the relationship between proficiency level and strategy use is highly complex and in particular the issue of causality is controversial. This study aims to explore the relationship further. In particular, it addresses the specific question as to whether students of high-proficiency level and low-proficiency level at the same course level will use strategies differently. It is expected that the strategy intervention and proficiency level may affect students' uptake of strategies. The research questions are: (4) Will training in the use of *direct* strategies have different effects on high-proficiency and low-proficiency students in terms of uptake of strategies? (5) Will training in the use of *indirect* strategies have different effects on high-proficiency and low-proficiency students in terms of uptake of strategies?

### 3.2.4 Research theme 3: Relationship between strategy training, proficiency level, and task performance

We saw in section 2.3.3 that the results of strategy training on students' task performance are far from definitive. More empirical evidence is necessary to relate strategy training to the learning outcome. In particular, more research is needed to investigate learners' strategy use and performance on oral tasks with a focus on participatory, interactive speaking skills. There is also a necessity for studying the impact of strategies in groups rather than in isolation on task performance. The purpose is to compare the relative

contributions of groups of strategies on task performance to see if one category of strategies will contribute more than another category in terms of improved task performance (if any) on the part of the learners. The present study is therefore intended to investigate and compare the effects of training in the use of direct strategies and indirect strategies on learners' performance on group discussion tasks. Learners' proficiency level will also be considered to see whether it affects the results. The research questions are: (6) Will students who have received training in the use of *direct* strategies perform better than students who have not in group discussions? If so, will high-proficiency and low-proficiency students perform differently? (7) Will students who have received training in the use of *indirect* strategies perform better than students who have not in group discussions? If so, will high-proficiency and low-proficiency students perform differently? (8) Will the respective training of *direct* strategies and *indirect* strategies relate differently to students' performances in group discussions?

### 3.2.5 Summary

To sum, up, the eight research questions addressed in the present study are organized into three research themes as follows:

Research theme 1: The impact of strategy training on strategy use

- (1) Will students who have received training in the use of *direct* strategies use more *direct* strategies as compared with students who have not in group discussions?
- (2) Will students who have received training in the use of *indirect* strategies use more *indirect* strategies as compared with students who have not in group discussions?
- (3) Will training in the use of *direct* and of *indirect* strategies have different impacts on students' strategy use in group discussions; and if so, in what way(s)?

Research theme 2: Relationship between strategy training, proficiency level and strategy use

- (4) Will training in the use of *direct* strategies relate differently to high-proficiency and low-proficiency students as compared with students who have not received any training in group discussions?



(5) Will training in the use of *indirect* strategies relate differently to high-proficiency and low-proficiency students as compared with students who have not received any training in group discussions?

Research theme 3: Relationship between strategy training, proficiency level, and task performance

(6) Will students who have received training in the use of *direct* strategies perform better than students who have not in group discussions? If so, will high-proficiency and low-proficiency students perform differently?

(7) Will students who have received training in the use of *indirect* strategies perform better than students who have not in group discussions? If so, will high-proficiency and low-proficiency students perform differently?

(8) Will the respective training of *direct* strategies and *indirect* strategies relate differently to students' performances in group discussions?

### 3.3 The quasi-experimental design and its justifications

It has been explained that the key objective of the present study is to investigate the effects of strategy training on students' strategy use and performance on L2 oral communication tasks. To investigate this research problem, an experimental design seems appropriate. According to Robson (1993, p.40), "experiment best deals with the measuring of the effects of manipulating one variable on another variable". The key independent variable to be manipulated in the present study is strategy training. Specifically, it is the training in the use of direct or indirect strategies as identified in section 2.5. The key dependent variables are learners' strategy use and task performance.

It should be noted that a quasi-experimental design rather than an experimental design may be used for a research design involving an experimental approach but where random assignment to treatment and comparison groups has not been used (Robson, 1993; Rudestam & Newton, 2001). The quasi-experimental design has been used in strategy training studies (e.g. Brown & Perry, 1991; Chamot et al., 1996). In fact, Brown and Perry (1991) justify that fully randomised experimental designs might lack ecological validity due to inauthentic environments i.e. breaking up of normal class arrangements

for research purposes. Moreover, using intact classes for research purposes could provide “the practitioner with findings that are closer to their own classroom settings” (Brown & Perry, 1991, p.660). Hence, a quasi-experimental design is considered appropriate for the present research for the obvious reason that breaking up normal classes is undesirable and in fact not feasible. Hence, intact classes were used in the present study and students were randomly allocated to treatment conditions i.e. training in the use of direct or indirect strategies.

### *Validity issues*

In the case of the present research, validity is the extent to which the training effect could be attributable to the training itself rather than other factors. “A piece of research has internal validity if the researcher can argue satisfactorily that there are no feasible alternative explanations for the results of the research.” (Borg & Gall, 1989, p.642) To enhance the internal validity of the design, two measures should be taken.

First, a control group is required to minimize as far as possible major sources of threat to the internal validity of the design such as the ‘History’, ‘Maturation’, ‘Testing/Practice’ and ‘Instrumentation’ effects (Cohen & Manion, 1994). The safeguard measure of using a control group is based on the assumption that any of these effects that may contaminate the training effect on the experimental groups will similarly affect the control group, thereby strengthening the claim that any resultant effect is likely to be related to strategy training. Hence, it is decided that there should be three groups in the present investigation: the E1 group which receives training in the use of direct strategies; the E2 group which receives training in the use of indirect strategies; the C group which has no exposure to strategy training.

The other measure is to minimize initial group differences before the strategy training, thereby addressing another threat to the design i.e. “any change in a dependent variable is caused not by the independent variable but by differences in the characteristics of the two groups” (Robson, 1993, p.98). The reason is that true “random sampling can eliminate most of other circumstances potentially functioning as variables which can affect the outcome as well as the treatment itself”. In the case of a quasi-experimental design,

despite the measure of using a control group, there may remain a source of threat i.e. 'selection bias' (Campbell & Stanley, 1963; Fraas, 1983). Since the students are not randomly assigned to experimental and control conditions, students may not be equivalent prior to the study and hence any training effect can be due to group differences rather than the strategy tuition itself. To address this problem, the experimental and control classes will need to be controlled for in terms of their level of English because proficiency level has been found to be related to strategy use and task performance (see section 2.3.4). (The procedures of selecting and allocating students to the three groups and methods of controlling for initial differences in terms of language proficiency will be described in section 4.2.2).

Inevitably, it is not feasible to control for all initial differences. That is, the experimental and control classes may still differ on other characteristics such as attitude, motivation, learning style, group style, etc. which can be possible rival explanations for the training effect. Given that control for all variables is not feasible in a quasi-experimental design and that potential threats to the validity of the design cannot be categorically ruled out, it is more appropriate to propose correlational rather than causal relationships between the training and the impact for the purposes of the present study (Rudestam & Newton, 2001). Hence, in Chapters 5 and 6, the effects of strategy training on strategy use and task performance are interpreted and discussed in terms of associative or correlational relationships rather than causal relationships.

Nonetheless, it can be argued that the correlational relationships between the treatment (i.e. strategy training) and the impact (i.e. strategy use and task performance) are strengthened by the adoption of a multi-method approach to assessing the impact of the intervention, an issue to which we are now turning.

### **3.4 The research methods: a multi-method approach and its justifications**

#### **3.4.1 Introduction**

The primary aim of the present investigation is to study the effects of strategy training on learners' strategy use and task performance, which are the key dependent variables in the

quasi-experimental design. We now propose research methods for the investigation of learners' strategy use and task performance in L2 group discussion tasks.

The reader will recall that section 2.3.5 discussed problems in relation to the methods of investigation of strategy use. That is, while a triangulation of research methods is recommended to investigate strategy use in order that the strengths and weaknesses of one method can offset those of another, there are few guidelines for a systematic and logical way to the synthesis of different research methods. Few attempts have been made to provide a systematic rationale for the combinations of types of research methods selected. This section therefore presents a systematic and logical approach to the selection of research methods. Following this overall logic, each of the research methods selected will be justified in the context of the present study.

### 3.4.2 A coherent approach to assessing strategy use

In an attempt to answer the research questions from a multiple perspective, four research methods i.e. task ratings, questionnaires, observations, stimulated recall interviews (SRIs) are proposed in the present study to collect different types of data to assess learners' task performance and strategy use in English group discussions. An overview of the research questions and the respective data sets (marked < x >) that are aimed to answer the questions is presented in Table 3.1. The description of the content of the Table and a full justification for the selection of the four research methods will follow.

Table 3.1 *An overview of the research questions and research methods aimed to answer the questions*

Research themes and questions	Research methods/ datasets			
	Task ratings	Questionnaires	Observations/	Stimulated recall interviews (SRIs)
Research Theme 1: Strategy training and strategy use (Questions 1 - 3)		X	X	X
Research Theme 2: Strategy use and proficiency level (Questions 4 - 5)			X	X
Research Theme 3: Strategy training, task performance and proficiency level (Questions 6 - 8)	X			

The Table indicates that research questions 1-3 will be answered by the evidence collected by questionnaires, observations and stimulated recall interviews (SRIs), research questions 4-5 by observations and SRIs, and research questions 6-8 by task ratings.

We now move on to justify the logic of the four research methods selected. A diagrammatic overview of the multi-method approach is shown in figure 3.1 below. The overview relates each method of investigation to one source of information about task performance and strategy use. In particular, each circle represents one source of information and denotes the degree of closeness of the information to learners' underlying strategic processing (if any). The shaded, innermost circle represents inaccessible strategic processing not detectable by any means of investigation. The present study therefore makes no claims that it investigates this level of strategic processing in the human mind. The explication of the logic of the approach follows the Figure.

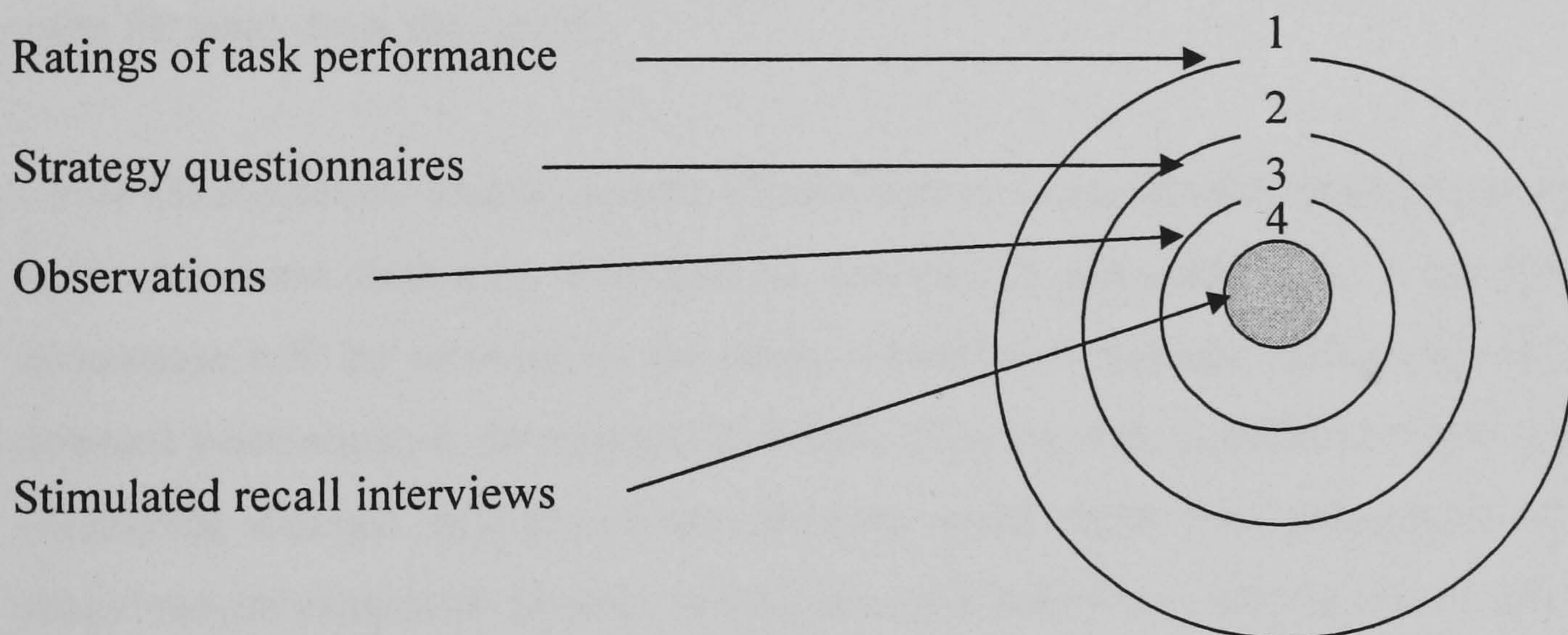


Fig 3.1 *Diagrammatic Representation of a Multi-method Approach to Assessing the Impact of Strategy Training*

First and foremost, it is a research tradition to assess the effects of treatment i.e. strategy training by measuring observable task performances (Cohen & Manion, 1994; Robson, 1993). Hence, in attempting to explore the impact through a quasi-experimental design, the first stage of data collection is to devise a method that focuses on task performance in order to assess the relationship between treatment and performance. After all, the ultimate

aim of strategy training is arguably to enhance the task performances of students. It therefore makes sense to compare students' ratings on task performances across treatment groups. Yet findings of task performance (albeit very useful) do not provide us with direct information as to whether the improvements (if any) are associated with students' strategy use. This source of information is therefore assigned to the outermost circle (1), which is furthest away from the centre. In view of this, three other methods are used to probe strategy use, namely questionnaires, observations and SRIs. The three methods provide information with varying degrees of closeness to underlying strategic processing (if any) as indicated in Figure 3.1.

Circle (2) in Figure 3.1 represents one source of information of strategy use; it is students' self-perceptions of strategy use reported in the questionnaires. The questionnaire data assess students' general impressions of their own strategy use over the intervention period. This way, while strategy questionnaires are valuable in probing underlying beliefs and perceptions, they do not necessarily provide evidence about students' actual strategic behaviours when engaging in tasks. So circle (2) is considered quite far away from the centre.

Circle (3) represents another source of information i.e. observable strategy use in specific tasks. As some strategies identified in section 2.5 are observable, a profile of their occurrence will be relevant to the study. Observable strategic behaviours (if any) are detected when students are engaged in a task. They are then considered closer to students' underlying strategic thinking (if any) because actual rather than perceptions of strategic behaviours are examined. In other words, strategic behaviours may be direct reflections of covert, strategic thinking. Observed strategy use is then assigned to an inner circle (3). However, we are aware that surface evidence from observations may not necessarily reflect underlying strategic thoughts. Hence, a third method is needed to gauge student thought processes to see whether they are strategic.

Circle (4) represents the source of information from the stimulated recall (SR) methodology. It is particularly used to tap students' thoughts while engaging in tasks for the present study. (For the appropriacy of the SR methodology, see section 3.4.6.) The purpose is to examine the process of learners' strategy use. This means of investigation is

to study traces of thought processes reflecting underlying strategic processing (if any) which cannot be detected by other forms of data collection. As the method may yield information that is relatively closer to strategic thinking as compared with other means, it is represented by the innermost circle (4).

So far, it has been argued that each research method provides one distinct source of information about strategy use. Moreover, the four methods also complement each other in providing a fuller picture of learners' response to strategy training. That is, the task ratings aim to gauge the impact of the strategy training on observable changes in task performance, on which most studies of experimental design focus. The questionnaires, on the other hand, are intended to assess unobservable changes in learners' underlying perceptions of strategy use. This way, the two methods are complementary in that they give information as to the impact of the training on both observable and unobservable changes (if any). Similarly, the information collected from observed strategy use of students complement that from SRIs which are meant to elicit unobservable changes (if any) in students' thought processes before and after strategy training.

This way, the study adopts a logical and systematic selection of four research methods to assess the impact of strategy training on learners' task performance and strategy use. In the following sections 3.4.3 - 3.4.6, the theoretical basis for each of the four methods (i.e. task ratings, strategy questionnaires, observations, stimulated recall interviews) is also delineated in the context of the present study. It should be stressed that the following accounts justify the use of individual research methods in the context of the present research rather than in general terms. The methodological procedures of collecting and analyzing each type of data will be discussed in Chapter 4.

### 3.4.3 Justifications for rating task performances

A number of strategy intervention studies for oral communication employed an experimental design and measured the impact of the intervention by using a battery speaking tests to gauge improvements (e.g. Bejarano et al., 1997; Cohen, 1998; O'Malley & Chamot, 1990). The main justification is that measuring task performance is the normal practice of experimental designs (Robson, 1993). Hence, in this study, to answer

research questions 6-8, students' performance on English group discussions are assessed and compared across the three treatment groups (i.e. E1, E2 and C) and across phases (i.e. pre-training and post-training). The procedure of assessing task performance and the method of data analysis will be dealt with in Chapter 4.

#### 3.4.4 Justifications for using self-designed strategy questionnaires

In section 2.3.5, we saw that there is strong tradition of using questionnaires in strategy research to investigate strategy use. In this section, we justify the need for developing strategy questionnaires that can serve the distinct purposes of the present study to answer research questions 1-3.

Perhaps, the most widely used strategy questionnaires that could be applied to the context of second language learning is the ESL/EFL version of *SILL* (the Strategy Inventory for Language Learning, Oxford 1986-1990). Oxford and Burry-Stock (1995) report on the numerous studies conducted world-wide that claim to have established the utility (usefulness of the instrument in real life applications), reliability (accuracy of scores on the instrument) and validity (degree to which an instrument measures what it purports to measure) of the *SILL* in more than 40 major studies, involving about 8000-8500 language learners. Despite the seemingly strong statistical support for its usefulness, the items in *SILL* are yet to be sampled accurately and surveyed representatively across the globe to claim that it is the sole questionnaire to be used for all studies. In fact, questionnaire items are partial in general and the items in the *SILL* have not yet been used in triangulation with other types of data. The *SILL* is yet to be proved to be highly reliable and valid.

This study, therefore, does not use *SILL* to measure learners' strategy use, though it is generally recommended that available research instruments should be used to minimize the problems of validity and reliability in measurement (Rudestam & Newton, 2001). The *SILL* is, for example, not oriented towards assessing strategies for the speaking skill in particular. As Oxford & Burry-Stock (1995) concede, strategy questionnaires do not usually elicit details about strategies deployed by the respondents to cope with specific language tasks. It is therefore considered appropriate to design strategy questionnaires



with items on the direct and indirect strategies identified in section 2.5 for the present study. As these two types of strategies are targeted in the present investigation, the impact of training in the use of direct and indirect strategies can be assessed by finding out whether the frequency of students' self-perceived strategy use in questionnaires will be altered through strategy training. In addition, it is possible to investigate whether students' perceptions of the effectiveness of the strategies will be altered by strategy training. That is, it is argued that any underlying changes in students' perceptions may be tracked by using strategy questionnaires. The content of the questionnaires, the procedures of designing and piloting the questionnaires, their administration and methods of data analysis will be presented in Chapter 4.

As explained before, questionnaires in general only provide a subjective report of students' general patterns of behaviour, which can easily be at odds with their actual behaviour. Hence, this calls for cross validation of results by other means. According to McDonough and McDonough (1997), the only way to assess the validity of the questionnaire is to compare its results with similar information obtained by other methods. In view of this, the information obtained from the strategy questionnaires will be compared with findings from the other two methods (i.e. observations, SRIs) in the present study in order to assess learners' strategy use. We now turn to observations as the third research method employed in the study.

#### 3.4.5 Justifications for observing L2 language behaviours

In section 2.3.5, we saw a number of earlier studies using observation as a research tool to collect evidence of observable strategic behaviours. As defined in section 2.5, it can be seen that some of the direct and indirect strategies targeted for training are observable (see Appendix 3 for their definitions). Observation is, therefore, an appropriate means to investigate observed strategy use. One point should be noted, however. In the context of the present study, one means to answer the question as to whether learners will use the observable direct or indirect strategies for L2 group discussions is by observing students' language behaviours.

In the following, it is argued that language behaviour is strategic in nature and may be accorded a strategic status in general. The awareness of the generally strategic nature of language provides a necessary background to our understanding of the impact of strategy training on learners' strategy use in oral communication tasks. As language behaviours are strategic, training effects may be detected by changes in any patterns of specific language behaviours. If language behaviours were not inherently strategic, profiling changes in patterns of language behaviours would not be relevant to assessing the effects of strategy instruction on strategy use. Hence, observing and coding language behaviours is one valid way of assessing strategy use. The primary proposition is that language operates at both the symbolic and strategic levels. I begin by delineating the representation of meaning at the symbolic level via the use of language. Based on Halliday's (1984) view that language functions as behaviour, it is then argued how language behaviour operates at the strategic level as well. The purpose is to substantiate the position that the analysis of the strategic status of language behaviour is as justifiable as the analysis of the symbolic level of language. This paves the way for the justification of observing, profiling and coding language behaviours as a legitimate way to answer research questions 1-5 relating to learners' on strategy use.

### *Analysing meaning at the symbolic level*

According to Halliday (e.g. 1989), representation of meanings can be done by non-symbolic and symbolic acts. Non-symbolic acts are referred to as actions, which are by definition not language. Meanings can also be represented by the use of language. Halliday (1989) gives an example to illustrate this. If you are hungry, and want an apple, you can act directly on the apple by grabbing it. This is a non-symbolic act. You can also act symbolically but not directly by the use of language; you could ask someone to fetch you an apple by saying, 'Fetch me an apple.' "This is a symbolic act, an ACT OF MEANING." (ibid.:3) Landmark works on the analysis of the symbolic level of language originate from Halliday (e.g. 1973; 1975; 1989). The semantic system of language can be analysed by three functional components (Halliday, 1975). "First, there are *ideational* options, those relating to the content of what is said..." (ibid., p.17). In the context of speech, this represents the working out of messages. "Second, there is an *interpersonal* component of the semantic system, reflecting the function of language as a means

whereby the speaker participates in the speech situation”(ibid.). The speaker relates his/her role in the speech situation. And then, finally, “there is a third semantic function which is in a sense an enabling function, one without which the other two could not be put into effect; this we shall refer to as the *textual* function, the function that the language has of creating text” (ibid.). This is referred to as the linguistic level whereby the speaker uses, for example, articles, pronouns, didactic expressions, etc. to formulate a coherent piece of text. In this way, language operates at the symbolic level and can be analysed by the ideational, interpersonal and textual components.

Moreover, Halliday (1984, p.5) argues that language operates not only as symbol or code but as behaviour as well. This seems to be particularly true for spoken language.

People talk; what is more, they talk to each other... The elaboration of ‘communicative competence’ was a comparable step taken from another angle, an attempt to explain behaviour as if it was a distinct *part* of the code. What this implies is... that the two together make up the sum total of idealized linguistic competence.” (ibid., p.5)

“The two together” – language as code and language as behaviour - would seem to represent a more comprehensive view of language competence. As Halliday (1984) continues, while code is represented in terms of rules of grammar, “and where the focus shifts to behaviour, the rule leaps over the gap and we have rules of interpretation and rules of use” (ibid., p.5). In other words, meaning can also be represented by behaviour and as such the behaviour is also governed by rules other than those of grammar. In this way, it seems reasonable that language behaviour can and should also be analysed. The following section argues that “the rules of interpretation and rules of use” in spoken language often operate at the strategic level and hence language behaviour should be accorded a strategic status.

### *Analysing meaning at the strategic level*

A basic question that one may ask: why has the message been expressed the way it has been? What did the language items used try to achieve? A message has to be expressed in the way it has been in order to achieve certain ideational, interpersonal or textual

functions. In analysing the linguistic and strategic features of the language of learners in oral communication, Bygate (1988a) explains that:

There are various ways in which the speaker can deploy language strategically. For instance, he can select language items, or sequence them specifically so as to express particular interpersonal or ideational meanings... (ibid., p.109)

Hence, the particular language form selected and deployed by the speaker is governed by the kinds of meaning that the speaker wants to express. Language forms are then strategically deployed to express meanings, and above all, to achieve particular outcomes or goals. Craig and Tracy (1983) explain:

A “strategic” account of coherence, in contrast, would assume that conversationalists behave strategically in pursuit of their individual goals, and that whatever structure conversation may have emerges from this process. Rules and standard patterns are not simply followed but are used as resources to accomplish goals. (ibid., p.15)

Craig and Tracy illustrate the strategic nature of talks in first language use in its many manifestations. Talks have a strategic nature to do things; they are all meant to achieve conversational goals. Gumperz (1982, p.2) views conversations as activities in which the participants build on “background assumptions about context, interactive goals and interpersonal relations to derive frames in terms of which they can interpret what is going on. Participants have their own “interact goals” to achieve in a shared context.

The basic argument is that talks are goal-directed and hence have a strategic nature to accomplish something. Both the speaker and the listener are meant to understand each other in order to move towards common goals in talks/ conversations or to achieve task goals. In fact, it is widely supported that language use is goal-directed. As Bygate (1988a) advocates:

“The point is that comprehension and production are assumed to be goal-directed activities, so that what people orient to in understanding each other is the goals which they can assume their interlocutors to be intending to achieve.” (ibid., p.88)

Richards's and Schmidt's (1983) research on conversational behaviour also lends support to the argument here. Conversation is seen as an activity that is aimed to achieve broadly two goals. First, talk is directed towards the immediate goal of making sense (i.e. a linguistic goal that aims to communicate meaning). Second, talks are also directed towards achieving informational goals or social goals in general (e.g. the establishment of roles, the presentation of self). In ensuring that the activity is smoothly conducted, both the speaker and the listener must share common knowledge and understanding about the goals and the process of the conversation. As Richards and Schmidt (1983) continue:

Speakers and hearers are seen to share assumptions about the goals and processes of conversation which enable them to interact with each other and to interpret conversation as an ongoing, developing and related succession of utterances. Such a movement is constructed from strategies for the introduction of topics, openings and closings, the pairing of utterances in conversation and in turn-taking conventions. (ibid., p.116)

The movement and development of utterances in talks all aim towards a common goal which is seen to be "constructed from strategies" for opening, turn-taking, sustaining, closing, etc. Put simply, speakers and hearers interact strategically in conversations. As Di Pietro (1987) espouses,

Strategic interaction starts with the premise that learning takes place only when the internal mind can be linked to the external world... Learners are placed in situations where the motivation to think is translated into the challenge to reach goals through verbal exchanges with others. (ibid., p.10)

The notion that goals are achieved through 'verbal exchanges' or language behaviour is evident. In the case of communicative group activities such as group discussions, verbal exchanges involving opening, holding the floor, turn-taking, closing, etc. are potentially strategic as they are inherently goal-oriented. It is then reasonable to analyse the strategic status of language behaviours manifested in group discussions for the purposes of the present study. To summarise thus far, language use is describable and analyzable in a strategic sense.

In the context of the present study, there are two sources of strategic use of language. First, it is the 'ad hoc' level at which the learners may rely on their own pre-existing strategic behaviours inherent in language use as delineated so far. Second, it may be the result of the strategy training. Pre-existing strategies may include strategies selected for training and hence observing strategic use of language in action would encompass noticing strategy use from both sources. This study aims to investigate the training effects by assessing students' overall increases in trained strategy use. The study does not aim to separate out the effects on pre-existing strategies and on trained strategy use. To sum up, the language behaviours of students in group discussions will be observed and coded to assess observed strategy use. Again, the procedures of observing, coding and analyzing the transcripts of students' group discussions will be described in Chapter 4.

### *Limitations*

Perhaps the major drawback of according a strategic status to language behaviours so as to gauge strategy use is that many strategies are in fact mentalistic and covert. It could, nonetheless, be argued that while strategic processing is essentially mental, the application of these strategies may be observable (Chamot & Rubin, 1994). Subsequently, profiling the language behaviours of speakers provides one source of information about strategy use. It goes without saying that whether students in the experimental classes will use more of the target strategies as compared with the control class cannot be answered by observing language behaviours alone. Hence, observations are complemented by stimulated recall interviews (SRIs) i.e. a method that may open a window to students' thought processes.

### 3.4.6 Justifications for tapping strategic thoughts using stimulated recall (SR) methodology

We have seen that observing surface behaviours is not adequate in assessing strategy use. Moreover, the end product i.e. the learners' utterances in an L2 may have been the result of extensive thought processes whereby the learners are debating what words to use and which phrases to employ. Assessing only the product is doing the learner a disservice. The stimulated recall (SR) methodology is proposed as an appropriate means to access

the 'Black Box' of the students' mind to assess strategic thoughts (if any). The purpose of this section is to justify the appropriacy of using stimulated recall interviews (SRIs) to assess strategy use, particularly use of covert strategies to address research questions 1-5.

### *The SR methodology and oral interaction research*

Stimulated recall (SR) is "one subset of a range of introspective methods that represent a means of eliciting data about thought processes involved in carrying out a task or activity" (Gass & Mackey, 2000, p.1). Bloom (1954) describes SR as a method of reviving memories immediately after an event. The SR is a retrospective technique based on retrieval cues. Such cues may entail audio and/or visual stimuli (e.g. video play-back). With the help of audio and/or video prompts, the participants are expected to be able to recall thoughts they had while performing a task or engaging in an activity.

SR belongs to the group of verbalization methods that have traditionally been termed introspection or retrospection. These methods were first employed in psychological research. There are two basic assumptions of SR which are of particular relevance to the purposes of this study. First, it is possible to observe internal processes (including strategic processing) in a similar fashion as we observe surface behaviours. Second, we can access and understand our thought processes and articulate them explicitly. SR has a long tradition in psychological research. Ericsson and Simon (1980; 1984; 1994) examine numerous studies involving the use of verbal reports as data in an effort to determine under what conditions verbal reports are valid and trustworthy. In doing this, they have developed an information processing model and a taxonomy of verbalization procedures. An understanding of the model and procedures is important in guiding decisions regarding data collection, data analysis and subsequent interpretations of findings based on SR methodology.

Within the framework of this information processing model, it is assumed that information recently acquired (attended to or heeded) by the central processor is kept in short-term memory (STM), and is directly accessible for explicit reporting (i.e. verbal reports), whereas information from long-term memory (LTM) must first be retrieved and then transferred to STM before it can be reported. To obtain verbal reports, "as new

information (thoughts) enters attention, the subjects should verbalize the corresponding thought or thoughts. ...the new incoming information is *maintained* in attention until the corresponding verbalization is completed” (Ericsson & Simon, 1987, p.32). In short, the core hypothesis is that information that is heeded during a task or an activity is the information that is reportable. And the information that is reported is the information that is heeded (Ericsson & Simon 1984, p.167).

Basically Ericsson and Simon (1980; 1984; 1994) argue that verbal reporting is feasible under one of the following three conditions:

1. while information is heeded (talk aloud, think aloud)
2. while information is still in short-term memory (immediate, concurrent probing for information during the task)
3. after the completion of a task (retrospective probing; verbalizing after the task)

For conditions 1 and 2, the reporting seems to have one-to-one relations with the heeded information because verbalization takes place concurrently with the task. Retrospective probing done immediately after the task (i.e. delayed retrospective probing) is supposed to have the same function using a probe like “report everything you can remember about your thoughts during the last problem”. It is assumed that information is still in STM and can be directly reported or used. In this study, it was felt that reporting under conditions 1 and 2 would disrupt the conduct of the task or would lead to incredibly distorted speech production. To circumvent the difficulty, SR was used as a key method for gaining access to students’ thoughts on a post-task basis using retrospective probing.

The SR methodology has been used in oral interactions in second language acquisition (Cohen & Olshtain, 1993; 1994; Dörnyei & Kormos, 1998; Gass & Mackey, 2000; Hawkins, 1985; Kormos, 1998; Lennon, 1989; Mackey, Gass & McDonough, 2001; Poulisse, Bongaerts & Kellerman 1987). A common procedure shared by these studies is that tapes of task-based activities were played back to participants and that either they or the researchers could pause the tapes at any time the participants wished to describe their thoughts at any particular point when the original interaction was going on. The participants’ comments often yielded valuable information about covert thoughts during the tasks.



Using verbal reports to assess learners' strategies is particularly effective in understanding learners' strategies not least because strategy use of L2 learners is still part of their declarative knowledge and amenable to reporting (Cohen, 1994; 1998; Faerch & Kasper, 1987; Gass & Mackey, 2000; O'Malley & Chamot, 1990). Activities that the learners are not in full control are slow and involve controlled processing. Such kind of tasks provides an ideal avenue for the researchers to tap students' thought processes because declarative knowledge is called into place in new tasks, kept in STM and is available for verbal reporting. When L2 learners deploy strategies to help them as they struggle their way along the language learning process, strategy use is still part of their declarative knowledge because it is kept in STM and they are still able to articulate it. Through repeated practice, declarative knowledge becomes automatic and routinized and enters the LTM to form part of the procedural knowledge. So when strategy use becomes automatic, it is no longer available for reporting. Learners' strategies, apart from pre-existing strategies which are likely to have become automatic, are mostly not yet automatised and therefore may probably be available for reporting in the SR methodology. It is on this very premise that the present study employs stimulated recall interviews (SRIs) to assess learners' strategy use on L2 oral tasks.

### *Validity*

As with any research methods, validity is an important consideration. Validity here centres on whether information that is captured within the SRI corresponds with information that was actually heeded when the English discussion was being carried out. Gass and Mackey (2000, p.89) contend that "given that the goal of stimulated recall is to tap learners' thought processes while they were performing a particular task, the method itself will have no validity unless one can be reasonably sure that accurate recall in fact is taking place." Based on this fundamental premise, they stipulate that in SR methodology, accurate memory structures must be brought into focus.

Several provisos should be borne in mind to enhance the validity of SR methodology. First, timing of data collection is of the essence. The data should be collected as soon as possible after the event which is the focus of the recall. Second, all the recall questions have to focus on the 'there and then' processing during the event itself but not on the SR

session. Third, all the questions must be on the interviewee's description of thought processes but not explanation of thought processes during the event (Ericsson & Simon, 1996; Gilhooly & Green, 1996; Green, 1998; Russo et al., 1989). Ericsson and Simon (1996), in particular, distinguish between reporting on those thoughts per se and giving reasons for thought processes. They argue that people normally give very different responses when they are asked to report simply on the thought processes rather than on the reasons for the thoughts. When asked about 'why', for example, participants tend to rely on their "a priori theories" to theorize about what they saw in the video or what might have happened during the event. So, instead of searching for the memory structures that give access to the thought processes at a particular point in the task, the participants may simply access their "implicit, a priori" theories and then establish and report on the causal relationship between those theories and what they happened in the event on which they are recalling. It is arguably more accurate for the analyst to make an interpretation on the basis of the reporting of the content rather than on the basis of the participants' interpretation of the content. For the purposes of the present investigation, these provisos have a crucial impact on the procedures to elicit valid SRI data and to check for the validity of SRI data collected prior to analysis, the details of which will be described together with methods of coding and analyzing SRI data in Chapter 4.

### *Limitations*

First, as explained, the SR methodology can only tap the contents of consciousness i.e. declarative knowledge. In this study, strategies that are newly taught to the learners may be accessible and assessable via the methodology. Nonetheless, pre-existing strategies that are routinised will probably not be detected in the SRI because procedural knowledge governing such kind of strategy use does not enter into STM and is not available for verbal reporting. According to Wilson (1994, p.249), "processes that have become automatized and thoughts that are not in verbal code or cannot be easily transferred to verbal code" are not tapped by verbal protocols. This calls for the need for complementing SR data with data from other sources to fill the 'gap'.

Second, respondents may repress data to supply socially acceptable responses. It is possible that the participants 'reconstruct' thought processes that they think the

interviewer would like to hear; they might 'tidy up' what happened or rationalize their behaviours.

Third, participants vary a lot in terms of their verbal skills and their verbal reports may differ considerably in the quality and quantity of the verbal report data produced. Hence, it is not surprising that some students produce lengthy reports and others sparse accounts only. This has implications for the interpretation of SRI findings.

Last but not least, the entire process of gathering and analyzing verbal data is very time-consuming. The procedures involve ensuring the appropriate conditions for data collection. In addition, transcribing oral data, coding and analyzing the data are very labour-intensive. The implication is that it is not feasible to get information from a large number of participants. This has knock-on effects on resources needed for research relying on verbal report data. This also explains why only pull-out groups from each of the three treatment groups were invited to take part in this part of the study in the present research. (Details of the data collection procedure will be given in section 4.6.)

#### 3.4.7 Summary

It has been argued that the multi-method approach adopted for the present study is systematic and logical to researching the impact of strategy training and learners' strategy use. The rationale for each of the four research methods has been justified in the context of the present study.

### 3.5 Conclusion

In this chapter, the research questions of the present study have been delineated on the theoretical bases arising from unresolved issues identified in Chapter 2. Next, it has been argued that a quasi-experimental design is an appropriate design to study the key research question as to the effects of strategy training on learners' strategy use and task performance. It has also been demonstrated that the multi-method approach adopted for the present study is systematic and logical to investigating strategy use. Each method makes a distinct contribution to our understanding of learners' strategy use and that the

different methods also complement each other's strengths and weaknesses in providing a complete picture of strategy use via the triangulation of findings from different sources.

## **CHAPTER 4 THE RESEARCH DESIGN AND RESEARCH METHODS: METHODOLOGICAL PROCEDURES**

### **4.1 Introduction and Overview of Chapter**

Chapter 3 explicates the theoretical bases for the quasi-experimental design and the four research methods. This chapter complements Chapter 3 in that it describes the methodological procedures of implementing the quasi-experimental design and collecting and analysing data using each of the four methods discussed in Chapter 3.

In this chapter, section 4.2 explains how the quasi-experimental design was piloted and the decisions made to inform the main interventionist study in 2000. Sections 4.3-4.6 describe the procedures of collecting data using the four research methods (i.e. rating task performances, questionnaires, observations and stimulated recall interviews). The method of analyzing data elicited from each research method is also included. Section 4.7 concludes the chapter.

### **4.2 Implementing the quasi-experimental design**

The reader will recall that the main focus of the study is to investigate the effects of strategy training on L2 learners' strategy use and task performance. This section describes the implementation of the quasi-experimental design at various stages including the preparatory studies and the main study.

#### **4.2.1 Preparatory studies**

As outlined in section 1.2, the first preliminary study of strategy training in group discussion skills was conducted in 1997 with Secondary Six students, lending support for the feasibility of implementing strategy instruction in the senior secondary ESL classroom in Hong Kong (Lam, 1998; Lam & Chan, 2000).

The second preliminary study was conducted between April to June 1998 with a view to testing the feasibility of strategy training with junior Secondary Two students. The data collected from one experimental class provided surface evidence that students

had used the target strategies 'Asking for clarification' and 'Clarifying oneself' introduced to them. Moreover, the study indicated that the strategy materials developed for the project were workable. In addition, the feedback from the teachers on the materials helped inform the pilot study and the main study in subsequent years. (For details, see the 'Research Proposal' submitted to the School of Education of the University of Leeds in December 1998.)

A pilot study was conducted between March and April 1999 involving one control class and two experimental classes (one received training in the use of direct strategies and the other indirect strategies) at Secondary Two level. The main objective of the piloting was to observe how strategy training worked out in the classroom and could be improved for implementation in the main study in 2000.

In the piloting process, the following types of data were collected: (1) Field notes of some strategy lessons; (2) Interview data from students and teachers in the experimental classes; (3) End-of-lesson student evaluations on strategy use; (4) Audio recordings of English group discussions; (5) Strategy questionnaires data administered to all treatment classes. The purpose of collecting data on (1) to (3) was to evaluate instructional approaches, the mode of delivery and training materials on the basis of my own observations as well as feedback from the teachers and students. The purpose of collecting data on (4) and on (5) was to evaluate the appropriacy of different data-collection instruments in assessing task performance and strategy use. Last, some interesting information about students' perceptions of the use of direct and of indirect strategies was generated from the pilot study (Lam, 2002).

At this point, it is worth mentioning the instructional approaches piloted in greater detail. The "completely informed training" (Oxford & Crookall, 1989, p.414) was used in the piloting. Students were informed of the value and purpose of strategy instruction, given names and examples of strategies to model on, provided with opportunities to use and consolidate the strategies, and guided to evaluate strategy use. The data from the pilot study showed that explicit strategy training worked as it synchronized well with the conventional teaching methodology used in the Hong Kong secondary classroom where modelling of language patterns with explicit explanations was typical. Students were used to this instructional model.

Whereas the general approach of ‘completely informed training’ was workable, the specific approaches to the teaching of direct and of indirect approaches required modifications. In the training of direct strategies, initially, the plan was to adopt the preparation-presentation-demonstration-practice-evaluation approach to strategy instruction (Chamot & O’Malley, 1994). Nonetheless, the pilot study showed that the presentation stage was too theoretical, preparation time was not adequate, and demonstration of the ‘thinking aloud’ process by the teachers needed strengthening. Moreover, following the same 5-step approach to present strategy use in every lesson was too boring and rigid for students. Similarly, in the training of indirect strategies, the original plan was to adopt a modified version of the Problem-Solving Process Model developed by Chamot, Robbins and El-Dinary (1993). The Model covered four stages namely, the Problem, Solution, Monitoring and Evaluation stages. This was initially considered the most appropriate for presenting indirect strategies such as meta-cognitive strategies. However, the pilot study indicated that both the teacher and the students were not used to the approach and found the concept difficult to grasp. Key areas of improvement were then identified for implementation in the main study in 2000.

#### 4.2.2 The main study

The main interventionist study was implemented from January to May in 2000. The main objective of the intervention was to investigate the effects of training in the use of direct strategies and of indirect strategies on students’ strategy use and task performance. (For details of the research questions, see sections 3.2.)

As explained in section 3.3, a quasi-experimental design involving experimental and control groups is adopted. In the main study, three intact classes (E1, E2, C) of 20 students each were involved. The E1 group received training in the use of the eight target, direct strategies over eight sessions (see section 2.5.2). The E2 group received training in the use of the seven target, indirect strategies (see section 2.5.3) over eight sessions. The C group also had eight sessions doing similar group discussion tasks as those of the E1 and E2 groups but was not exposed to any strategy instruction. Each session was one hour and ten minutes long. Table 4.1 below gives an overview of the study. Details of the intervention including the school, the selection of treatment

groups, the teachers and strategy training procedures, and the tasks that the three treatment groups did follow the Table.

Table 4.1 *An overview of the interventionist study in 2000*

Class		E1 (Direct strategies)	E2 (Indirect strategies)	Control group
Number of students		20 (5 groups of 4) *	20 (5 groups of 4) *	20 (5 groups of 4)*
Session	Task type	8 target strategies	7 target strategies	Regular lessons
January (2 lessons)	Group Discussion	'Resourcing' 'Paraphrasing'	'Problem identification'	#
February (2 lessons)	Group Discussion	'Using fillers' 'Using self-repetition'	'Evaluation' 'Relax and think positive'	#
March (1 lesson)	Group Discussion	'Self correction'	'Planning ideas in advance' <sup>a</sup> 'Functional planning'	#
April (2 lessons)	Pair discussion	'Asking for repetition' 'Asking for clarification' 'Asking for confirmation'	'Asking for help' 'Giving help'	#
May (1 lesson)	Group Discussion	Consolidation/ revision	Consolidation/revision	#

# *The control group did similar tasks to those of E1 and E2 but had no exposure to any strategy instruction.*

\* *Of the 5 groups of students, 3 were of high-proficiency and 2 were of low-proficiency*

### *Participants*

The main study was conducted with elementary and advanced-intermediate learners in a secondary school in Hong Kong. All students have to go through seven years of secondary education prior to university studies. Students proceed from Secondary One (i.e. 12 years old) to Secondary Seven (i.e. 18 years old) in the secondary curriculum. The students in the present study were selected from Secondary Two. They had six years of English at primary level and one year at secondary level and their English standard was considered to be at elementary level. The school chosen for the study was an above-average school in Hong Kong and used English as the medium of instruction for most subjects.

To enhance validity and to minimize initial differences across the three treatment classes (see section 3.3), students' English scores in the First Term Secondary Two



standardized examination held in January 2000 were used to select intact classes for the main study. There were 5 regular Secondary Two classes and each had 40 students (i.e. 2A, 2B, 2C, 2D, 2E). The one-way ANOVA and T-test were conducted on their mean scores in the 3-part English examination to see which classes had comparable standards. The statistical analyses showed that the mean scores of 2A, 2B and 2D were 62.52, 60.80, and 65.21 respectively and that they showed no statistically significant differences (ANOVA,  $p=.135$ ). In oral lessons, the regular practice of the school was to split a regular class of 40 into two halves of 20 students according to the class numbers of the students (odd and even numbers). The purpose was to enhance participation and interaction in oral communication tasks. Hence, only 2A and 2B (i.e. four half classes) were initially selected as their mean scores (62.52 and 60.80) were closer than those of 2A and 2D (62.52 and 65.21). (See Appendix 4 for statistical details.)

As the other objective of the study is to investigate whether proficiency level makes a difference to the impact of strategy training, all the 20 students in each half class were put into either the high-proficiency (H) subgroup of four students each or the low-proficiency (L) subgroup of four students each according to the results of the Kruskal-Wallis Test, a non-parametric test for small numbers. The mean scores of the three H subgroups in each of 2A (odd number), 2A (even number), 2B (odd number), 2B (even number) were 70.97, 64.85, 71.36, 68.38 respectively. These means had no statistically significant differences ( $p=.425$ ). The mean scores of the two L subgroups in each of 2A (odd number), 2A (even number), 2B (odd number), 2B (even number) were 55.08, 53.78, 48.25, 55.08 respectively. These means also had no statistically significant differences ( $p=.330$ ). (See Appendix 4 for statistical details.) As only 3 groups (E1, E2 and C) were needed for the study, it was finally decided to include teacher factor as another consideration (see discussion below) and 2A (odd number), 2A (even number), 2B (even number) were selected and then allocated randomly to the treatment group E1 (training in the use of direct strategies), treatment group E2 (training in the use of indirect strategies) and comparison group C respectively. This way, three H-subgroups and two L-subgroups (i.e. a total of five groups) were formed in each of the three treatment groups (Table 4.1). In some data collection procedures, only one H-subgroup and one L-subgroup in each group were invited to perform 'pull-out' group tasks (see later sections 4.3, 4.5-4.6). The same pull-out groups (i.e. two groups) in each of E1, E2 and C classes were involved throughout the study.

To reduce the possibility of teacher effect in affecting the impact of strategy intervention, the choice of teachers was carefully considered. The final decision was to select three groups (i.e. 2A odd number, 2A even number, 2B even number) which not only had comparable English standards as previously described but were taught by three different teachers. This arrangement has the advantage of eliminating the chance of one teacher transferring treatment of one class to another and vice versa. Moreover, the three teachers had similar educational backgrounds and professional qualifications. All possessed a Bachelor's degree in English language and literature and had qualified teacher status. They were in their 30's and teachers for E1, E2 and C had taught English language in the same school for 6, 8 and 10 years respectively. While the three teachers differed in terms of experience, this difference was somewhat offset by the organization of the English panel in that it worked as a team and teachers often shared teaching resources and ideas to promote professional development. Finally, both teachers in the experimental classes were involved in either the preliminary or the pilot study and had experience in strategy training. The teacher in the control class was not exposed to any strategy instruction at all. The three teachers were asked not to share teaching ideas, materials or information provided by the researcher.

### *Strategy training*

#### i. Training approaches

On the basis of the evidence from the piloting, it was then decided that a more flexible approach to strategy instruction would be needed. Major decisions regarding the instructional approach for both experimental classes in the main study were as follows:

- Explicit training was employed in which students were explained the rationale for strategy use, introduced to the names of strategies, given demonstrations of strategy use, provided with practice time to try out the recommended strategies, and given the opportunity to evaluate strategy use.
- The introductory 'theory' part was replaced by warming-up or awareness-raising exercises. The idea was to let students observe how strategies might be deployed by the teacher or to let students experience strategy use right at the beginning of the presentation stage to enhance teaching effects. More emphasis would be on practice rather than theory or definition of the recommended strategies.

- The demonstration of the ‘thinking aloud’ process by the teacher was expanded and strengthened so that students might ‘observe’ strategy use in action in the human mind. Instructions to teachers to demonstrate the ‘think aloud’ process were incorporated in the training materials (see Appendix 5).
- A bit more time was devoted to the practice/discussion part where students could try out the strategies.
- At the end of each strategy lesson, students were encouraged to give feedback on the strategies introduced in that lesson. It was an attempt to engage students in a collaborative dialogue to see how they felt about strategy use.

## ii. Monitoring procedures

The main purpose of the study is to investigate if strategy training has an impact on task performance and on strategy use. It is then crucial to ensure a maximum relationship between implementation and the impact. In view of this, special attention was devoted to the ways in which the teachers were inducted into the strategy training in the main study. Based on the experience from the preliminary and pilot studies, the following steps were taken:

- The thinking and rationale behind the design of the materials were made transparent to the teachers. Moreover, the teachers were provided with notes for each strategy lesson and briefed about the objective of every strategy lesson. As both teachers were involved in either the preliminary or pilot studies, they had a good understanding of strategy use and strategy instruction.
- The teachers in the experimental classes were given strategy materials including suggested activities to follow in the lessons (see sample materials in Appendix 6).
- Each strategy lesson in the main study was audio-taped. The researcher was then able to listen to the implementation and noted points of interest for regular discussions with the teachers before the following strategy lesson began. The purpose was to keep track of how the teachers implemented the training and to solicit feedback from teachers on the training and the materials.

It is obviously important to keep track of how the teachers implemented the strategy training so as to ensure that they would do what was asked in the intervention. On the other hand, it is equally important not to control the teachers too tightly. Otherwise,

they might have taught in ways that they did not normally do and then the research would have lost its meaning and validity. In other words, if the control had been too tight, the teachers and students would probably have done what was told and the whole process of intervention would not have been given the chance to work out on its own. This way, any results that it claims to make would not have been valid because they did not reflect reality. The teachers were therefore encouraged to integrate the recommended approach to strategy training with their own teaching style. The intention is to allow flexibility for the teacher to translate the recommended approach into reality/implementation. After all, the validity of intervention hinges on the balance between ensuring that the teachers understood and implemented strategy instructions and ensuring that the teachers were not forced too far into doing things which they would not normally do. A good balance is therefore considered crucial to establish maximum possible validity of the intervention.

### iii. Training materials and tasks

The choice of the major oral task type is governed by several considerations. First, the task type should be representative of what students are expected to perform in the regular secondary classroom. Group discussion is deemed appropriate because students are required to do group discussions across course levels and academic subject areas. Second, group discussion is interactive in nature i.e. involving two or more participants. This matches the objective of the study to see whether learners will benefit from strategy training on interactive, participatory oral tasks (see section 3.2.4). Nonetheless, it should be borne in mind that the type of task (and materials) chosen would tend to favour the use of certain strategies. That is, the group discussion involving students in solving a prioritizing problem may encourage them to use 'Problem identification', a target strategy which aims to help students analyse the problem of a learning task and 'Ranking', a non-target strategy which students favour when preparing for the English task proper. However, it is expected that the use of a comparison group in the intervention would address this problem as the effects of task type should be the same for both the experimental and comparison groups.

Three sets of teaching materials have been developed for strategy training, one for E1, one for E2 and one for C. Each set consists of materials for eight lessons with students' notes and teacher's notes. The oral tasks (basically group discussions) have

either been adapted from available sources or self-designed. These tasks remain very similar across the three treatment groups. The major differences are: for E1, direct strategies are incorporated and recommended to the students to facilitate speech production in English group discussions; for E2, indirect strategies are incorporated and introduced to students to handle English group discussion tasks more effectively; for C, the oral tasks are presented to students with no exposure to strategy instruction. [For economy of space, only sample materials and tasks are shown in Appendix 6. The full set of materials is kept in English Learning Centre at the Hong Kong Institute of Education for public use (Lam, 2003).]

The distinctive features of the training tasks should be mentioned here. First, on the basis of the data collected from the pilot study, it was decided that the set of strategy training materials should be presented in a collaborative way rather than as directives telling students what they should be doing or implying that using the strategies is considered 'right'. The purpose is to recommend strategy use to students in a non-dogmatic way so that students will not feel obliged to use strategies because it is considered the 'right' thing to do. This impacts on the validity of the tuition in that the whole procedure of intervention has to be given a chance to work and that students' uptake of the strategies (if any) may be assessed. So the key principle is to let students know that strategy use is a recommendation and that they are encouraged to try the strategies out. Last but not least, students should be given a chance to reflect on and evaluate the usefulness of strategy use at the end of a strategy lesson.

Second, the language use in the materials is meant to reflect good pedagogic talk as far as possible to ensure understanding by the students and the teachers. This obviously has implications for the validity of the intervention. In order that the students may develop underlying strategic competence, they have to understand the explanations and instructions in the materials. With a lack of genuine understanding, the students may only change their surface behaviour without changing their underlying thinking.

So far, the quasi-experimental research design involving three intact, treatment groups has been described. The main purpose is to explain how the design is intended to answer the eight research questions, each of which requires a comparison of findings between the three treatment groups.

As explained in Chapter 3, four research methods are used to collect data to answer the research questions. In sections 4.3-4.6 that follow, the procedures of eliciting and analyzing data of each method are described in the following order: rating task performances (section 4.3); using strategy questionnaires (section 4.4); using observations (section 4.5); and using stimulated recall interviews (SRIs) (section 4.6). An overview of all the four data collection methods and the research questions they aim to answer is in Table 4.2. Explanations are in sections 4.3-4.6 that follow the Table.

*Table 4.2 Overview of Data Collection Methods and Schedules in the Main Study*

Research methods	Student involvement	Administration Schedule			Research questions addressed
		Phase 1 (Pre-training)	Phase 2* (Strategy training)	Phase 3 (Post-training)	
Task ratings	Whole class & pull-out groups	Nov 1999	-	June 2000	Q6 - Q8
Questionnaires	Whole class	Dec 1999	-	June 2000	Q1 - Q3
Observations	Pull-out groups	Dec 1999	Mar 2000	June 2000	Q1 - Q5
SR interviews	Pull-out groups	Dec 1999	Mar 2000	June 2000	Q1 - Q5

< \* > denotes strategy training from January 2000 - May 2000

### **4.3 Rating students' performances on English group discussions**

The research method used in this part of the study aims to assess students' performances on English group discussions and to answer the research questions 6-8 about strategy use, task performance and proficiency level (see section 3.2.4). All the five groups in each of three treatment classes as well as two pull-out groups (as mentioned in section 4.2.2) in each class were involved. Two sets of data were collected: one set for the whole class of C, E1 and E2 and one set for the 'pull-out' groups. The data collection, the timing of data samples and the tasks used are explained in section 4.3.1 and the rating procedures in section 4.3.2.

#### **4.3.1 Data collection and timing of data samples**

First, there was a 'whole-class' task i.e. a group discussion task used to compare the performance of E1 (5 groups), E2 (5 groups) and C (5 groups) during normal class times before strategy training (November 1999) and after training (June 2000). Second, there was a 'pull-out' group task. That is, as mentioned in section 4.2.2, two

pull-out groups (one of high-proficiency and one of low-proficiency) in each of C, E1 and E2 (altogether six) were invited to do another group discussion task outside normal class hours on a pre-post training basis in November 1999 and June 2000. Hence, there were two sets of results for assessing students' performances on group discussions: the 'whole-class' results and the 'pull-out' group results. The data collection schedule and data set are as follows:

Table 4.3 *Rating task performances: data collection schedule and data set*

Task		Whole-class task (Recorded during normal class time)		Pull-out group task (Recorded outside normal class time)		Total no. of recordings
Class	Proficiency Level	Pre-test (Nov 1999)	Post-test (June 2000)	Pre-test (Nov 1999)	Post-test (June 2000)	
C	High	3	3	1	1	8
	Low	2	2	1	1	6
E1	H	3	3	1	1	8
	L	2	2	1	1	6
E2	H	3	3	1	1	8
	L	2	2	1	1	6
Sub-total		15	15	6	6	
		30 recordings		12 recordings		42 *

\* *In each of the 42 recordings, an extract of 5 minutes was analysed and rated.*

For the 'whole-class' task, recording instructions were explained to the teachers who administered the audio recording during normal class time. For the 'pull-out' group task, the researcher did the recording in conjunction with the activities for collecting data from observations (see section 4.5 later) and from stimulated recall interviews (see section 4.6 later).

As explained in section 3.2.4, the task type chosen for students to try out strategy use during strategy training is the interactive, participatory group discussion task. Hence, the same task type is used for assessing the impact of the strategy instruction on students' task performance. On the basis of the teachers' feedback and of the data from the students' recordings in the pilot study, several revisions have been made to ensure that the tasks are appropriate in terms of interest and difficulty level. The final decision was that the tasks should require students to solve a technical problem such as deciding on the order of a list of items. Moreover, the group has to reach a consensus on the final order (samples of tasks are in Appendix 7). The purpose is to generate a fair spread of talk and good interaction among all group members. All groups were asked to do a discussion of 12 minutes.

It should be noted that the 'whole class' task and the 'pull-out' group task are different. The intention is to reduce the practice effect that would have helped the 'pull-out' groups had the same task been used for both sets of results. So, two different discussion tasks of similar nature, linguistic demands, and interest level were employed in the study: the 'whole-class' task and the 'pull-out' group tasks to assess students' performances on group discussions on a pre-post basis.

It can be argued that that there could well be a task repetition or practice effect if identical pre-post tasks are used. To reduce such an effect and to ensure the comparability of the pre-post tasks, minor changes have been made to the post task. Specifically, the number of items to be ranked was reduced and there were more guiding questions and suggested phrases provided in the post-task. Furthermore, it should also be noted that the use of a control class in the present research precisely aims to address the problem of testing/practice effect as explained in section 3.3. Any effect resulting from practice should be the same for both the control and experimental classes and would therefore be controlled for (Campbell & Stanley 1966).

#### 4.3.2 Method of data analysis

The performances of students on the group discussion tasks were assessed in terms of the ratings assigned by independent raters. It was decided to rate the middle 5 minutes only in each of the 12-minute discussion as students were expected to have settled in and warmed up and not to be under time pressure to complete the task while it was mid way through the task. To ensure consistency in comparison across recordings, the third minute to the seventh minute talk (i.e. a total of 5 minutes) in each of the 42 recordings was selected and transcribed by the researcher and then given to four independent judges for rating. (Because of the demand of time on the raters, audio recordings were not used for rating.) The four judges, comprising one native speaker and three near-native speakers of English, were all experienced teachers of English in local secondary schools. All the 42 transcripts were randomly numbered before being disseminated to the four raters who had no idea as to whether the transcripts were recorded before or after strategy training. The raters worked on the 12 'pull-out group' transcripts first and then on the 30 'whole-class' transcripts. The purpose was



to maintain consistency of rating across transcripts of the same task. (For a full set of the 42 transcripts, see Appendix 8.)

Before rating commenced, a sample transcript and draft scoring instructions were given to one potential judge to comment on the clarity and appropriacy of the instructions. It was decided that only two criteria were used, namely 'English' and 'Task effectiveness'. 'English' was assessed in terms of the ratings given by the judges on students' vocabulary use and grammar and 'Task effectiveness' on students' general effectiveness in handling the task and cooperation in completing the task. When rating each transcript, the four raters were asked to give impressionistically one *global* score (on a six-point scale) for 'English' and another one for 'Task Effectiveness'. A set of written instructions was also given to all raters to ensure convergence of interpretation prior to rating (see Appendix 9).

Reliability analysis was conducted to gauge the extent of correlations among the four raters on the 'whole-class' task and on the 'pull-out group' tasks. The inter-rater reliability coefficients were .7125 for 'English' and .8790 for 'Task effectiveness' on the 'whole-class' task. ANOVAs were also run to determine if 'teacher' had any main effect on the ratings. The results ( $p=.145$  for 'English' and  $p=.959$  for 'Task Effectiveness') confirmed that there was no teacher effect on the ratings. Similarly, on the 'pull-out group' task, the inter-rater reliability coefficients were .6987 for 'English' and .8054 for 'Task Effectiveness'. To ascertain if 'teacher' was a variable that had a main effect on the ratings, the Kruskal-Wallis test (non-parametric) for small samples was conducted on the rankings of the four raters. Results showed that the differences in the rankings of the four judges were statistically insignificant ( $p=.171$  for 'English' and  $p=.884$  for 'Task Effectiveness'), confirming once again that rankings of the four raters were comparable. Given the similarity of ratings by the four raters, the average of the scores was used as the score (on a six-point scale) for each transcript for comparison across groups on a pre-post basis.

At this point, it should be acknowledged that using group ratings and assessing performances with the use of orthographic transcripts are not without problems. As audio recording (but not video recording) was permitted during the whole class task, it was not feasible to identify individual students on audio recordings because of the rather distracting background noise when 20 students were doing the recording

together under the same roof. Given this constraint, group performance rather than the ideally more desirable individual performance was assessed. The group ratings, however, might have reflected the performances of one or two atypical participants only but not all the participants. In addition, because of the demand of time on raters, orthographic transcripts and not actual oral performances were rated. The raters could not capture the pronunciation and fluency of students' talk and this might have affected the level of inter-rater reliability coefficients for English ratings which, in fact, were not as high as one would wish (i.e. 0.7125 for the 'whole class' task and 0.6987 for the 'pull-out' group task). Besides, the four raters were asked to assess the students' general level of English proficiency using a single rating roughly reflecting the students' pronunciation, content vocabulary, and grammar and to assess the students' general ability to handle the discussion task using one rating roughly reflecting the students' general effectiveness, confidence and cooperation/mutual help in completing the task (see instructions in Appendix 9). To reduce the workloads incurred on the raters, performance features in the scales were not specified. This might then have affected the consistency of the judges' interpretation of the rating scales and, in turn, the level of inter-rater reliability coefficients.

#### **4.4 Assessing self-perceived strategy use by questionnaires**

The strategy questionnaires used in this part of the study aim to answer research questions 1-3 about strategy training and strategy use (see section 3.2.2). All students in the three treatment classes i.e. C, E1 and E2 were asked to complete the questionnaires on a pre-post basis. Section 4.4.1 describes the administration, design and piloting of the questionnaires. Section 4.4.2 gives details of the method of data analysis.

##### **4.4.1 Data collection and timing of data samples**

The Chinese versions of questionnaires Q1 and Q2 were administered to the E1 and E2 groups respectively before and after strategy training. The C group was given both questionnaires Q1 & Q2 at similar times. The regular teachers of the three groups administered the questionnaires. The self-explanatory instructions on the covers of the questionnaires explained briefly the purpose of the research and emphasized the

importance of giving true answers rather than 'correct' answers. All students were given 10-15 minutes to complete the questionnaires during class time. The time frame of administering the questionnaires and the data set are presented in Table 4.4.

Table 4.4 *Time Frame of Administering the Questionnaires and the Data Set*

Class	Phase 1(Dec 1999)	Phase 2 (Mar 2000)	Phase 3 (June 2000)	No. of questionnaires
E1	Q1 20	-	Q1 20	40
E2	Q2 20	-	Q2 20	40
C	Q1 & Q2 40	-	Q1 & Q2 40	80
				Total: 160

Two different strategy questionnaires (Q1) and (Q2) have been designed respectively for the E1 and E2 classes. Q1 has 14 questions. Of these, 8 questions focus on the direct strategies targeted in the training and 6 on non-target strategies. Similarly, Q2 has 14 questions, of which 7 focus on indirect strategies targeted in the training and 7 on non-target strategies. (See Appendix 10.) (The purpose of including non-target strategies will be explained shortly.) As explained in section 3.4.4, the objectives of both questionnaires are to assess students' (a) self-perceived frequency of strategy use; (b) perceptions of strategy effectiveness to see whether they will be altered through strategy training. Hence, each question has parts (a) and (b) as follows:

### ***Strategy 1***

When I need to think of what to say, I use fillers such as 'um', 'urh', 'well'. 'you know', 'I see what you mean', etc. to gain time.

(a) The **frequency** of my own use of the above strategy in English group discussions in general is

1	2	3	4	5	6
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Very low

Very high

(b) I think that the **degree of effectiveness** of the above strategy to English group discussions in general is

1	2	3	4	5	6
---	---	---	---	---	---

Very low

Very high

Sproull (1995) proposes that it is necessary to generate validity estimates of a self-designed research instrument prior to its use. The following section explains the procedure taken to establish and enhance the validity of the questionnaires as research instruments.

### ***Design and validity issues***

Validity can best be interpreted as “accuracy of measurement” (Sproull, 1995, p.74) and “the core essence of validity is captured nicely by the word *accuracy*” (Huck & Cormier, 1996, p.88). Stated differently, the validity of a research tool (in this case, a questionnaire) estimates the extent to which it accurately measures what it is supposed to measure (McDonough & McDonough, 1997). Hence, the fundamental question is whether the questionnaires were able to measure what they were purported to measure.

To answer this question, it is necessary to understand the objectives of the questionnaires, which are to compare the C class and the two E classes in terms of their perceptions of the use of target strategies and of the effectiveness of these strategies to group discussions. Given this aim, it is logical that the items in the questionnaires have to, first and foremost, include all the target strategies introduced to the students in the training sessions. In so doing, the content validity of the questionnaires is established because it estimates “the degree to which the various items collectively cover the material that the instrument is supposed to cover” (Huck & Cormier, 1996, p.89). This explains the rationale for covering all the target strategies.

Apart from the target strategies that were taught to students, non-target strategies that were not taught to students in the strategy instruction are also included in the questionnaires. The main purpose is to see whether students will give different response patterns to non-target strategies particularly after strategy training. The assumption is that students in E1 and E2 will report higher frequency of the use of target strategies than they will of the use of non-target strategies after training. This is another way to guard against the problem of social desirability in the sense that students are expected to give different response patterns to target and to non-target strategies. They will not however be sure which are the preferred strategies. Furthermore, this procedure is meant to ensure that other unsolicited and possibly self-generated strategies are not being overlooked. So a comparable number of target and non-target strategies are included in the questionnaires.

Content validity is one type of logical validity. The other type is face validity which concerns whether it “appears obvious that the test or device is measuring what it is supposed to” (Berg & Latin, 1994, p.152). To establish face validity, expert advice on the questionnaires was sought from a group of experienced professionals who was

taking an MEd course in TESOL at the University of Leeds and was hence considered appropriate judges of the questions.

While appropriate steps were taken to ensure maximum validity, it should be acknowledged that reactivity effects in relation to the impact of training on the completion of the questionnaires might well have been one source of threat to validity. That is, the questions themselves as well as the strategy training to which students were exposed might have led students to guess what the desirable answers should be and to respond accordingly rather than to respond to the treatment per se.

### *Piloting*

Both questionnaires were first field tested in February 1999 before the pilot study of the intervention and then a revised version was tested in early May 1999 immediately after the pilot training. The third version of the questionnaires was administered in late July 1999 well after the pilot training. As the pilot strategy training was conducted with students who shared very similar backgrounds and English proficiency levels with the target groups in the main study, they were considered appropriate for the piloting of the questionnaires. The three-phase piloting aimed to provide information on two important questions. First, did the questions elicit a range of responses? Second, did the respondents understand the questions and the response scales the way they were intended? The answers to these questions are crucial to establishing and enhancing the validity and reliability of the questionnaire as a research instrument to gauge strategy use. The following sections explain the reasons for this and report on the findings that help improve the strengths of the questionnaires as data collection instruments.

#### A. Did the questions elicit a range of responses?

This question concerns the problem of social desirability, which is the most serious threat to the validity of questionnaires that aim to measure people's self-perceptions or judgments. "Studies of response accuracy suggest the tendency for respondents to distort answers in ways that will make them look better or will avoid making them look bad." (Fowler, 1995, p.28) From this fact, it follows that the students,

particularly those in E1 and E2 groups, might want to give “socially desirable” or “positive answers” which they thought would please the teachers instead of true answers when asked if they would use the target strategies in group discussions.

In view of the aforementioned problems, two procedures were in place in the piloting to check if students gave particularly high ratings to all the responses. First, all the responses to the target strategies were studied and the results indicated that the E1 and E2 groups did give higher ratings to frequency of use of all the target strategies as compared with the C group. Second, all the responses to the non-target strategies were analysed. The findings showed that the students did give very different response patterns to the non-target strategies as compared with those to the target strategies; the students responded fairly negatively and one-sidedly to the majority of the non-target strategies. In other words, many students gave low ratings to the frequency of use of the non-target strategies. In this way, the non-target strategies seemed to have provided some evidence that students had not just given positive answers to please the researcher. A close look at the non-target strategies piloted, however, revealed that the wording of the questions was probably too negative in the sense that the questions were put in a negative form (e.g. *‘I avoid thinking about key words or ideas before it is my turn’*) or in double negatives (e.g. *To keep the discussion going, I do not ask others to clarify what they have said, even if I don’t understand them.*). The students might probably have been led by the wording in the questions to give predominantly negative responses in order to avoid looking ‘bad’.

B. Did the students understand the questions and the response scales the way they were intended?

This question deals with reliability and “the basic idea of reliability is summed up by the word consistency” (Huck & Cromier, 1996). As afore-mentioned, both questionnaires aimed to measure the subjective states of the respondents i.e. their self-perceptions of strategy use and their opinions of strategy effectiveness. The distinctive feature of such questions is that there are no right or wrong answers. To ensure consistency of the answers, the questions have to be set in accordance to the two basic criteria governing the measurement of people’s subjective states (Fowler, 1995).

First, “questions should be understood consistently by all the respondents so they are all answering the same question.” (ibid., p.46). To ensure that the same question meant the same thing to all the students to the extent possible, a focus group interview was held during the piloting to see if students had understood all the questions as intended. At the interview, students took turns to explain what each question meant and disagreement among students was spotted when there was ambiguity in the questions. Apart from using focus group interviews, 4 students in each of the two experimental and control classes were asked to give their reasons for the ratings that they had assigned to all the questions by providing a verbal report while completing the questionnaires. This involved the use of audio taping to record their thoughts while they were answering every question. An analysis of the taped verbal reporting revealed that almost 50% of the selected subjects had problems in accurately assigning the options that reflected what they meant when answering questions put in a negative form like: *“I do not repeat some of the words or phrases I have just said”*. The problem was most serious with questions with double negatives such as *‘To keep the discussion going, I do not ask others to clarify what they have said, even if I don’t understand them.’* The students gave high ratings on the frequency of use even though they verbally reported they did not use the stated strategies in the questions. This lent strong evidence that the wording in all questions had to be rephrased in a non-negative form to avoid misinterpretation and confusion of meaning to enhance validity (McDonough & McDonough, 1997).

So far what has been explained is the first criterion governing the setting of questions to ensure reliability. The second criterion concerns the response task i.e. the way the respondents are asked to answer the questions (Fowler, 1995, p.46). It is crucial that respondents understand the response task the way it is intended. According to Fowler (1995), a critical criterion for a response task is that “it defines a single dimension, and that the categories of responses from which respondents choose have a clearly ordered component” (ibid., p.51). Generally speaking, “5 to 7 categories is probably as many categories as most respondents can use meaningfully for most rating scales” (ibid., p.53). A 5-point scale was piloted but results showed that many respondents tended to assign ratings to the middle number or the neutral point. This is a problem particularly with Chinese students who tend to choose ‘non-committal’, middle ground when they are not sure about any answers or ‘zero’ or ‘never’ at the lowest end. So a 6-point scale was finally adopted to push the students to take sides.

In addition, numerical scales are in favour of adjectival scales because numbers translate better and more easily than adjectives. One example for illustration is the Likert-scale. Respondents indicate on a 5-point scale (i.e. ranging from “never or almost never” to “always or almost always”) as to how often they use the six types of LLS identified by Oxford (1990). The problem lies in the ambiguities of the verbalization of the meaning of each of the five points on the scale (Gu, Wen & Wu, 1995). As Fowler (1995) cautions, what is needed is a good translation of the two ends of the continuum. So “Very Low” and “Very High” are used for the two ends on the 6-point scale.

Regarding the questions and the response task, it is worth mentioning that the young learners were given a Chinese version of the questionnaires. To ensure that the English and Chinese versions were equivalent, the Chinese version was translated into English and compared with the original English for discrepancy of meaning. Discrepancies were subsequently amended in the final version.

On the basis of the findings from the piloting at three different stages, it was decided that:

- The questionnaires should include both target and non-target strategies to see how students would give different response patterns to them.
- All questions had to be phrased in a neutral, non-negative way to reduce, to the extent possible, the problem of social desirability affecting the responses.
- A 6-point numerical scale was used to avoid possible errors in interpreting descriptors which had similar meanings.

#### 4.4.2 Method of data analysis

In gauging the effects of training on strategy use, the questionnaires compares the E1, E2 and C groups in terms of (a) their self-perceived strategy use and (b) their perceptions of the effectiveness of strategies to group discussions. The ‘perceptions’ measured on the ordinal, 6-point scale used in the present study are ordinal data; there is no absolute value attached to each point. It follows that it is not appropriate to apply mathematical computations (e.g. ANOVA) on ordinal data (Healey, 1999). As mathematical operations are not permitted with ordinal data, cross tabulations



(CROSSTABS) was used. CROSSTABS is considered appropriate to the analysis of the questionnaire data for the purposes of the present research. CROSSTABS compares the ratings given by individual students to each strategy on a pre-post basis. CROSSTABS therefore has the distinct advantage of tracking ratings of individual students. Take the strategy “Resourcing” for an illustration. CROSSTABS of individual pairs of ratings of E1 and C on a pre-post basis across the 6 points on the response scales were conducted (Grids 1&2).

Grids 1&2 CROSSTABS of Ratings on “Resourcing” by E1 and C Groups

E1 Group (N=15)

Pre-training ratings	Post-training ratings					
	(1)	(2)	(3)	(4)	(5)	(6)
(1)	1	1				
(2)		1			4	
(3)		1	1		1	
(4)		2		1	1	
(5)			1		1	
(6)						1

C Group (N=12)

Pre-training ratings	Post-training ratings					
	(1)	(2)	(3)	(4)	(5)	(6)
(1)	1					
(2)		1		1		
(3)			1	1		
(4)		1	3	2		
(5)			1		1	
(6)						1

Proportion of increase:  $8/15 = 53\%$

$2/12 = 17\%$

The relative increase in positive scores between E1 and C is  $(53\% - 17\%) = 36\%$

Proportion of decrease:  $4/15 = 27\%$

$5/12 = 42\%$

The relative increase in negative scores between E1 and C is  $(42\% - 27\%) = 15\%$

The comparison makes it possible to find out the exact number (and proportion) of students who gave higher ratings and the number (and proportion) of lower ratings after training to an individual strategy. For instance, Grids 1 & 2 compare E1 and C in terms of students' ratings on the self-perceived use of “Resourcing” on the pre- and post- questionnaires. Numbers on the diagonal (shaded in yellow) indicate that the numbers of identical scores on both the pre- and post-questionnaires. Numbers on the upper, right hand side of the diagonal (shaded in grey) indicate numbers of students who gave higher ratings after training whereas numbers on the lower, left hand side of the diagonal represent numbers of students who gave lower ratings after training. The proportions indicated below the two grids show that E1 had a much bigger proportion of higher ratings after training as compared with the C group; there was a relative increase in positive scores of  $(53\% - 17\%) = 36\%$ . Comparison of the proportions of

higher scores gave only part of the comparison between the two groups. Since there was a 'no change score', the relative proportions of drops in scores could be studied independently. That is, the proportions of increased scores may or may not be accompanied by a comparative drop in the proportions of the lower scores. If the training appeared to be related to gains in higher ratings after training, it was reasonable to see whether training would result in smaller proportions of lower ratings reported by E1 as compared with C after training. The examples given in Grids 1&2 show that E1 did have a smaller proportion of lower ratings after training as compared with the C group; the relative increase in negative scores was  $(42\% - 27\%) = 15\%$ . That is fewer in E1 than C. To sum up, the relative differences between the two groups in the proportions of increased positive scores can be combined with the relative differences in the proportions of increased negative scores to give an overall figure. The result in this example is that E1 outnumbered C by a total of 51% ( $36\% + 15\%$ ) after training for "Resourcing". So the size of the effect of strategy training on E1 as compared with C is +51%. In short, the effect size is +51% for 'Resourcing'. This seems to indicate that, overall, strategy training had considerably positive impact on E1 in terms of their reported, self-perceived use of 'Resourcing'. This way, the impact on individual strategies could be gauged and the information provided by CROSSTABS also makes it possible to see how strategy training impacted differentially on individual strategies. This may help throw some light on the receptivity of students to the training of individual strategies.

#### **4.5 Observing strategy use in action**

The research method used in this part of the study aims to assess students' frequency of observed strategy use and to answer the research questions 1-5 about strategy training, strategy use and proficiency level (see sections 3.2.2 & 3.2.3). Only two 'pull-out' groups (one of high-proficiency and one of low-proficiency) in each of the three treatment classes (i.e. a total of six 'pull-out' groups) were invited to be involved in this part of the study. Section 4.5.1 describes data collection and timing of data samples. Section 4.5.2 explains the method of data analysis including coding of data and counting of frequency of use.

##### **4.5.1 Data collection and timing of data samples**

Each 'pull-out' group did three activities in a row: a 6-minute preparatory task in Cantonese; a 12-minute English group discussion task; and individual stimulated recall interviews SRIs outside normal class time (see Table 4.5). (It should be noted that the English group discussion task referred to in this part of the study is the same as the 'pull-out' group task described in section 4.3 used for rating students' task performance.)

Table 4.5 Data collection activities for 'pull-out' groups

Events in order of sequence	Format	Duration	Language used
1. Preparatory talk prior to the group task	Group of 4	6 min	Cantonese
2. Group discussion task	Group of 4	12 min	English
3. Stimulated recall interview (SRI)	Individual	20 min	Cantonese

Each of the six pull-out groups did the recording in three phases on a pre-, while-, post- basis between November 1999 and June 2000. The data set for this part of the study (i.e. excluding SRIs), consisted of 18 recordings and each recording comprised a 6-min Cantonese talk and 12-min English discussion. That is, a total of 108 minutes of Cantonese talk (18 x 6 minutes) were translated into English and analysed and 216 minutes of English discussion (18 x 12 minutes) were transcribed and analysed. (The set of 18 transcripts is in Appendix 11.) The recording schedule and the data set are presented in Table 4.6.

Table 4.6 Recording schedule and data set of performance data

Class	Proficiency/ Subgroup	Phase 1	Phase 2	Phase 3	Number of recordings*
		Dec 1999	March 2000	June 2000	
E1	High	<i>H</i>	<i>H</i>	<i>H</i>	3
	Low	<i>L</i>	<i>L</i>	<i>L</i>	3
E2	H	<i>H</i>	<i>H</i>	<i>H</i>	3
	L	<i>L</i>	<i>L</i>	<i>L</i>	3
C	H	<i>H</i>	<i>H</i>	<i>H</i>	3
	L	<i>L</i>	<i>L</i>	<i>L</i>	3
Total					18

< *H* > denotes high-proficiency group

< *L* > denotes a low-proficiency group

< \* > Each recording comprises 6-min preparatory talk and 12-min group discussion

The recorded pre-discussion planning phase is particularly designed to generate performance data for the use of indirect strategies. Indirect strategies for speaking targeted in the present study are defined as those plans, behaviours or thoughts intended by the students to facilitate the conduct of an upcoming L2 i.e. English discussion task (see section 2.5.3). Hence, all pull-out groups are given 6 minutes for

preparation prior to the English discussion task proper. The instructions given to all groups are as follows:

*“Now I would like you to discuss among yourselves - in Cantonese - what you will do to prepare for the English discussion that follows. The instruction sheet on the desk tells you what you will need to do in the English task. You may use the dictionary if you like. The preparation time is 6 minutes. At the end of the six minutes, I will give you a signal to start the English discussion. You will have 12 minutes for the English discussion. Both the preparation and the subsequent English discussion will be recorded. Please try your best to contribute to the discussions.”*

It should be noted that, students might also use the indirect strategies (e.g. ‘Asking for help’, ‘Giving help’) when they are waiting for their turn to speak while the English task is in progress. Hence performance data from both the preparatory talks and the English discussions are studied although observable indirect strategy use is mainly detected in the preparatory talks in Cantonese (see section 2.5.3).

The recorded English discussion phase is designed to generate data for the use of direct strategies targeted in the training. As these strategies are defined as plans, behaviours or thoughts intended by the students to facilitate speech processing (see section 2.5.2), they are expected to be deployed by students (if any) in the English discussions only. Hence, performance data from the English task are used to assess the use of direct strategies.

#### 4.5.2 Methods of analysis

##### *Unit of analysis and segmentation*

In both the preparatory task and the discussion proper, a turn (T) in the transcript is identified as the unit of analysis. As observable strategy use is the focus of this part of the present study, every turn is segmented into units in which each indication of the use of a strategy type is categorized and coded. Each segment is marked and bounded by a pair of slashes < // > and corresponded to one strategy type. (For the justifications for according a strategic status to language behaviour, see section 3.4.5.) For example, the extract below is taken from an English discussion task. Each turn is segmented and bounded by a pair of slashes and then assigned a code to indicate surface strategic behaviour. It should be noted that some turns (e.g. T19) have more than one segment. A coded sample of an English discussion is in Appendix 12. The

coding of the Cantonese preparatory talk is done in a similar fashion, an example of which is in Appendix 13. The full sets of codes, definitions and examples of strategies observed in the performance data are in Appendix 14.

Table 4.7 *An Extract of Coded English Discussion*

T10	<i>/Which is the most /er/ /important?/</i>	<stalling> <facilitating progress>
T11	<i>/The second one/</i>	<facilitating progress>
T12	<i>/The second one? Powerful legs?/</i>	<seeking confirmation>
T13	<i>/I think the high muscle high power muscle/</i>	<self correction>
T14	<i>/No I think the legs (.) is more important/</i>	<responding>
T15	<i>/Why?/</i>	<Seeking meaning>
T16	<i>/Because/</i>	<abandoning messages>
T17	<i>/when but we can do it more/</i>	< x >
T18	<i>the important things is save your life</i>	< x >
T19	<i>/If you (.) look smart (..) /</i>	<false start>
	<i>/if this work as super strong heart</i>	
	<i>that last for (.) 100 years/</i>	<resourcing>
	<i>/your brain (...)/</i>	<false start>
	<i>/you you/</i>	<self repetition>
	<i>/are too old and you can't think (.)</i>	
	<i>And you don't need to live (.) and</i>	
	<i>you must have a pretty handsome face (.)</i>	
	<i>After 100 years you will be ugly/</i>	<x >
	<i>/you know/</i>	<using fillers>
	<i>/and and/</i>	<self repetition>

### *Process of coding and analysis*

To begin with, all the observable target strategies that were introduced to the students during the strategy training sessions form the *a priori* list of categories for coding strategy use. There are 7 indirect strategies and 8 direct strategies targeted in the training and these 15 categories remain the same in all stages of coding. Apart from the target strategies, there are non-target strategies which were not introduced in the training sessions but were used by students. The non-target strategies are generated from the data as coding is in process. So, unlike the target strategies, there is no pre-existing list of non-target strategies. After an initial pass of the data, 21 non-target strategies are added to the list of 15 target strategies. That is, the initial coding scheme is composed of 15 target strategies and 21 non-target strategies.

The initial coding scheme was refined and inter-coder reliability checks were conducted at three different stages. The coders were explained the context in which the preparatory talk and the group discussion was conducted and then asked to assign one code to every segment indicated in the transcripts. To facilitate coding, all the turns had been segmented by the researcher before they were given to the coders for coding. Each stage of coding is now described in turn.

At Stage One, Coder 1 was asked to use the initial coding scheme with explanations and examples to code 2 (out of 18) transcripts of the preparatory talk in Cantonese (translated into English) and 1 (out of 18) transcripts of the English discussion proper. The purpose was to check if the scheme was understandable and usable. An initial pass of the small set of data indicated that definitions had to be revised and clarified but the overall coding scheme was usable.

At Stage Two, the revised coding scheme was used to conduct formal inter-coder reliability checks with Coders 2 and 3. Both coders were employed as part-time research assistants as they were experienced in coding for educational research. 9 out of 18 transcripts of the preparatory talks (comprising 381 segments) were randomly selected for Coder 2 to analyse and 9 out of 18 transcripts of the English discussion (comprising 1,484 segments) were randomly selected for Coder 3 to analyse. Both coders were given the full set of codes, definitions, and examples. Before they started the analysis, two transcripts taken from the 9 remaining transcripts were used for training purposes to ensure convergence of interpretation by each coder. After this, each coder was asked to take the 9 transcripts away and assign a code to each identified segment.

When coding was completed by the coders, reliability checks began to assess the level of agreement between their codings and mine. As espoused by Green (1998:12), “the issue of reliability of encoded data centres on the probability that the same data might be coded using the same categories, either by two independent encoders, or by the same individual coding the same set of protocols twice”. On the basis of this, an intercoder reliability coefficient formula was used to quantify the degree of agreement between coders.

Number of segments coded the same by the Coder and the Researcher

Number of segments coded by the Researcher

Of the 381 segments (from Cantonese preparatory talks) coded by Coder 2, 315 matched those of mine. That means the inter-coder reliability coefficient was 0.827. Of the 1,484 segments (from English discussions) coded by Coder 3, 1,367 matched those of mine. The inter-coder reliability coefficient was 0.921. These figures showed that there was a reasonable level of convergence of interpretation among coders. After the reliability checks, problems of coding and disagreements were discussed and resolved. In other words, 9 transcripts of Cantonese talks and 9 transcripts of English discussions (i.e. 50% of the entire dataset) had been checked.

At Stage Three, when disagreements with Coders 2 and 3 were resolved, the entire data set (18 preparatory talks and 18 English discussions) was entered the data analysis software NUD\*IST (Version 4). The coding of the remaining 9 transcripts was then done and constantly compared with the already coded 9 transcripts using NUD\*IST. The software helps enhance the rigour of analysis (Green, 1998; Silverman, 2000; Weitzman, 2000). In particular, it offers the following range of functions that facilitate the analysis of both the performance data and stimulated recall data:

- Coding segments
- Changing a code after the original coding
- Collapsing codes
- Retrieving, browsing and checking all segments assigned to the same code
- Counting the frequency with which each code was used by any given coder
- Profiling the strategy types of a given group/student

NUD\*IST also has the advantage of facilitating intra-coder reliability checks which concerns the level of agreement of coding done by the same coder at different times. With NUD\*IST, this is easily done by retrieving all segments coded as the same code for comparison and contrast. The purpose was to ensure consistency of coding conducted by multiple checking of the codings.

#### *Methods of counting frequency of observed strategy use*

The preparatory talks in Cantonese have been translated into English for coding. Turns (T) and counting for every 10 turns is used as the standard measure and the basis of comparison across groups and phases. Either none or only one predominant

strategy is identified in every turn in the 18 transcripts. Frequency of use (F) of observable strategies is expressed in terms of every 10 turns. In other words, counts are for every 10 turns produced in 6 minutes by one group of 4 students. Hence, the frequency (F) of the observable use of a particular strategy type per group is calculated as follows: (Also see Table 5.14 in results section 5.4.3.)

$$F \text{ (frequency per 10 turns)} = \frac{N \times 10}{T} = \frac{\text{Total no. of turns coded as a strategy type (N)} \times 10}{\text{Total no. of turns produced by the group (T)}}$$

For the English discussion task, the number of turns and the amount of talk produced by every group are very different because the groups vary in language proficiency and in degrees of social cohesiveness, which in turn affect the length of turns they produce. So instead of using the number of turns, the number of words produced is preferred and frequency of use (F) per 100 words is used as a comparable measure of frequency counts of strategy use across groups and times. The transcript data indicate that one long turn of one minute could well contain as many strategies as 5 short turns lasting the same period of time. On the other hand, the total number of words produced by each group does not vary as much as that of turns. It is, therefore, decided that the total number of words would be a more reliable reference point to use as the basis of comparison across groups and phases. So frequency counts of strategy use is for every 100 words produced by one group of 4 students in 12 minutes. Hence, the frequency (F) of the observable use of a particular strategy type per group is calculated as follows. (Also see Table 5.5 in results sections 5.4.2.)

$$F \text{ (frequency per 100 words)} = \frac{N \times 100}{W} = \frac{\text{Total no. of segments coded as a strategy type (N)} \times 100}{\text{Total no. of words produced per group (W)}}$$

#### **4.6 Tapping strategic thoughts using stimulated recall interviews (SRIs)**

The research method used in this part of the study aims to assess students' frequency of reported strategy use in the stimulated recall interviews (SRIs) and to answer research questions 1-5 about strategy training, strategy use and proficiency level (see sections 3.2.2 & 3.2.3). Both quantitative and qualitative data are used to answer the questions. The same 'pull-out' groups in each treatment class were involved. Section 4.6.1 reports the data collection activities, the data elicitation procedures and



recording schedules. Section 4.6.2 explains the method of data analysis including the method of counting frequency of use.

#### 4.6.1 Data collection activities and timing of data samples

Immediately after doing the 6-min Cantonese preparatory talks and 12-min English discussions proper (see Table 4.5 in section 4.5), the same 'pull-out' groups of four students (one of high-proficiency group and one of low-proficiency group) from each of the E1, E2 and C classes participated in the SRIs. A total of six groups of four students participated in the SRIs; they were *individually* interviewed three times (i.e. pre-, while-, post-training) between November 1999 and June 2000. The database of the SRI data is therefore composed of 72 interviews; each lasts about 20 minutes including video play back. The recording schedule and data set are presented in Table 4.8.

Table 4.8 *The recording schedule and data set of stimulated recall interviews*

Class	Ability	Phase 1	Phase 2	Phase 3	Number of SRIs *
		Dec 1999	March 2000	June 2000	
E1	High	4	4	4	12
	Low	4	4	4	12
E2	H	4	4	4	12
	L	4	4	4	12
C	H	4	4	4	12
	L	4	4	4	12
					72

< H > denotes high-proficiency group      < L > denotes a low-proficiency group  
 < \* > Each recording comprises about 20-min talk including video-play back.

Only the researcher and individual students were present in the SRIs. As explained in section 3.4.6, the video play-back of the task serves the purpose of providing a strong stimulus to aid memory. Hence, in the main study, the video-tape of the preparatory talk/English discussion was played back to the students and they were asked to watch and pause to report on what they were thinking about during the task. The students were given only minimal training because too much training would raise the students' awareness of the experimental goals or activate unnecessary information other than what was heeded during the events. Nothing about strategies or strategy training was mentioned at the SRIs. The SRIs were conducted in the students' mother tongue (i.e. Cantonese) to facilitate reporting and all interviews were audio-taped for analysis.

As discussed in section 3.4.6, a limitation of the SR methodology is that students may repress data. Hence, to address this problem, it was clearly explained to students that

SRIIs were for personal research and that students' performance both in the two tasks and the SRIIs would have no impact whatsoever on their academic results. In addition, students were told that: (1) there was no 'right or wrong' response; (2) they had to report truthfully what had happened during the task; (3) if they did not remember, they should say so. Let us now turn to the procedure of eliciting SRI data during the interviews.

The reader will recall that three provisos regarding the collection of SRI data were discussed in section 3.4.6. That is, first, the timing of data collection is of the essence. Second, the reporting has to focus on the 'there and then' processing during the event/task itself but not on the SRI. Third, all the questions must be on the interviewee's description of thought processes but not explanation of thought processes during the event. (For the justification of these provisos, see section 3.4.6.) In view of these provisos, special care was taken to collect SRI data in the main study.

First, to address the issue of timing, it is necessary for students to do the SRI immediately after the two tasks (i.e. preparatory task and English discussion task) when the students can still access their short-term memory (STM). Otherwise, there will be a greater chance that students may forget the details and fabricate responses. Hence, in order to shorten the time gap between the actual events and the SRIIs, two key decisions were made. First, in order to cut down on the waiting time for individuals for the SRIIs, the 8 pull-out students from the E1 class watched and reported on the 12-min English discussion task only. For E2, the students first watched and commented on the entire 6-min Cantonese talk. If and when there was time left, they also watched and talked about part of the English task as it was expected that some indirect strategies might have been used during the English discussion. Second, it was desirable to have the same number of students in each of the C, E1 and E2 'pull-out' group for comparison of results. Nonetheless, for the C class, due to the limitation of resources, there were only 2 groups of 4 (i.e. 8 students). So each of the 4 students in one group watched the English task only and the protocols of these 4 students were compared with those of E1 to assess the reported use of direct strategies. Similarly, each of the other 4 students watched the entire preparatory talk and parts of the English task (time permitting) and their protocols were compared with those of E2 to assess the reported use of indirect strategies. An overview of the interview arrangement is in Appendix 15.

Second, to address the issue of the focus of the reporting, the students were asked to try to remember and verbalise what had gone through their mind during the tasks (i.e. the preparatory tasks or English discussions). They were told that they would be asked questions such as: “What were you thinking at that point?” “What was at the back of your mind?” “Do you remember what was happening?” “Any difficulty there?” The emphasis was on what had been happening in the event (i.e. ‘there and then’) but not on what students were thinking during the SRIs (i.e. ‘here and now’).

Third, to address the problem that students tend to rely on their “a priori theories” to theorize about what they saw in the video or what might have happened during the event, it was ensured, as far as possible, that the questions were on the interviewee’s description of thought processes but not explanation of thought processes during the preparatory or English task. That is, the researcher tried not to ask ‘why?’ questions as far as possible. Despite this measure, it is acknowledged, however, that there is no way to rule out the possibility that any post-task account may still be partly affected by individual’s personal theories.

Last, students were instructed how to operate the remote control to stop or rewind if and when necessary during the reporting. The following instructions were repeated to each student just before an SRI began:

*“What we’re going to do is to watch the video together. I’m interested in what you were thinking during the task. I can see what you were doing but I don’t know what you’re thinking about. I’ll pause the tape for you to talk or you can pause the video any time you like if you have anything to say. Is that clear?”*

Over the three phases of data collection, there was a gradual phasing out of prompts such as “What were you thinking about?” as the students became familiar with what they were required to talk about. In Phase 3, many students took the initiative to stop the videotape to report and the researcher only had to speak a little.

#### 4.6.2 Methods of analysis

All the 72 SRI transcripts were translated by the researcher from Cantonese into English for coding and analysis. To ensure the accuracy of the translation, six transcripts (out of 72) were checked by an undergraduate who majored in English/Chinese translation. To ensure the validity of the SR data, it was decided that,

prior to analysis, the entire database should be checked to see whether they met the following three criteria:

1. What was reported was the ‘there and then’ thought processing at the time of the task rather than the ‘here and now’ or post hoc rationalization during the SRI.
2. What was reported was the thought process of the student during the task itself but not the interpretation of the thought process by the student during the SRI.
3. What was reported was unprompted or prompted after the probing question on the thinking process (i.e. “What were you thinking about?” “What was at the back of your mind?” “What was happening?”)

SRI responses that do not meet any one of these criteria are considered invalid for the purposes of the present study and hence excluded for analysis. Take the three examples below for illustration. In example 1, in RECALL 2, the student responds to the clarification question: “What do you mean by....”. This question moves away from the ‘there and then’ of the event and instead focuses on the ‘now and here’ of the SRI. It is therefore highly likely that the student’s reporting is based on what s/he is thinking about in response to the question: “What do you mean by...” during the SRI session rather than on what s/he was thinking about during the event i.e. the discussion task. As such, criterion (1) is not met and so RECALL 2 is not included in the database for analysis.

Example 1

Prompt	What was happening there?
RECALL 1	I was trying to use some simple words to say something more.
Prompt	<i>What do you mean by ‘say something more’?</i>
RECALL 2	<i>For example, if you want to say ‘You eat very fast’ but don’t know the word ‘fast’, then you’ll need to describe it in another way.</i>

In Example 2 below, to maximize the chance that the accounts reflect recalls of thought processes rather than a priori theories or post hoc rationalizations of the students during the SRIs, the response to the ‘why’ question in RECALL 2 is not analysed because it does not meet criterion (2). All in all, there should be only one kind of focal question that aims to tap the thoughts of students during the events: “What were you thinking about?” “What was at the back of your mind?” “What was happening there?” Other probing questions are therefore considered irrelevant.

Example 2

RECALL 1      There it's the same thing. I mean I was asking my group mates why they had said so in the discussion. This is what we usually do in the discussion. I felt that I needed to know more about what others were thinking.

*Prompt*            *Why?*

RECALL 2      *They might have some insights that nobody could think of. You never know.*

In example 3 below, first, there are too many prompts and criterion (3) is violated. So RECALLs 2 and 3 are invalid data. Moreover, in RECALL 3, the train of thoughts of the student may have been altered by the question "What sort of difficulty did you come across?". As a result, the student may have relied on his/her general beliefs to answer the question relating to the discussion. So RECALL 3 does not satisfy criterion (1) and has to be removed from the data set.

Example 3

Prompt            What was happening there?

RECALL 1      Thinking.

*Prompt*            *What were you thinking of? Any difficulty there?*

RECALL 2      *A little.*

*Prompt*            *What sort of difficulty did you come across?*

RECALL 3      *At the beginning...I had to think and respond promptly, or people would switch to discuss some other things.*

After the screening procedures, SRI data that lacks face validity are excluded for analysis. The filtered dataset is then used for analysis and coding for this part of the study.

The three steps recommended by Green (1998) for analysing verbal protocol data are employed for the present study. They are: (1) developing a coding scheme; (2) identifying the unit for analysis; and (3) segmenting the protocols for coding. We now describe these steps in turn.

The first step is to draw up an initial coding scheme. All the target strategies that were introduced to the students during the strategy training sessions form the *a priori* list of categories for coding reported strategy use. The intention is to assess whether students reported using the 15 direct and indirect strategies targeted in the intervention. These 15 categories remain the same in all stages of coding. Apart from the 15 target strategies, there are non-target strategies which were not introduced in the training

sessions and were reported by students. The non-target strategies are being drawn up while initial coding is in progress as well. The purpose is to explore whether the patterns of reported use of non-target strategies will change as a result of strategy instruction.

The second step is to identify the unit for analysis in the SRI transcripts. Every time when the video was stopped and when the students did the reporting constitutes an episode. So an episode comprises the video play-back of a related clip, the prompt (if any) by the research and the prompted or unprompted reporting of a student. The RECALL (segment) is the reporting of the student and identified as the unit for analysis. An example is given as follows.

\* Episode 1 (Video clip)

Prompt	What was at the back of your mind there?
RECALL (S2)	/That part seemed to be quite difficult, I remember. They could understand what I meant. What I meant was that with 'handsome face', it helped a lot, for example, in job interviews, etc. It might be helpful. But I didn't know how to say 'helpful' or 'job interviews' in English, so I just said 'something good for you' instead./
	<Paraphrasing>

The third step is to segment the RECALL for coding. The RECALL in each episode is segmented into unit(s) in which each mention of a strategy type is categorized and coded (Gass & Mackey, 2000). Each segment is marked and bounded by a pair of slashes < / / > as indicated in the aforementioned example and is assigned one code. (The example is coded as 'Paraphrasing'.) As SRI data serves as one independent source of information about strategy use, the coding of reported strategy use is done entirely independent of the performance data.

The initial try out of segmentation and coding has been conducted with 7 randomly selected interviews (about 10% of the database). The intention is to see how usable the initial scheme is. The initial analysis and coding indicate that the preliminary coding scheme is usable. Then, the coding of the SRI data was done at four major stages. The purpose is two-fold: first, to refine the coding scheme, second, to ensure objectivity and reliability of codings so that they do not reflect the biases or idiosyncrasies of the researcher. In each stage, a different coder was recruited and explained the context in which the SRI interview was conducted and then asked to

code the segmented RECALLs. The procedures followed at each stage of coding are now described in turn.

### *Stage One*

Coder 1 was asked to re-analyse all the RECALLs in the 7 interviews which had been segmented and coded by the researcher, using the initial coding scheme. Coder 1 held a teacher's certificate and had experience in being a research assistant. To lighten the workload of the first coder, she was given only the list of strategies which the researcher had coded for the 7 interviews (i.e. about 10% of the data set). The list consisted of the names of the strategies coded, their definitions and an example for each definition. The definitions and the accompanying examples were verbally explained to the coder. The coder was then asked to take the data away and assign a code to each identified segment in the RECALLs. It should be noted that only the predominant strategy type was coded though it was possible that what was reported could well be referred to more than one strategy type.

Regarding reliability checks, the same formula used for the performance data was applied to SR data (Green, 1998). Of the 89 segments coded by Coder 1, 61 matched those of the researcher; the reliability coefficient was 0.685. This showed that the initial scheme was understandable and usable to an outsider.

The coding scheme was refined with a view to enhancing the reliability of coding. This was mainly done by collapsing overlapping and similar strategies and by regrouping some strategies. This procedure applied to all non-target strategies. It should be acknowledged that reducing the number of strategies would reduce the interpretative power of coding. Nonetheless, the main objective of using SRI data was to investigate and compare macro patterns of strategy use (if any) of students with other types of data. Hence, reducing the types of strategies to enhance reliability of coding seemed appropriate.

### *Stage Two*

A further sampling of 8 interviews were then randomly selected from the dataset and given to Coder 2. She held a Master's degree in Education and was a qualified teacher.

On the basis of the revised coding scheme, she was asked to segment and code the RECALLs of the 8 interviews. A total of 98 segments were coded, out of which 80 matched the codings of the researcher. The intercoder reliability coefficient was 0.816. The result showed that reducing the number of types of strategies did lead to improved convergence in coding.

Nonetheless, on checking the disagreements, it was found that there were still two problems that might have affected the reliability of the codings. First, it was at times difficult to discern the meaning of the RECALLs alone without the performance data (i.e. recordings of group discussions). Second, it might be necessary to assign two codes to one segment because some strategies seemed to serve more than one function and that it was difficult to assign only one code (i.e. strategy) to each segment. In view of the problems identified, it was decided that, apart from relying on the definitions and examples, operational criteria would need to be drawn up and at least one of the criterion would have to be met for each segment to be classified under a strategy type. (For a full set of codes, definitions, operational criteria, and RECALL examples, see Appendix 16; for coded samples of two SRIs, see Appendix 17.)

### *Stage Three*

After further refinements of the definitions and operational criteria, it was decided that 50% of the entire data set (i.e. 36 interviews), regardless of whether they had been checked at stages 1 and 2, would need to be randomly selected across groups and phases for coding and further checking by a third coder to improve the reliability of coding. In view of the amount of data to be coded by the third rater, a qualified English language teacher who held a Master's degree in TESL, was employed on a part-time basis to do the job. She attended a briefing at which the definitions, operational criteria and examples were explained. Prior to coding the 36 interviews, 2 interviews out of the other 36 SRIs were coded for familiarization and standardization purposes in order to minimize differences in interpretation. All the efforts proved to be effective in establishing reasonable reliability. Out of the 461 segments she coded, 412 matched my codings. The reliability coefficient was 0.894.

### *Stage Four*



When all the disagreements with the third coder were resolved, the entire dataset (72 SRIs) was entered the programme NUD\*IST for coding and for intra-rater reliability checks.

*Method of counting of frequency of reported use in SRIs*

For each SRI, the RECALLS are divided into segments in which each mention of a strategy type is categorized and coded. The number of recall segments coded at a given strategy is then equivalent to the frequency count of the reported use of the strategy. In cases where a recall segment cannot be considered 'strategic', it is coded as < x > (i.e. non strategies). They are also counted towards the total number of recall segments reported. For each SRI, the proportional frequency of the reported use of target strategies (T) is expressed in terms of percentage (%) and calculated as follows: (See Table 5.20 in results section 5.5.2.1.)

$$\frac{\text{Total number of recall segments coded as target strategies (T)}}{\text{Total number of recall segments coded (T + NT + X)}} \times 100\%$$

The proportional frequencies of the reported use of non-target strategies (NT) and of non strategies < x > are calculated in the same way. The total percentage of T, NT and < x > coded per interview is therefore 100%.

It should be cautioned that, in calculating the proportions of reported use of strategies in terms of percentages, the target and non-target strategies are not entirely independent of each other. The inclusion of non-strategies as the third category may alleviate the problem to a certain extent though not entirely. Nonetheless, any weaknesses inherent in the counting method should not weaken the validity of the results as the same method of counting is applied to all groups and the focus of the present study is on cross-group comparisons.

Apart from quantitative analysis, further case study analysis is deemed necessary to see whether there are qualitative changes in students' strategy use across phases. To ensure representation of samples from both the E1 and the E2 groups, proficiency level and range of strategy use are used as criteria for selecting students from SRIs for case study. Hence, students of high-proficiency and of low-proficiency and students who used a wide as well as a narrow range of strategies in each of E1 and E2 were included for qualitative analysis.

#### 4.7 Discussion and conclusion

Chapter 4 has explained procedures of implementing the interventionist study using a quasi-experimental design. Data collection activities and procedures for eliciting four types of data using four research methods (i.e. task ratings, questionnaires data, observation/performance data, SR interview data) have also been described. In addition, methods of data analysis have been illustrated.

At this point, it is necessary to mention that there may be an interaction effect between the treatment (i.e. strategy training) and four research methods in the context of a quasi-experimental design. That is, it is not feasible to control for all initial differences across groups, so pretests and posttests (rather than posttest only) have to be conducted to assess gained scores in favour of the experimental groups (if any). According to Campbell and Stanley (1966), the pretest may then interact with the treatment, thus influencing the posttest outcome. In the context of the present research, while the use of a control group could eliminate the 'testing' or 'practice' effect, this does not quite address the issue of the possible interaction effect between the strategy instruction and the research methods used. For example, it is possible that students, after having done the English discussion task, completed the questionnaire, attended the SRI at Phase 1, may become sensitized and familiar with the English task or the questionnaire, or the SRI itself. The sensitization may in turn interact with the training effect to affect students' responses at Phases 2 and at Phase 3. Put simply, the findings at Phase 3 may be the result of the interaction effect between the training and the 'practice' of different research methods rather than the training per se. This has repercussions on the interpretations of findings and will be considered in Chapter 6 when the findings are discussed.

## **CHAPTER 5 PRESENTATION AND DESCRIPTION OF FINDINGS**

### **5.1 Introduction and Overview of the Chapter**

This chapter presents findings for task performance, strategy questionnaires, observations and stimulated recall interviews i.e. the four research instruments described in the previous chapter. The findings are organized in accordance with the rationale delineated in Chapter 3 in which the logic of a multi-method approach and the theoretical bases of the different instruments were justified. The order of presentation of the findings in this chapter is as follows:

- 5.2 Assessing Performance in English Group Discussion Tasks
- 5.3 Assessing Self-perceived Strategy Use from Strategy Questionnaires
- 5.4 Assessing Observed Strategy Use in Action
- 5.5 Assessing Reported Strategy Use in Stimulated Recall Interviews
- 5.6 Triangulation of findings

Section 5.6 brings together all the key findings from sections 5.2 to 5.5 with a view to addressing the research questions from a multi-method perspective. Section 5.7 concludes this chapter by statements synthesising the broad impact of the results, and highlighting key issues to be discussed in Chapter 6.

### **5.2 Assessing Performance in English Group Discussion Tasks**

#### **5.2.1 Introduction**

It is a research tradition that experimental design normally focuses on observable changes (Robson, 1993). We therefore begin with studying students' observable changes in terms of their performance in group discussions. That is, this section presents findings on the impact of the training on students' procedural knowledge (i.e. what students could do). As the findings described in this section include both whole-class results and 'pull-out' group results, we obtain an overall picture of the impact on students' performance. This section addresses research questions 6-8. (See section 3.2.4.)

#### **5.2.2 Results of task performance**

Table 5.1 below sets out the 'English' scores and the 'Task effectiveness' scores on the whole-class tasks and on the 'pull-out' group tasks (see section 4.3.1). As all the five groups in each class were involved in the whole class task, the ratings under 'whole-class' task in the Table represent the mean value of five groups in each class. As only one low-proficiency (L) sub-group and one high-proficiency (H) sub-group in each class did the 'pull-out' group task, the ratings under 'pull-out' task in the Table represent the mean value of the two pull-out groups in each class. The gains in ratings are expressed in terms of the difference between ratings before strategy training and after strategy training i.e. on a pre-training and post-training basis.

### 5.2.2.1 Results by treatment

Table 5.1 *Ratings and pre-post gains for C, E1 and E2 classes*

<b>Whole class task</b>										
	'English' scores on a 6-point scale					'Task effectiveness' scores on a 6-point scale				
	Pre-		Post-		Pre-post gains	Pre-		Post-		Pre-post gains
Class	Mean	S.D.	Mean	S.D.	Mean	Mean	S.D.	Mean	S.D.	Mean
C	3.20	0.89	3.15	0.75	-0.05	2.95	1.23	3.40	0.68	0.45
E1	2.95	1.05	2.90	1.02	-0.05	3.05	1.00	3.60	0.99	0.55
E2	1.85	0.67	2.45	0.69	0.60	1.75	0.72	2.90	0.97	1.15
<b>'Pull-out' group task</b>										
Class	Mean	S.D.	Mean	S.D.	Mean	Mean	S.D.	Mean	S.D.	Mean
C	2.63	0.92	2.63	1.06	0.00	2.75	0.71	2.38	0.74	-0.38
E1	3.50	1.07	4.00	1.20	0.50	3.25	0.89	3.50	1.20	0.25
E2	2.00	0.76	2.75	0.89	0.75 *	2.25	1.16	3.63	0.74	1.38 *

< \* > denotes the highest pre-post gain

A clear picture has emerged from a comparison of all the pre-post gains (shaded boxes). For E1 and E2 classes, there are eight comparisons in total between the pre-post scores, seven of which are improvements. On the other hand, for the C class, there are four comparisons in total, one of which is an improvement. It can be seen that E1 had higher pre-post gains than C on three out of four comparisons (i.e. one 'English' score and two 'Task effectiveness' scores). E2 had higher pre-post gains than C on four out of four comparisons (i.e. two 'English' scores and two 'Task effectiveness' scores). These findings indicate that both E1 and E2 outperformed the C class. E2, the intervention group that had received training in the use of indirect strategies, appeared to perform the best in terms of both 'English' and 'Task effectiveness' scores, with the gains on the latter scores higher than those on the former.

## 5.2.2.2 Results by proficiency level

Let us now turn to the results by proficiency level of the students to see if it made a difference to the afore-mentioned overall pattern. There were three high-proficiency subgroups (H) and low-proficiency subgroups (L) in each class. Hence, under 'whole class' task in Table 5.2 below, H values represent the mean rating of three high-proficiency subgroups and L values represent the mean rating of two low-proficiency subgroups. Under the 'pull-out' group task, H denotes the mean rating of only one high-proficiency subgroup and L only one low-proficiency sub-group.

Table 5.2 *Ratings and pre-post gains (by proficiency level)*

		'English' scores				'Task effectiveness' scores					
		Pre-	Post-	Pre-post gains		Pre-	Post-	Pre-post gains			
<b>Whole class task *</b>											
Class	Ability	Mean	S.D.	Mean	S.D.	Mean	Mean	S.D.	Mean	S.D.	Mean
C	H	3.42	0.79	3.33	0.65	-0.08	3.50	0.80	3.50	0.80	0.00
	L	2.88	0.99	2.88	0.83	0.00	2.13	1.36	3.25	0.46	1.13
E1	H	3.67	0.49	2.92	0.90	-0.75	3.50	0.90	3.67	1.15	0.17
	L	1.88	0.64	2.88	1.25	1.00 *	2.38	0.74	3.50	0.76	1.13
E2	H	2.00	0.60	2.58	0.51	0.58	1.92	0.79	2.67	0.89	0.75
	L	1.63	0.74	2.25	0.89	0.63	1.50	0.53	3.25	1.04	1.75 *
<b>'Pull-out' group task</b>											
Class	Ability	Mean	S.D.	Mean	S.D.	Mean	Mean	S.D.	Mean	S.D.	Mean
C	H	2.75	0.50	3.25	0.96	0.50	2.50	0.58	2.75	0.96	0.25
	L	2.50	1.29	2.00	0.82	-0.50	3.00	0.82	2.00	0.00	-1.00
E1	H	4.25	0.50	5.00	0.82	0.75	4.00	0.00	4.00	1.41	0.00
	L	2.75	0.96	3.00	0.00	0.25	2.50	0.58	3.00	0.82	0.50
E2	H	2.00	0.82	3.25	0.50	1.25 *	1.50	0.58	3.75	0.50	2.25 *
	L	2.00	0.82	2.25	0.96	0.25	3.00	1.15	3.50	1.00	0.50

< \* > denotes highest pre-post gains by proficiency group

Let us focus on the overall picture first. Taking the whole-class task and 'pull-out' group tasks together, for all the H-subgroups of E1 and E2, there are eight comparisons between pre-post scores, six of which are improvements. For all the L-subgroups of E1 and E2, there are eight comparisons between pre-post scores, all of which are improvements. On the other hand, for the H-subgroups of C, there are four comparisons between pre-post scores, two of which are improvements. For the L-subgroups of C, there are four comparisons between pre-post scores, only one of which is an improvement. Therefore, the synoptic picture by proficiency level is that both the E1 and E2 classes outperformed the C class.

We now turn to the findings for the E1 group, which had received training in the use of direct strategies. The findings pertain to RQ6 (see section 3.2.4).

Taking the whole-class and 'pull-out' group tasks together, the L-subgroups had higher gains than their counterparts in C on three out of four comparisons, but the H-subgroups had higher gains than their counterparts in C on only two out of four comparisons. In addition, the L-subgroups had higher pre-post gains than their H-subgroups on three out of four comparisons. Therefore, this set of results indicates that, for E1, strategy instruction might be related to the low-proficiency students making greater improvements in task performance when compared with the high-proficiency counterparts. Furthermore, the L-subgroups had higher pre-post gains than their C counterparts on 'English' scores on both the whole class task and the 'pull-out' group task. Moreover, the L-subgroups had the highest pre-post gain (i.e. 1.00) in the 'English' score across all L-subgroups in E1, E2 and C. This indicates that strategy training might be associated with the low-proficiency students making improvements in the 'English' score. Similar improvements were not evident on the 'Task effectiveness' scores for E1.

#### *Training in the use of indirect strategies*

We now turn to the findings for the E2 group, which had received training in the use of indirect strategies. The findings pertain to RQ7 (see section 3.2.4).

Taking the whole-class and 'pull-out' group tasks together, both the H-subgroups and L-subgroups had higher gains than their respective counterparts in C on four out of four comparisons including both 'English' and 'Task effectiveness' scores. Furthermore, the H-subgroups had higher pre-post gains than the L-subgroups on two out of four comparisons. Similarly, the L-subgroups had higher pre-post gains than the H-subgroups on two out of four comparisons. This set of findings shows that, for E2, strategy instruction could be connected with both high-proficiency and low-proficiency students in E2 making improvements in task performance. Last, there were higher pre-post gains on the 'Task effectiveness' scores than 'English' scores on four out of four comparisons for E2 and on two out of four comparisons for C, thus suggesting that training in the use of indirect strategies might be associated with E2 making even more improvements in the 'Task effectiveness' score than the 'English' score.

### 5.2.3 Summary and discussion

It is interesting to find out that, for both E1 and E2, strategy intervention apparently had an impact on students' performance in group discussions. In particular, to address RQ6, for E1, which had received training in the use of direct strategies, the tuition appeared to have enabled the low-proficiency students to do better in terms of the 'English' scores. That is, proficiency level made a difference to the impact. To address RQ7, for E2, which had received training in the use of indirect strategies, the strategy instruction seemed to have benefited students' performance in the 'English' scores and even more so in the 'Task effectiveness' scores. For E2, proficiency level did not make much difference to the impact. To address RQ8, the results support the argument that the respective training in the use of direct strategies and of indirect strategies may be related to improvements in different aspects of task performance. The reasons for these results, alongside other issues, will be explored in detail in Chapter 6.

So far, the findings for task performance have given us a general picture of the effects of strategy training on students' performance in terms of observable outcomes. In the next section, 5.3, we will also look at the general picture but the focus will be to gauge the impact of the intervention on students' underlying beliefs and perceptions.

## **5.3 Assessing Self-perceived Strategy Use from Strategy Questionnaires**

### 5.3.1 Introduction

In the previous section, 5.2, the focus was to assess the effects of strategy instruction on observable changes in task performance i.e. on what the students could do; their procedural knowledge. In this section, 5.3, the focus is on the questionnaire findings on strategy use as perceived by the students themselves. The purpose is to gauge the impact of the strategy tuition on what the students thought they could do i.e. their declarative knowledge about strategy use. The results of the questionnaires in this section were from whole classes, thus involving all students in each of the C, E1 and E2 classes. This section addresses the three research questions RQs 1-3 (see section 3.2.2).

### 5.3.2 Presentation and description of findings

As explained in section 4.4.2, CROSSTABS were conducted on all items in both questionnaires. The overall difference between E and C expressed as percentages was the sum of the differences between E and C (%) in the proportion of increased post scores and the differences between E and C (%) in the proportion of decreased post scores. The overall differences between the E groups and the C group were the effect sizes. These effect sizes were then subjected to the non-parametric Fisher Exact Test for small samples (Siegal & Castellan, 2000) to see if they were statistically significant. Section 5.3.3 presents results for direct strategies and section 5.3.4 indirect strategies.

### 5.3.3 Findings on direct strategies

The effect sizes of E1 over C with respect to self-perceived strategy use and perceptions of effectiveness of the eight target strategies (T) and six non-target strategies (NT) are presented in Table 5.3 below. (For full information on the gains in increased post scores as well as the gains in decreased post scores is in Appendix 18.)

Table 5.3 *Relative effects of training on E1 compared with C group on their self-perceived strategy use and perceptions of effectiveness of direct strategies*

Self-perceived Strategy Use (Effect size in %)			Perceptions of Strategy Effectiveness (Effect size in %)		
NT	Attentive listening	+66* p=0.028	NT	Attentive listening rather than seeking clarification	+44
NT	Focusing more on content than language	+60* p=0.007	NT	Paying more attention to one's content than use of language	+35
T	Resourcing	+51* p=0.058	T	Seeking confirmation	+35
T	Using fillers	+32	T	Paraphrasing	+32
NT	Letting others take the floor rather than risk paraphrasing	+30	T	Using fillers	+31* p=0.058
T	Using self repetition	+23	NT	Using pauses to gain time to think	+30* p=0.075
NT	Using pauses to gain time to think	+20	T	Self monitoring	+25
T	Seeking confirmation	+17	T	Using self repetition	+25
T	Paraphrasing	+6	T	Seeking clarification	+25
T	Seeking repetition	+5	NT	Continuing to express oneself regardless	+23
T	Self monitoring	-7	T	Asking for repetition	+19
NT	Relying on oneself rather than on resources	-14	NT	Letting others take the floor rather than risk paraphrasing	+8
NT	Continuing to express oneself regardless	-14	NT	Relying on oneself rather than on resources	0
T	Seeking clarification	-18	T	Resourcing	-56* p=0.058

< \* > significant or near significant at p = .05



### *Target strategies*

Regarding self-perceived strategy use, Table 5.3 indicates that there were overall gains in effect size in favour of E1 over C in six out of eight target strategies. Moreover, 'Resourcing' had a statistically significant gain of +51% ( $p=0.058$ ). Similarly, regarding perceptions of strategy effectiveness, there were gains in effect sizes in seven out of eight target strategies. 'Using fillers' had a statistically significant gain of +31% ( $p=0.058$ ), and interestingly, 'Resourcing' had a negative gain of -56% ( $p=0.058$ ).

### *Non-target strategies*

As for self-perceived strategy use, there were gains in effect size in favour of E1 over C in 4 out of 6 non-target strategies. Moreover, there were statistically significant gains for "Attentive listening" (+66%;  $p=0.028$ ) and "Focusing on content" (+60%;  $p=0.007$ ). As for the self-perceptions of strategy effectiveness, there were gains in effect sizes in favour of E1 over C in 5 out of 6 non-target strategies. Moreover, 'Using pauses to gain time to think' (+30%;  $p=0.075$ ) showed a statistically significant gain.

#### 5.3.4 Findings on indirect strategies

The effect sizes of E2 over C with respect to the self-perceived strategy use and perceptions of effectiveness of the seven target strategies (T) and seven non-target strategies (NT) are presented in Table 5.4 below. (Full information on the gains in increased post scores as well as the gains in decreased post-scores is again in Appendix 18.)

Table 5.4 *Relative effects of training on E2 compared with C group on their self-perceived strategy use and perceptions of effectiveness of indirect strategies*

Self-perceived Strategy Use (Effect size in %)			Perceptions of Strategy Effectiveness (Effect size in %)		
T	Asking for help	+76* p=0.001	T	Problem Identification	+66* p=0.011
T	Problem Identification	+50* p=0.099	T	Asking for help	+38
NT	Encouraging others to use available resources rather than giving help	+26	T	Functional planning	+23
T	Giving help	+21	NT	Giving spontaneous response instead of planning about language in advance	+16
NT	Letting others speak more to reduce pressure	+21	NT	Relying on oneself rather than seeking help	+14
T	Planning ideas in advance	+20	NT	Letting others speak more to reduce pressure	+10
NT	Accepting performance outcome rather than thinking back	+20	T	Positive self talk	+6
NT	Relying on oneself rather than seeking help	+14	T	Giving help	+0
NT	Thinking about the content rather than the purpose and requirements of the discussions	+13	NT	Accepting performance outcome rather than thinking back	-8
T	Evaluation	+10	NT	Giving spontaneous response instead of planning ideas in advance	-14
T	Functional planning	+5	T	Planning ideas in advance	-15
NT	Giving spontaneous response instead of planning about language in advance	+4	NT	Thinking about the content rather than the purpose and requirements of the discussions	-25
NT	Giving spontaneous response instead of planning ideas in advance	0	T	Evaluation	-35
T	Positive self talk	-2	NT	Encouraging others to use resources instead of giving help	-49

< \* > significant or near significant at  $p = .05$

### *Target strategies*

For self-perceived strategy use, Table 5.4 indicates that there were overall gains in effect size in favour of E2 over C in six out of seven target strategies. Moreover, 'Asking for help' (+76%;  $p=0.001$ ) and 'Problem identification' (+50%;  $p=0.099$ ) showed statistically significant gains. For perceptions of strategy effectiveness, there were overall gains in favour of E2 in four out of seven target strategies. Moreover, 'Problem identification' (+66%;  $p=0.011$ ) showed statistically significant gains.

### *Non-target strategies*

Regarding self-perceived strategy use, there were overall gains in effect sizes in favour of E2 over C in six out of seven non-target strategies. However, none of these were statistically significant. Regarding their perceptions of strategy effectiveness, there were no statistically significant gains; in fact, there were negative effects in four out of seven non-target strategies.

### 5.3.5 Summary and discussion

#### *Direct strategies*

To answer RQ1, overall, training in the use of direct strategies appeared to have positively influenced strategy use and perceptions of strategy effectiveness of target and non-target strategies. For E1, the training was associated with statistically significant increases in the self-perceived use of one target strategy i.e. 'Resourcing' and two non-target strategies i.e. 'Attentive listening' and 'Focusing more on content than on language'. For the perceptions of strategy effectiveness, strategy tuition appeared to be related to statistically significant increases for one target strategy i.e. 'Using fillers' and one non-target strategy i.e. 'Using pauses to gain time to think': both are time-gaining devices to help students cope with on-line speech production under real-time pressure.

#### *Indirect strategies*

To address RQ2, overall, training in the use of indirect strategies did not seem to have much impact on non-target strategies. However, the strategy tuition was associated with statistically significant increases in students' perceived use of two target strategies i.e. 'Asking for help' and 'Problem identification' and with enhanced perceptions of the effectiveness of 'Problem identification'.

To address RQ3, overall, the impact of training in the use of direct and indirect strategies on students' self-perceived strategy use and perceptions of strategy effectiveness appeared to be different. The findings seem to indicate that, for E1, the teaching of 'Resourcing' might be related to the improved task performance which was reported in the previous section, 5.2. For E2, the teaching of 'Asking for help' and 'Problem identification' could be connected with the improved 'English' and

'Task effectiveness' scores previously reported. These findings, together with those from other research methods, will be discussed in detail in Chapter 6.

While questionnaire data can reflect changes in students' underlying perceptions of their own strategy use and of the effectiveness of the strategies, the data do not indicate in any way whether these perceptions are borne out by actual behaviour. We therefore look at students' actual behaviour in terms of strategy use in the next section.

## **5.4 Assessing Observed Strategy Use in Action**

### **5.4.1 Introduction**

In the preceding sections 5.2 and 5.3, the findings of task performance and of strategy questionnaires pertained to the big picture i.e. the whole of C, E1 and E2 classes. In this section 5.4 and the following section 5.5, we zero in on the two pull-out groups in each of the three treatment classes. Specifically, this section investigates changes (if any) in students' observed strategy use in the English group discussions and in the preparatory talks in Cantonese.

While we move from the big picture and look more closely at the effects of the strategy intervention on students' strategy use, we remain focused on observable changes first before turning to unobservable thought processes later. That is, the focus of this section is on what the students could actually do i.e. on the procedural knowledge of strategy use.

This section has two sub-sections 5.4.2 and 5.4.3. The former presents findings pertaining to observed strategy use in the English group discussion tasks and the latter in the preparatory talks in Cantonese. All findings were from the pull-out groups only. Both sections 5.4.2 and 5.4.3 address the research questions RQs 1-5 (see sections 3.2.2 - 3.2.3).

### **5.4.2 Observed strategy use in English group discussions**

#### **5.4.2.1 Findings by whole sample**

*Results by treatment class (C, E1 and E2)*

The Table 5.5 below presents descriptive statistics to compare C's, E1's and E2's frequencies of use of direct, indirect, and non-target strategies (by whole sample) across Phases 1, 2, and 3. Each of the C, E1 and E2 classes comprised two pull-out groups i.e. one high-proficiency (H) sub-group and one low-proficiency (L) sub-group. So each cell in the Table 5.5 presents data collected from the two pull-out groups of 4 students in each. The data (N/W) presented on the left hand side of the Table indicate the total raw frequency of strategy use (N) in relation to the total number of words (W) produced by the two pull-out groups (i.e. a total of eight students) in each class in a total of 24 minutes (i.e. 12 minutes of English discussion per group). The data (N/W x 100 = F) on the right hand side indicate the standardized frequencies per 100 words (F) used for comparison across groups and phases. (For methods of counting, see section 4.5.2.)

Results of three main categories of strategies are included in the Table. First, direct strategies refer to those target strategies introduced to E1 during strategy intervention. Second, indirect strategies refer to those target strategies introduced to E2 during the intervention. Third, non-target strategies refer to those that had not been targeted in the teaching but which had been used in the discussions. Findings specific to each category of strategies are shown in the Table for comparison across treatment classes and phases. Let us now refer to the standardized frequencies of use per 100 words (F) on the right hand side of the Table.

Table 5.5 *Comparison of C's, E1's and E2's frequencies of the use of direct, indirect, and non-target strategies per 100 words (by treatment)*

	N/W			N/W x 100 = F		
	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
<b>Direct strategies</b>						
C	168/2352	136/2372	118/1798	7.1	5.7	6.6
E1 **	117/2105	118/1958	117/2141	5.6	6.0	5.5
E2	135/2143	173/2439	120/2150	6.3	7.1	5.6
<b>Indirect strategies</b>						
C	23/ 2352	21/2372	11/1798	1.0	0.9	0.6
E1	25/ 2105	27/1958	14/ 2141	1.2	1.4	0.7
E2 **	24/ 2143	134/2439	22/ 2150	1.2	5.5	1.0
<b>Non-target</b>						
C	362/2352	375/2372	301/1798	15.4	15.8	16.7
E1	239/2105	249/1958	230/2141	11.4	12.7	10.7
E2	346/2143	412/2439	296/2150	16.1	16.9	13.8

< \*\* > denotes the group which received training in the corresponding strategy group

First, we study the use of direct strategies by the groups. For E1, strategy use rose slightly at Phase 2 and, at Phase 3, returned to almost where it was prior to training (i.e. 5.6, 6.0, 5.5). The range was small; it was between 5.5 and 6.0 only. It seems that E1 maintained the use of direct strategies at more or less the same level over time. In contrast, for both the C and the E2 groups, there were big 'Fall-rise' (i.e. 7.1, 5.7, 6.6) and 'Rise-fall' (6.3, 7.1, 5.6) trends respectively, with a frequency range of 5.7 to 7.1 for C and 5.6 to 7.1 for E2. In addition, for both C and E2, at some points, the drops were lower than those at Phase 1. The results therefore appear to suggest that training in the use of direct strategies might have been associated with E1 being able to maintain the use of direct strategies while a lack of such training had rather random effects on C and E2 in their use of direct strategies. Nonetheless, given that the increase at Phase 2 was only marginal (i.e. from 5.6 to 6.0) and that C outranked E1 at Phase 3, the training effect (if any) was rather limited.

Next, we focus on the use of indirect strategies. The majority of the figures were around 1.0 per 100 words, indicating that observable use remained minimal across all groups and phases. One plausible reason for this is that 5 out of 7 indirect strategies taught in the training were either mentalistic (e.g. 'Positive self-talk') or meant to be used before or after the English discussion proper (e.g. 'Problem identification'; 'Evaluation'). That is, they would not normally appear in the English discussion though on one occasion, for example, the target group used 'Evaluation' during the English task. As can be seen in Table 5.5, for the C group, there was a steady decrease over time (1.0, 0.9, 0.6). For the E1 group, there was no predicted direction; but a 'Rise-fall' trend (1.2, 1.4, 0.7) appeared. In contrast, E2, the target group, showed a very different pattern: there was a dramatic increase in strategy use at Phase 2; the F value (5.5) was well above that of any group at any time. The sharp increase, however, was not sustained at Phase 3 (1.2, 5.5, 1.0). In this way, strategy training appeared to be connected to the dramatic though temporary rise in the use of indirect strategies by E2 at Phase 2.

Finally, let us turn to the non-target strategies. It is clear that the majority of strategy use was attributed to the use of non-target strategies. The raw frequencies indicated on the left hand side of the Table show that they were generally high; the highest score for non-target strategies was 412 (shaded). In comparison, the highest score for direct strategies was only 173 (shaded) for direct strategies and 134 (shaded) for indirect strategies. The high proportion of observable non-target strategies showed that

students had a number of pre-existing strategies to which they resorted. Moreover, analysis of the standardized frequencies (F), on the right hand side of the Table, reveals some interesting findings. The E1 and E2 groups displayed a 'Rise-fall' pattern over time, indicating that strategy training did not bring about sustained increases in use of non-target strategies in predicted directions. In contrast, for the C group, there were steady increases over time (15.4, 15.8, 16.7). The findings seem to suggest that strategy training did not appear to be related to any patterns consistent for all groups in the use of non-target strategies.

### *Results by proficiency level*

We have so far compared the observed use of the three categories of strategies. The next step is to address the research question as to whether proficiency level affects strategy use. Hence, we now focus on the results of analysis by proficiency level to see if it made a difference to the general picture just depicted. Table 5.6 below compares standardized frequencies (F) pertaining to one high-proficiency (H) and one low-proficiency (L) pull-out groups of C, E1 and E2 across phases. Each cell presents counts from one group of 4 students (i.e. from either the H- or L-subgroup).

*Table 5.6 Comparison of C's, E1's and E2's frequencies of the use of direct strategies, indirect strategies, and non-target strategies per 100 words (by proficiency)*

			N/W			N/W x 100 = F		
Strategy group	Class	Ability	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
Direct Strategies	C	H	96/1199	45/869	41/726	8.0	5.2	5.7
		L	70/1153	91/1503	77/1072	6.1	6.0	7.2
	E1**	H	62/1319	54/1125	74/1399	4.7	4.8	5.3
		L	55/786	64/833	43/742	7.0	7.7	5.8
	E2	H	51/769	69/1285	50/737	6.6	5.4	6.8
		L	84/1374	104/1154	70/1413	6.1	9.0	5.0
Indirect Strategies	C	H	13/1199	13/869	4/726	1.1	1.5	0.6
		L	9/1153	5/1503	5/1072	0.8	0.3	0.5
	E1	H	11/1319	7/1125	4/1399	0.8	0.6	0.3
		L	12/786	18/833	8/742	1.5	2.2	1.1
	E2**	H	5/769	19/1285	4/737	0.7	1.5	0.5
		L	20/1374	108/1154	17/1413	1.5	9.4	1.2
Non-target Strategies	C	H	172/1199	157/869	142/726	14.3	18.1	19.6
		L	190/1153	218/1503	168/1072	16.5	14.5	15.7
	E1	H	147/1319	141/1125	95/1399	11.1	12.5	6.8
		L	83/786	108/833	135/742	10.6	13.0	18.2
	E2	H	127/769	153/1285	107/737	16.5	11.9	14.5
		L	219/1374	259/1154	189/1413	15.9	22.4	13.4

< \*\* > denotes the group which received training in the corresponding strategy group

## Direct strategies

First, we compare the use of direct strategies by the H- and L-ability subgroups across the three groups. For the C group, both subgroups displayed a 'Fall-rise' pattern across the three phases. For E1, the target group, the H-subgroup showed steady increases in the predicted direction (4.7, 4.8, 5.3) whereas the L-subgroup had a 'Rise-fall' pattern (7.0, 7.7, 5.8). For the E2 group, neither subgroup showed patterns in the predicted direction. The H-subgroup had a 'Fall-rise' trend (6.6, 5.4, 6.8) while the L-subgroup had a 'Rise-fall' pattern (6.1, 9.0, 5.0). In short, the high-proficiency subgroup of E1 was the only group that showed a pattern of use in the predicted direction. These findings support the argument that, for E1, the target group, strategy training might have been associated with consistent increases (albeit modest) in the use of direct strategies by high-proficiency students in E1. There was, however, no evidence that the tuition was related to any discernible patterns of use by the low-proficiency students.

One more observation about the use of direct strategies is worth highlighting. For the E1 group, the scores of the L subgroup (i.e. 7.0, 7.7, 5.8) were higher than those of their respective H counterparts (i.e. 4.7, 4.8, 5.3) in all three pairs of comparisons. This also seems to suggest that the low-proficiency students were more active in the use of the direct strategies targeted than their high-proficiency counterparts.

## Indirect strategies

Let us now turn to the indirect strategies. While both the H and L subgroups of E2 echoed the main generalization reported in the previous section that there was an obvious rise at Phase 2 but a tail off pattern at Phase 3, the increase in strategy use by the L subgroup was much more dramatic (i.e. 1.5, 9.4, 1.2) than that of the H counterpart (0.7, 1.5, 0.5) at Phase 2. This finding indicates that training in the use of indirect strategies may have been related to higher use of indirect strategies by the low proficiency students of E2 at Phase 2 as compared with their high-proficiency counterparts.

Another interesting point is that, for the E1 groups, all the F values of the L subgroup (i.e. 1.5, 2.2, 1.1) were higher than those of their respective H counterparts (i.e. 0.8, 0.6, 0.3) in all the three pairs of comparisons over time. Similarly, for the E2 groups,



all the scores of the L subgroup (i.e. 1.5, 9.4, 1.2) were higher than those of their respective H counterparts (i.e. 0.7, 1.5, 0.5) in all the three pairs of comparisons across phases. In other words, the L subgroups of both E1 and E2 were more activated in the use of indirect strategies than their H counterparts regardless of whether the students received the relevant strategy training. This finding suggests that strategy training could have been connected to the low-proficiency students being more activated than their high-proficiency students in the use of indirect strategies.

### Non-target strategies

Lastly, we will investigate the use of non-target strategies. Only the L-subgroup of E1 (shaded) and the H-subgroup of C (shaded) showed consistent patterns (i.e. steadily increased strategy use) across phases 1, 2 and 3. Conversely, the remaining four subgroups had unpredicted 'Rise-fall' or 'Fall-rise' patterns across phases. In other words, regardless of the students' proficiency level, their response to strategy training appeared random. The finding seems to indicate that, for use of non-target strategies, proficiency level made a difference for the E1 group but not for E2 group. That is, for E1, the low-proficiency students showed steadily increased use of non-target strategies over time whereas their high-proficiency counterparts did not. Moreover, for the L-subgroup of E1, while its use of non-target strategies was lower than its H-ability subgroup at Phase 1, the use was higher than that of its H-ability counterpart at Phases 2 and 3 (shaded). In contrast, this pattern was not evident in other subgroups of C or E2. This supports the argument that, for E1, strategy training might have been connected to the higher activation on the part of the low-proficiency students than the high-proficiency students in using non-target strategies over time. It should be noted that 'activation' is associated with a higher frequency or proportion of strategy use but not variety of strategy use. That is, given their limited linguistic abilities, the low-proficiency students may be able to keep using similar types of strategies without being able to widen their range of strategy use.

#### 5.4.2.2 Findings for individual, direct strategies

So far we have looked at the results for observable strategy use by the whole sample of direct strategies. We now study the use of individual strategies, particularly with a view to investigating the students' uptake of each of the direct strategies targeted in the intervention. The patterns of use of individual strategies across phases will be looked at to see how many of them (if any) showed consistent increases in the

predicted direction. It was expected that an uptake of a strategy would be reflected by steady increases in the frequency counts (F) of the strategy over time.

Results by treatment class (C, E1 and E2)

Table 5.7 on the next page sets out standardized frequencies of use (F) of individual, direct, target strategies per 100 words across phases and groups.

The findings presented in Table indicate that there was a clearly upward trend (shaded) in the use of 'Resourcing' by E1 (0.1, 0.5, 1.6). Considering the majority of the F values were below 1.0, the rise from 0.1 at Phase 1 to 1.6 at Phase 3 was dramatic. In contrast, both the C and E2 groups did not show such a consistent upward trend. This seems to lend some evidence that strategy training might have an impact on students' uptake of "Resourcing". For other direct strategies, there was no evidence that the training was related to increases.

Table 5.7 Comparison of C's, E1's and E2's standardized frequencies of use of direct strategies per 100 words (F) across Phases (By treatment)

	C			E1 **			E2		
	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
Target, direct strategies	W=2532 N=168	W=2372 N=136	W=1798 N=118	W=2105 N=117	W=1958 N=118	W=2141 N=117	W=2143 N=135	W=2439 N=173	W=2150 N=120
1. Resourcing	0.6	0.3	1.3	0.1	0.5	1.6	0.8	0.8	0.9
2. Paraphrasing	0.2	0.1	1.3	0.4	0.3	0.4	0.3	0.1	0.1
3. Using fillers	0.1	0.3	0.1	0	0.4	0.4	0.4	1.1	0.5
4. Self repetition	5.4	3.8	2.0	4.3	3.7	2.4	3.5	4.3	3.0
5. Self correction	0.5	0.7	0.6	0.7	0.8	0.5	0.8	0.5	0.6
6. Asking for repetition	0.1	0.1	0.5	0	0	0.1	0.1	0	0
7. Seeking clarification	0.1	0.3	0.1	0	0.1	0.1	0.3	0.1	0.3
8. Seeking confirmation	0.1	0.2	0.7	0.1	0.2	0.1	0.2	0.3	0.2
Aggregated frequency of use	7.1	5.7	6.6	5.6	6.0	5.5	6.3	7.1	5.6
Aggregated variety of use	8	8	8	5	7	8	8	7	7

< E1 \*\* > denotes the target group which received training in the use of direct strategies

Apart from the frequency of use, the variety of strategy use is also worth highlighting. The aggregated number of target strategies employed by E1, the target group, was on the increase over time (5, 7, 8) (Shaded). In contrast, for the E2 group, there was a tendency to use fewer types (8, 7, 7). C group remained at the highest point (i.e. 8). Strategy training might therefore have been connected to increases in the predicted direction in the variety of strategy use.

*Analysis by proficiency level*

We saw earlier that the high-proficiency students consistently increased their use of direct strategies targeted, whereas the low-proficiency students did not. In this section, we investigate whether this general trend was influenced by one or two atypical strategies only. Table 5.8 below compares standardized frequencies (F) for individual strategies for C, E1 and E2 at Phases 1, 2 and 3 by proficiency level.

Table 5.8 *Comparison of C's, E1's and E2's standardized frequencies of use of direct strategies per 100 words (F) across Phases (by proficiency)*

	Phase	C			E1 **			E2		
		1	2	3	1	2	3	1	2	3
Individual, direct strategies	H	W=1199	W=869	W=726	W=1319	W=1125	W=1399	W=769	W=1285	W=737
	L	W=1153	W=1503	W=1072	W=786	W=833	W=742	W=1374	W=1154	W=1413
1. Resourcing	H	0.8	0.5	1.2	0.2	0.4	1.2	1.7	1.3	2.2
	L	0.5	0.2	1.4	0	0.6	2.4	0.4	0.3	0.3
2. Paraphrasing	H	0.3	0	0.4	0.5	0	0.5	0	0	0
	L	0.1	0.2	0.2	0.4	0.6	0.1	0.4	0.2	0.1
3. Using fillers	H	0	0.3	0.1	0	0.5	0.6	0.4	1.3	0.4
	L	0	0.3	0.1	0	0.1	0.1	0.4	1.3	0.4
4. Self repetition	H	6.1	3.3	2.9	3.3	2.9	1.7	2.7	2.5	2.9
	L	4.6	4.1	3.1	6.0	5.2	2.4	3.9	6.3	3.1
5. Self correction	H	0.5	0.5	0	0.7	0.4	0.4	0.4	0.5	0.4
	L	0.5	0.9	0.9	0.6	1.2	0.7	1.0	0.4	0.7
6. Asking for repetition	H	0.1	0	0	0	0	0.8	0.3	0	0
	L	0.1	0.1	0.8	0	0	0	0	0	0
7. Seeking clarification	H	0.1	0.2	0.3	0.1	0.2	0	0.7	0	0.4
	L	0.2	0.3	0.1	0	0	0	0.1	0.2	0.3
8. Seeking confirmation	H	0	0.3	0.8	0.1	0.4	0.1	0.4	0.2	0.4
	L	0.1	0.1	0.6	0	0	0	0.1	0.3	0.1
Aggregated frequency of use	H	8.0	5.2	5.7	4.7	4.8	5.3	6.6	5.4	6.8
	L	6.1	6.0	7.2	7.0	7.7	5.8	6.1	9.0	5.0
Aggregated variety of use	H	6	6	7	6	6	7	7	5	6
	L	7	7	8	3	5	5	7	7	4

< \*\* > denotes the group which received training in the use of direct strategies

The shaded boxes in the Table indicated that for E1, the target group, the H subgroup showed steady increases in the use of 'Resourcing' and 'Using fillers' only. The overall picture is that, other than these two, there was no evidence that strategy training could have been related to higher uses of the target strategies by the high-proficiency students as compared with their low-proficiency counterparts.

A closer look at the use of 'Resourcing' reveals that, for E1, the target group, while both H and L subgroups increased consistently in their use of the strategy, there were differences between high- and low-proficiency students in their uptake of the strategy. The H subgroup increased from 0.2 to 0.4 and 1.2 whereas the L subgroup rose from 0.0 to 0.6 and 2.4 across phases. This is dramatic considering that the L subgroup did not use 'Resourcing' at Phase 1. In other words, the low-proficiency students seemed to be even more receptive to 'Resourcing' than their high-proficiency counterparts. In

contrast, for both the C and E2 groups, there were no such clear differences between the H- and L-subgroups.

Last, regarding the variety of strategy use, the E1 L-subgroup showed a strong upward trend in the predicted direction across phases. In contrast, neither the E1 H- subgroup nor the other subgroups demonstrated this pattern. Nonetheless, it should be acknowledged that, given that the H-subgroup was already using 6 out of 8 strategies, there was probably a ceiling effect. Hence, the positive effect of strategy tuition on the variety of strategy use by the low-proficiency students would need to be qualified.

#### 5.4.2.3 Findings by individual, indirect strategies

##### Results by treatment

We saw earlier the main generalization about the use of indirect strategies by whole sample during the English task. The generalization was that, for E2, the target group, strategy training appeared to be related to a dramatic rise in strategy use at Phase 2 but not at Phase 3. Here in this section, we are interested in how many of the target, indirect strategies could be attributed to the main generalization. As explained in section 4.5.1, only four out of the seven target indirect strategies were observable during the English discussion (i.e. 'Problem identification', 'Evaluation', 'Asking for help' and 'Giving help'.) Hence, Table 5.9 below sets out and compares standardized frequencies (F) for only these four strategies across phases and classes.

Table 5.9 *Comparison of the standardized frequency of use (per 100 words) of indirect, target strategies across groups and phases (by treatment)*

Phase	C			E1			E2**		
	1	2	3	1	2	3	1	2	3
Problem Identification	0	0	0	0	0	0.1	0.2	0	0.4
Evaluation	0	0	0	0	0.1	0	0	3.8	0
Giving help	0.6	0.6	0.3	0.9	1.0	0.4	0.6	0.5	0.5
Asking help	0.3	0.1	0.1	0.1	0.2	0.1	0.4	0.7	0.1

< \*\* > denotes the group which received training in the use of indirect strategies

The Table clearly shows that, in the majority of the cells, the frequencies of strategy use (F) were below 1.0 per 100 words. This was as expected, given the fact that indirect strategies were meant to be deployed mainly in the preparatory task in Cantonese though they could also be used in the English task (see section 4.5.1). The

Table also indicates that much of the dramatic rise in strategy use by E2 at Phase 2 was attributed to 'Evaluation' only. The frequency of use was 3.8 per 100 words (shaded), which was a lot higher than any of the other groups at any phase. In fact, the use of other indirect, target strategies remained sparse. Thus, the intervention seemed to be associated mainly with big increases in the use of 'Evaluation' at Phase 2 by E2, the target group.

### *Results by proficiency level*

The breakdown of the frequencies for the high- and low-proficiency sub-groups is not shown here; the differences are too small to be of interest. Nonetheless, a close check of the raw scores of 'Evaluation' for both the H- and L- subgroups of E2 was done to see whether proficiency level made a difference to the frequency of use. There was an interesting finding: the F value for the H subgroup was 0.2 whereas that of the L subgroup was 7.6. This means that the dramatic rise in the use of 'Evaluation' was caused by the L subgroup and not by the H subgroup. Thus, although limited, proficiency level seemed to have made a difference.

#### 5.4.2.4 Findings by individual, non-target strategies

##### *Analysis by treatment class (C, E1 and E2)*

In the previous section, analysis by treatment indicated that, for both E1 and E2, strategy training did not seem to have had the predicted impact on frequency of use by the whole sample of non-target strategies. We now look at individual non-target strategies to see whether this main generalization was strongly influenced by a few atypical strategies. A total of 15 different types of non-target strategies were identified in the recordings. Table 5.10 below compares standardized frequencies (F) per 100 words across groups and phases.

Table 5.10 Comparison of C, E1 and E2 in the frequency of use per 100 words (F) of non-target strategies (by treatment)

	C			E1			E2		
	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
Non-target Strategies	W=2532 N=362	W=2372 N=375	W=1798 N=301	W=2105 N=239	W=1958 N=249	W=2141 N=230	W=2143 N=346	W=2439 N=412	W=2150 N=296
1.Task knowledge	0.4	0	0	0.1	0.2	0	0.2	1.0	0.1
2.Repeating others	1.4	1.4	1.5	1.0	0.6	0.2	1.7	1.9	1.0
3.Stalling	2.8	3.5	3.3	2.9	3.2	2.9	2.5	1.6	2.1
4.Using false start	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0
5.Repairing	0.0	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1
6.Abandoning messages	1.0	1.3	0.9	0.7	1.1	1.2	1.8	1.7	2.2
7.Seeking meaning	1.1	1.4	2.1	0.4	0.7	0.2	0.7	0.9	0.5
8.Seeking views	0.6	0.6	0.5	0.8	1.1	0.3	0.5	0.3	0.5
9.Seeking agreement	0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0
10.Clarifying oneself	0.5	0.6	1.0	0.3	0.4	0.2	0.5	0.5	0.4
11.Elaborating	0.4	0.7	0.4	0.2	0.8	0.8	1.3	1.0	0.7
12.Responding	3.7	3.3	3.5	2.1	2.1	3.3	4.4	5.1	4.3
13.Giving suggestions	0.4	0.6	0.2	1.0	0.5	0.1	1.0	1.5	0.5
14.Facilitating progress	1.2	1.6	1.7	0.9	1.3	0.8	1.0	1.0	1.4
15.Monitoring contributions	0.9	0.6	1.2	0.7	0.8	0.3	0.2	0	0.1
Aggregated frequency of use	15.4	15.8	16.7	11.4	12.7	10.7	16.1	16.9	13.8

To find out how many of the 15 strategies reflected the main generalization from the whole sample, the number of 'Rise-fall', 'Overall fall', 'Fall-rise', 'Overall rise' and 'Steady state' patterns of strategy use across Phases 1, 2 and 3 were counted and presented in Table 5.11 below.

Table 5.11 Comparisons of C's, E1's and E2's frequencies of reporting trends across Phases 1, 2 and 3

Patterns of strategy use across Phases 1, 2, 3	Class		
	C	E1	E2
Rise-fall	5	7	6
Fall-rise	2	0	4
Steady fall	2	3	4
Steady rise	6	4	1
Steady state	0	1	0
Total	15	15	15

The figures in Table 5.11 above indicate that the number of random patterns such as 'Rise-fall' or 'Fall-rise' remained substantial for all groups i.e. 7 for C, 7 for E1 and 10 for E2 (shaded). This being the case, the results of analysis across individual non-target strategies support the main generalization that strategy training did not seem to

have had much effect on E1 and on E2 in the predicted direction with respect to the whole sample of non-target strategies by treatment (see Table 5.5).

### *Analysis by proficiency level*

We now study the H- and L-subgroups of C, E1 and E2 to see whether proficiency level made a difference to the above trends. The standardized frequencies per 100 words (F) are set out by proficiency level for the H- and L- subgroups of each of C, E1 and E2 in the Table 5.12 below.

Table 5.12 *Comparison of C, E1 and E2 in the frequency of use of individual, non-target strategies across phases (by proficiency)*

Phase \ Non-target strategies	Proficiency level	C			E1			E2		
		1	2	3	1	2	3	1	2	3
1.Task knowledge	H	0.1	0	0	0.2	0.2	0	0	0.6	0.1
	L	0.8	0	0	0	0.2	0	0.4	1.4	0
2.Repeating others	H	0.4	1.7	1.2	1.0	0.6	0.1	1.6	1.0	0.7
	L	2.6	1.1	1.6	1.0	0.5	0.5	1.9	2.9	1.1
3.Stalling	H	4.1	4.5	4.7	1.7	1.6	1.4	1.6	1.0	2.7
	L	1.9	2.5	2.3	4.8	5.3	5.8	2.7	2.0	1.8
4.Using false start	H	0.1	0	0.1	0.4	0.1	0.1	0	0.1	0
	L	0.1	0.5	0.2	0	0	0	0.1	0.2	0
5.Repairing	H	0	0.1	0.1	0	0	0.1	0.4	0.1	0.1
	L	0.1	0.3	0.4	0.1	0.1	0.4	0.1	0.1	0.1
6.Abandoning messages	H	0.8	1.0	0.6	0.5	0.6	0.5	1.2	1.1	1.6
	L	1.4	1.4	1.1	1.0	1.7	2.6	2.2	2.4	2.5
7 Seeking meaning	H	0.8	1.4	2.1	0.6	1.2	0.3	1.3	0.5	0.7
	L	1.6	1.4	2.1	0	0	0.1	0.4	1.5	0.4
8 Seeking views	H	0.1	0.7	0.3	1.1	1.3	0.3	0.5	0.4	1.1
	L	1.1	0.6	0.7	0.3	0.7	0.3	0.4	0.3	0.1
9 Seeking agreement	H	0	0	0.3	0.1	0.2	0.1	0.3	0	0
	L	0	0.1	0	0	0	0	0	0.1	0
10. Clarifying oneself	H	0.5	0.3	1.1	0.5	0.6	0.3	0.4	0.2	0.5
	L	0.6	0.7	0.8	0	0	0.1	0.5	0.9	0.3
11. Elaborating	H	3.8	4.6	4.4	2.2	2.2	2.6	4.4	3.1	4.5
	L	4.1	2.6	2.8	1.8	1.8	4.6	4.4	7.3	4.2
12. Responding	H	0.1	0.6	0.4	1.3	0.8	0	1.3	1.9	0.7
	L	0.8	0.7	0.1	0.5	0.1	0.4	0.8	1.0	0.4
13. Giving suggestions	H	1.8	2.3	2.3	0.8	1.1	0.5	1.2	0.8	1.2
	L	0.7	1.1	1.3	1.1	1.4	1.4	1.0	1.3	1.5
14. Facilitating progress	H	1.8	0.3	1.1	0.5	1.1	0.2	0.5	0	0
	L	0.1	0.7	0.3	0.9	0.4	0.4	0	0	0.2
15. Monitoring contributions	H	0.1	0.5	0.8	0.3	0.9	0.4	1.3	0.7	0.1
	L	0.7	0.9	0.2	0.1	0.7	1.6	1.2	1.5	0.9
Aggregated frequency of use	H	14.3	18.1	19.6	11.1	12.5	6.8	16.5	11.9	14.5
	L	16.5	14.5	15.7	10.6	13.0	18.2	15.9	22.4	13.4

Key: A shaded box denotes that a low-subgroup had higher frequency of use than its high-proficiency counterpart

The tally indicates that, for the C group, the number of comparisons in which the L subgroup was higher than the H counterpart in terms of frequency of use decreased from 10, 8, 5 at Phase 1, 2 and 3 respectively (shaded). This shows that there was a downward activation trend for the L-subgroup compared to the H-subgroup. That means the high-proficiency students seemed to be consistently more activated than the low-proficiency students. Conversely, for both the E1 and E2 groups, there were no discernible trends. For the E1 group, there was an unpredicted 'Fall-rise' pattern i.e. 5, 4, 8 over time (shaded). Similarly, for the E2 group, there was an unpredicted 'Rise-fall' trend i.e. 6, 11, 5 (shaded). The findings so far have lent support to the view that strategy training did not seem to be related to the proficiency level of students in activating the observable use of non-target strategies in any consistent way.

It should be remembered that the afore-mentioned activation trend is assessed in terms of frequency of strategy use. The result is rather different, however, when we study the effect of time to see whether there was an overall rise across Phases 1, 2 and 3. Therefore, the number of 'Rise-fall', 'Overall fall', 'Fall-rise', 'Overall rise' and 'Steady state' patterns of strategy use for H- and L-subgroups for each of C, E1, and E2 across Phases 1, 2 and 3 were also tallied, presented and compared in the Table below.

Table 5.13 *Comparisons of C's, E1's, and E2's frequencies of trends across Phases 1, 2 and 3 (By proficiency)*

Trends across Phases 1, 2, 3	Proficiency level	C	E1	E2
Rise-fall	H	5	8	3
	L	5	2	8
Steady fall	H	1	5	5
	L	3	2	2
Fall-rise	H	3	0	7
	L	4	1	0
Steady rise	H	6	2	0
	L	3	8	3
Steady state	H	0	0	0
	L	0	2	1

The data in the Table 5.13 above reveal that, for the L-subgroup of E1, there were steady increases in the use of 8 out of 15 non-target strategies across Phases 1, 2 and 3 as compared with only 2 for the H-subgroup. Among all groups, '8' was the highest value for steady patterns such as 'Steady fall' and 'Steady rise'. In contrast, the L-subgroups of C and of E2 did not show similar trends. Therefore, training in the use of direct strategies might have been connected to the consistent increases in the use of non-target strategies across phases 1, 2 and 3 by low-proficiency students rather than



high-proficiency students. While this result pertaining to individual non-target strategies is consistent with the main generalization for the whole sample of non-target strategies by proficiency level (see Table 5.6), it should be acknowledged that the results are yet to be confirmed by the use of inferential statistics indicating significance level, which is not permitted by the small number of students for the present study. Therefore, the assertion that the L-subgroup was more activated than the H-subgroup in terms of overall increases over time should be taken as provisional.

#### 5.4.2.5 Summary of findings

##### Findings by whole sample

###### *Direct strategies*

Analysis of findings by treatment indicates that training in the use of direct strategies might be associated with E1, the target group, being able to maintain the use of direct strategies with a slight rise at Phase 2. Analysis by proficiency level shows that strategy training might be associated with consistent increases (albeit modest) in the predicted direction by high-proficiency students. Nonetheless, there was evidence to suggest that the low-proficiency students were more active in the use of the direct strategies than their high-proficiency counterparts at all times. That is, proficiency level appeared to make a difference.

###### *Indirect strategies*

Analysis of results by treatment indicates that, for E2, the target group, strategy training appeared to be connected to the dramatic rise in the use of indirect strategies at Phase 2. Analysis by proficiency level shows that the training might be related to a much more dramatic increase in observed use by the low-proficiency than high-proficiency students and to higher activation on the part of the low-proficiency students to use many more indirect strategies as compared with their high-proficiency counterparts. Hence, proficiency level made a difference.

###### *Non-target strategies*

Analysis by treatment indicates that strategy training did not appear to be related to any consistent patterns in the use of non-target strategies. Analysis by proficiency level reveals that strategy training might be connected to higher activation on the part of the low-proficiency students in using non-target strategies as compared with the high-proficiency counterparts.

#### Findings by individual strategies

##### *Direct strategies*

Analysis by treatment demonstrates that, for E1, the target group, strategy training may be related to a clear and strong upward trend in the students' uptake of 'Resourcing' and to increases in the variety of strategy use. Analysis by proficiency level shows that, for the E1 group, the strategy tuition could be associated with more dramatic uptake of 'Resourcing' by the low-proficiency students than their high-proficiency counterparts and with greater increases in the variety of strategy use by the low-proficiency students as compared with the high-proficiency students.

##### *Indirect strategies*

Analysis by treatment indicates that the intervention seemed to be associated with big increases in the use of 'Evaluation' at Phase 2 by E2, the target group. Analysis by proficiency level shows that, for E2, strategy instruction could be connected to a dramatic increase in the uptake of 'Evaluation' by the low-proficiency students only. In other words, proficiency level seemed to have made a difference.

##### *Non-target strategies*

Analysis by treatment indicates that strategy training did not seem to have much effect on E1 and on E2. Analysis by proficiency level shows that, for the E1 group, strategy instruction may be connected to the consistent increases in use by low-proficiency students rather than high-proficiency students.

#### 5.4.3 Observed strategy use in Cantonese preparatory talks

The reader will recall that strategies that might have been deployed by students during the preparatory talks prior to the English discussions proper were indirect strategies.

#### 5.4.3.1 Findings by whole sample

##### *Results by treatment class*

Table 5.14 presents descriptive statistics to compare the frequencies (F) for C, E1 and E2 of the observed use of indirect strategies (by whole sample) in phases 1, 2, and 3. Each of the C, E1 and E2 classes comprised two pull-out groups of 4 students each, namely one H- and one L-subgroup. So each cell in the Table presents data collected from a total 12 minutes by 2 groups of students as each group had six minutes of preparation time prior to the English task. (See Table 4.5, section 4.5.1.)

The data presented on the left hand side of the Table (N/T) indicate the total raw frequency (N) in relation to the total number of turns (T) for each treatment class. Frequency of use (F) per 10 turns was used as a standard measure across groups and times for comparison. (See section 4.5.2).

Table 5.14 *Comparison of C's, E1's and E2's standardized frequencies of the use of indirect strategies use per 10 turns (F) across phases (By treatment)*

	N/T			N/T x 10 = F		
	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
Class (8 students each)						
Target strategies						
C	36/89	46/127	52/110	4.0	3.6	4.7
E1	25/55	56/93	65/85	4.5	6.0	7.7
E2 *	28/121	32/97	25/104	2.3	3.3	2.4
Non-target strategies						
C	48/89	72/127	45/110	5.4	5.7	4.1
E1	26/55	17/93	14/85	4.7	1.8	1.7
E2 *	78/121	57/97	54/104	6.4	5.9	5.2

<E1 > denotes the group which received training in the use of direct strategies

<E2\*> denotes the target group which received training in the use of indirect strategies

Let us first focus on the right hand side of the Table 5.14 to compare standardized frequencies (F) across treatment groups and phases. First, we focus on the uptake of the target, indirect strategies (i.e. strategies introduced to E2 in the intervention). For the C class, there was an obvious drop at Phase 2 and a sudden rise in Phase 3 to a point higher than that at Phase 1 (i.e. 4.0, 3.6, 4.7) (shaded). That being the case, there were no predicted patterns at all. For the E1 class, there was a strong and consistent upward trend across the three phases (4.5, 6.0, 7.7) (shaded). The raw numbers (N)

shown on the left hand side of the Table are fairly high, indicating that the trend was fairly reliable. It therefore appears that the teaching of direct strategies may have an impact on the use of indirect strategies as well. For E2, the target group, there was a sharp increase at Phase 2. The raw frequency (N) indicated on the right hand side is high, about one-third of the total count (32/97). The upward trend, was, however, not sustained and fell back to a point which was only marginally higher than that at Phase 1 (2.3, 3.3, 2.4) (shaded). This pattern seems to indicate a 'peak' at Phase 2 rather than at Phase 3. This is interesting given that E2 had received the relevant training and was expected to continue to increase at both Phases 2 and 3 i.e. in the predicted direction.

Turning to the study of non-target strategies, for the C class, there was a slight increase at Phase 2 and a decrease at Phase 3 to a point lower than that at Phase 1 (5.2, 5.5, 4.1). Hence, there were once again no obvious, discernable patterns. In contrast, for E1, and E2 in particular, there were consistent decreases across Phases 1, 2 and 3. The downward trend was steady and consistent for E2, the target group (i.e. 6.1, 5.2, 4.6). As for E1, the decrease was dramatic at Phase 2 and tended to level off at Phase 3. (i.e. 4.3, 1.8, 1.7). So far, the results seem to indicate that there were no teaching effects for both E1 and E2 in that it did not bring about the expected increases (i.e. overall increased strategic awareness) but rather steady decreases in the use of non-target strategies over time. For the C group, a lack of teaching effect appeared to result in more random, unpredicted patterns of use. One final point should also be noted: for E2, the target group, the use of non-target strategies was substantially higher than that of target strategies across all three phases. This was not the case for both the C and E1 groups.

### *Results by proficiency level*

We now explore whether proficiency level was a factor in affecting the effects of training on strategy use in Cantonese preparatory talks. Let us study the data on the right hand side of Table 5.15 below which organizes and compares standardized frequencies of use (F) by ability groups across classes and phases. Each cell represents 6 minutes of talk produced by a H-subgroup or L-subgroup of 4 students each.

Table 5.15 Comparison of C's, E1's and E2's frequencies of overall strategy use per 10 turns (F) across phases (By proficiency level)

		Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
Target strategies							
Class	Ability	N/T	N/T	N/T	N/T x 10 = F	N/T x 10 = F	N/T x 10 = F
C	H(igh)	23/57	20/72	13/59	4.0	2.8	2.2
	L(ow)	13/32	26/55	39/51	4.1	4.7	7.7
E1	H	13/35	30/58	26/32	3.7	5.2	8.1
	L	12/20	26/35	39/53	6.0	7.4	7.4
E2*	H	14/59	16/42	11/65	2.4	3.8	1.7
	L	14/62	16/55	14/39	2.3	2.9	3.6
Non-target strategies							
C	H	31/57	51/72	40/59	5.4	7.1	6.8
	L	17/32	21/55	5/51	5.3	3.8	1.0
E1	H	19/35	9/58	5/32	5.4	1.6	1.6
	L	7/20	8/35	9/53	3.5	2.3	1.7
E2*	H	32/59	23/42	33/65	5.4	5.4	5.1
	L	46/62	34/55	21/39	7.4	6.2	5.4

<E1> denotes the group which received training in the use of direct strategies

<E2\*> denotes the group which received training in the use of target, indirect strategies

As for the target strategies, comparing the H and L subgroups of each class, we notice that for the C class, the H subgroup dropped (4.0, 2.8, 2.2) whereas the L subgroup rose consistently over time (4.1, 4.7, 7.7). In contrast, for both subgroups of E1, there were consistent effects in that there were no drops at Phases 2 and 3. Similarly, for the L-subgroup of E2, there were generally no drops. The only exception was the H group of E2 at Phase 3; it peaked at Phase 2 (3.8) and dropped sharply at Phase 3 (1.7). Overall, the findings seem to support the argument that there was a positive teaching effect on both the E1 and E2 groups. Nonetheless, it should be remembered that, for the C group, the L-subgroup also sustained consistent increases over time. Hence, the assertion that the teaching might be related to increased use in the predicted direction regardless of whether students had received training in the use of direct or indirect strategies should be taken with caution. It is also interesting to note that, for E2, unlike the L subgroup, the H subgroup did not sustain in the use of the target strategies. That is, the training had a more steady and sustained effect on the low-proficiency students (2.3, 2.9, 3.6) than their high-proficiency students (2.4, 3.8, 1.7). In particular, at Phase 3, for E2, the target group, the low-proficiency students for the first time used dramatically more non-target strategies than their high-proficiency counterparts.

Regarding non-target strategies, a similar pattern was observed. For the C class, the H subgroup showed a rise-and-fall pattern (5.4, 7.1, 6.8) whereas the L subgroup displayed a steadily decreasing trend across Phases 1, 2 and 3 (5.3, 3.8, 1.0). A lack of consistency therefore appeared to have random impacts on the two subgroups.

In contrast, for E1 and E2, both the H and L subgroups showed a decreasing trend over time. Once again, the consistent patterns in the predicted direction indicate that strategy training might have been associated with the declining use of non-target strategies.

#### 5.4.3.2 Findings by individual, target strategies

So far, the results by whole sample might have masked variations in the patterns of use of individual strategies. Moreover, the present study had a focus on the impact of strategy training on the uptake of individual target strategies. Table 5.16 below compares the findings of C, E1 and E2 on each of the 7 target strategies across the three phases.

In Table 5.16, all figures indicate standardized frequencies of use (F) of individual target strategies per 10 turns. The number of turns (T) produced per class per phase is shown at the top of the Table. The aggregated frequency of the use of target strategies is indicated at the bottom. The aggregated variety of strategy use is shown and expressed in terms of the total number of different types of strategies used per class per phase.

Table 5.16 *Comparison of C's, E1's and E2's standardized frequencies of use of indirect strategies per 10 turns across phases (By treatment)*

Class	C			E1			E2 **		
	1	2	3	1	2	3	1	2	3
Phase									
Number of turns produced per class per phase (T)	89	127	110	55	93	85	121	97	104
Target strategies									
1.Planning ideas in advance	3.0	3.4	4.6	3.6	5.8	7.6	1.9	0.9	0.2
2.Problem Identification	0.8	0.2	0.1	0.0	0.2	0.1	0.3	1.3	1.9
3.Functional planning	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.7	0.2
4.Evaluation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
5.Asking for help	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.Giving help	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.Positive self talk	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1	0.1
Aggregated frequency of use	4.0	3.6	4.7	4.5	6.0	7.7	2.3	3.3	2.4
Aggregated variety of use	3	2	2	3	2	2	3	4	4

<E2\*\*> denotes the target group which received training in the use of indirect strategies

#### *Results by treatment*

The results in Table 5.16 reveal that, while both E1 and E2 showed increases in the use of the target strategies for the whole sample (as reported in the preceding section), ~~was~~ influenced only by Strategy 1 ('Planning ideas in advance').

In fact, similar to C, E1 showed greater frequency of 'Planning ideas in advance'. In contrast, E2, the target group which had received training in the use of indirect strategies, displayed a wider range of strategy use (i.e. 'Planning ideas in advance', 'Problem identification', 'Functional planning', and 'Positive self talk'). This way, the findings by whole sample of target strategies were influenced by more than just one or two strategies. This seems to be consistent with the argument that E2, given the training in the use of the target strategies, would be more likely to try out a variety of strategies. On the other hand, without the relevant training, students in C and E1 tended to resort to one or two obvious strategies such as 'Planning ideas in advance'. However, it should be acknowledged that, the frequencies were rather low especially with 'Functional planning' (i.e. 0.2 at Phase 3), 'Evaluation' (i.e. 0.3 at Phase 2) and 'Positive self talk' (i.e. 0.1 at both Phases 2 and 3). Hence, the effects of training on the variety of use may not be statistically significant if bigger samples are used and inferential statistics are permitted.

Regarding the uptake of each of the 7 target strategies, the training effects appeared to vary across strategies. First, in the uptake of 'Planning ideas in advance', while both C and E1 showed consistent increases in its use over time, E2 was the only class that had a steady decrease. This is striking given that the result was counter to the predicted teaching effect. In contrast, the most dramatic change in the predicted direction (i.e. showing a teaching effect) was in the use of 'Problem Identification'. E2 showed dramatic increases (0.3, 1.3, 1.9) across Phases 1, 2 and 3, thereby taking E2 well above C and E1 at both Phases 2 and 3. In fact, C showed a downward trend (0.8, 0.2, 0.1) and the increases displayed by E1 were only minimal (0.0, 0.2, 0.1). Lastly, there was evidence of a noticeable increase in the use of 'Functional planning' for E2 at Phase 2 as compared with the C and E1 groups. It should, however, be noted that the frequency was low (0.7). The use of the other target strategies was minimal and hence does not warrant meaningful comparisons across groups and phases. All in all, training in the use of indirect strategies appeared to have the greatest impact on 'Problem identification'. In other words, the uptake of this strategy seemed to be the highest. The other interesting result was that the training brought about a downward trend in the use of 'Planning ideas in advance'.

### *Results by proficiency level*

To study whether proficiency level made a difference, we now move on to study results organized according to ability subgroups. Table 5.17 compares the frequencies of use per 10 turns (F) between high- and low-proficiency students across classes and phases.

Table 5.17 *Comparison of C's, E1's and E2's standardized frequencies of use of individual target strategies across phases (by proficiency level)*

Class	Ability	C			E1			E2 *		
		1	2	3	1	2	3	1	2	3
Phase		1	2	3	1	2	3	1	2	3
Number of turns produced per group per phase	High	57	72	59	35	58	32	59	42	65
	Low	32	55	51	20	35	53	62	55	39
1. Planning ideas in advance	H	2.8	2.5	2.2	2.6	5.0	8.1	2.0	0.2	0.2
	L	3.4	4.8	7.5	5.5	7.2	7.2	1.8	1.3	0.3
2. Problem identification	H	0.9	0.3	0.0	0.0	0.2	0.0	0.2	1.4	1.5
	L	0.6	0.0	0.2	0.0	0.3	0.2	0.5	1.3	2.6
3. Functional planning	H	0.4	0.0	0.0	0.0	0.0	0.0	0.2	1.4	0.0
	L	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2	0.5
4. Asking for help	H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Giving help	H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Evaluation	H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
7. Positive talk	H	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.2	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Aggregated frequency of use	H	4.0	2.8	2.2	3.7	5.2	8.1	2.4	3.8	1.7
	L	4.1	4.7	7.7	6.0	7.4	7.4	2.3	2.9	3.6
Aggregated variety of use	H	3	2	1	2	2	1	3	5	2
	L	2	1	2	2	2	2	2	4	4

<E1 > denotes the group which received training in the use of direct strategies

<E2\*> denotes the group which received training in the use of indirect strategies

First, analysis by proficiency level revealed that, in terms of the variety of strategy use, for E2, the target group, there was evidence (shaded) that the L subgroup seemed to be showing sustained increases in variety of use (2,4,4). In comparison, the H subgroup peaked at Phase 2 and tailed off at Phase 3 (3, 5, 2). None of their L- and H-counterparts in C and E1 groups exhibited any signs of increase in variety. For E2, strategy training therefore appeared to be associated with sustained increases in the variety of strategy types for the low-proficiency students but not for the high-proficiency students.

The L-subgroups of both C and E1 outscored its respective H-subgroup except E1 at Phase 3 in frequency of use of 'Planning ideas in advance'. For E2, while the L-subgroup had a lower score than the H-subgroup at Phase 1, the former outscored the latter at both Phases 2 and 3. In addition, neither the L-subgroup nor H-subgroups of C or E1 showed obvious signs of increase in the use of 'Problem identification'. In



contrast, for E2, the target group, both subgroups showed increased uses at Phases 2 and 3. Specifically, the L-subgroup (i.e. 2.6) considerably outscored its H-counterpart (i.e. 1.5) at Phase 3. Lastly, regarding the use of 'Functional planning', for both C and E1, the H- and L- subgroups did not show any sign of an upward trend. In contrast, there was evidence that, for E2, the H-subgroup displayed a dramatic increase at Phase 2 although this was not sustained at Phase 3. By comparison, the L-subgroup sustained a steady but very modest increase. Other than these three strategies, the use of other strategies by all groups was too sparse to warrant meaningful comparisons. The overall impression is that, for E2, strategy training seemed to be related to higher activation on the part of the low-proficiency students than their high-proficiency counterparts in the use of individual strategies. That is, proficiency level made a difference.

#### 5.4.3.3 Findings by individual, non-target strategies

##### *Results by treatment*

Table 5.18 sets out the figures indicating the standardized frequencies of use (F) of individual non-target strategies per 10 turns per group per phase.

Table 5.18 *Comparison of C's, E1's and E2's standardized frequencies of use per 10 turns of individual non-target strategies across phases (By treatment)*

Class	C			E1			E2*		
	1	2	3	1	2	3	1	2	3
Number of turns produced per class per phase	89	127	110	55	93	85	121	97	104
1. Enhancing task knowledge	1.3	0.1	0.0	2.5	0.4	0.7	3.8	2.5	2.2
2. Checking meanings	0.5	0.0	0.0	0.5	0.2	0.0	1.2	0.7	0.3
3. Rehearsing ranking	2.3	4.9	3.9	0.7	1.1	0.9	0.3	0.6	0.0
4. Monitoring contributions	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.2
5. Suggesting turn-taking tactics	0.9	0.1	0.0	0.0	0.0	0.0	0.4	0.2	1.0
6. Facilitating progress	0.1	0.1	0.2	0.6	0.1	0.0	0.3	1.1	1.0
Aggregated frequency of use	5.4	5.7	4.1	4.7	1.8	1.7	6.4	5.9	5.2
Aggregated variety of use	5	5	2	4	4	2	6	5	5

<E1 > denotes the group which received training in the use of direct strategies

<E2\*> denotes the group which received training in the use of indirect strategies

A holistic study of the data in Table 5.18 reveals that both C and E1 showed increasing use of one obvious strategy i.e. 'Rehearsing ranking' (shaded boxes). There was negligible sign of increase in the use of any other strategies. For E2, the target group, there was a slight increase in the use of 'Rehearsing ranking' at Phase 2 only,

and no use of it all at Phase 3. For E2, however, there were upward trends in the use of 'Suggesting turn-taking tactics' at Phase 3 (0.4, 0.2, 1.0), an increasing trend in the use of 'Facilitating progress' at Phases 2 and 3 (0.3, 1.1, 1.0), and a sustained use of 'Monitoring contributions' at Phase 3 (0.2, 0.0, 0.2). These findings suggest that, while a narrow range of fairly obvious strategies was used by C and E1, a wider range of less obvious strategies was employed by E2, the target group that was in general more aware of indirect strategies (target and non-target). Furthermore, in terms of variety of strategy use, there was a big drop at Phase 3 for both the C group (5, 5, 2) and the E1 group (4, 4, 2). In contrast, the drop was only slight for the E2 group (6, 5, 5). These results support the idea that, for E2, strategy training may be associated with using a wider range of less obvious non-target strategies and with declining uses of obvious strategies.

### *Results by proficiency level*

To address the research question as to whether proficiency level made a difference to strategy use, we continue to compare results of high- and low-proficiency students across groups and phases in Table 5.19.

Table 5.19 *Comparison of C's, E1's and E2's frequencies of use of individual non-target strategies across phases (By proficiency level)*

Class	Ability	C			E1			E2*		
		1	2	3	1	2	3	1	2	3
Phase	High	57	72	59	35	58	32	59	42	65
	Low	32	55	51	20	35	53	62	55	39
1. Enhancing task knowledge	H	1.4	0.0	0.0	3.4	0.7	0.9	2.4	1.0	1.2
	L	1.2	0.2	0.0	1.0	0.0	0.6	5.1	3.6	3.8
2. Checking meanings	H	0.2	0.0	0.0	0.6	0.3	0.0	0.8	1.2	0.0
	L	0.9	0.0	0.0	0.5	0.0	0.0	1.5	0.4	0.8
3. Rehearsing ranking	H	2.4	6.7	6.6	0.0	0.3	0.6	0.2	1.2	0.0
	L	2.2	3.1	0.7	2.0	2.3	1.0	0.5	0.2	0.0
4. Monitoring contributions	H	0.0	0.4	0.0	0.0	0.0	0.0	0.3	0.0	0.3
	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Suggesting turn-taking tactics	H	1.4	0.0	0.0	0.0	0.0	0.0	0.9	0.5	1.5
	L	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Facilitating progress	H	0.0	0.0	0.2	0.9	0.2	0.0	0.3	0.5	1.2
	L	0.3	0.2	0.2	0.0	0.0	0.0	0.3	1.6	0.5
Aggregated frequency of use	H	5.4	7.1	6.8	5.4	1.6	1.6	5.4	5.4	5.1
	L	5.3	3.8	1.0	3.5	2.3	1.7	7.4	6.2	5.4

<E1> denotes the group which received training in the use of direct strategies

<E2\*> denotes the group which received training in the use of indirect strategies

For Strategy 1, for both C and E1, the H subgroups tended to show more use than the L subgroups. In contrast, for E2, the target group, the L subgroup outstripped the H

subgroups for all the three phases. In fact, the highest frequency of use for E2 was

'Enhancing task knowledge'. For Strategy 2 and E2, the L-subgroup once again showed higher use than its H-counterpart (shaded boxes). For strategy 3 and the C group, this strategy was the only one to be consistently used, with the H subgroup leading the L subgroup. For E1, the L subgroup outscored the H subgroup for all the three phases. For E2, however, no consistent patterns were apparent.

For Strategies 4, 5 and 6, another interesting pattern emerged. For the E2 group, it was the H-subgroup that outscored the L-subgroup on 6 out of 9 comparisons. In fact, Strategies 4 and 5 were deployed by the H-subgroup only. These findings indicate that the H-subgroup used this set of strategies much more than the L-subgroup at all phases. In contrast, for both C and E1, H outperformed L subgroup only in 4 out of 18 comparisons. There were in fact minimal uses of these strategies by both ability subgroups. To sum up, the findings show that, for E2, strategy training may be related to the low-proficiency students being more activated than the high-proficiency students in the use of familiar, obvious strategies and to the high-proficiency students using more 'Monitoring contributions', 'Suggesting turn-taking tactics' and 'Facilitating progress'.

#### 5.4.3.4 Summary of findings

##### Findings by whole sample

##### *Target strategies*

Analysis by treatment shows that, for E1, the teaching of direct strategies may have had an impact on the consistent increases in the use of indirect strategies as well. For E2, strategy training appeared to be related to a noticeable effect in the use of the target strategies at Phase 2 rather than at Phase 3. Analysis by proficiency level reveals that, with the exception of the H sub-group of E2 at Phase 3, for both E1 and E2, strategy training may be related to general increases over time in the use of the target strategies by both the H- and L-subgroups regardless of whether students had received training in the use of direct or indirect strategies. Moreover, there was evidence that, for E2, strategy training might be associated with higher use of the target strategies by the low-proficiency students than by high-proficiency students.

*Non-target strategies*

Analysis by treatment indicates that there might have been teaching effects for both E1 and E2, bringing about steady decreases in the use of non-target strategies over time. Analysis by proficiency level shows that, for E1 and E2, both the H- and L-subgroups displayed consistently decreasing trends in the use of non-target strategies over time, suggesting that strategy training might be associated with the declining use of non-target strategies. That is, proficiency level did not seem to make a difference.

## Findings by individual strategies

*Target strategies*

Analysis by treatment indicated that, for E2 (in comparison with C and E1), strategy training could be associated with a wider variety of strategy use at both Phases 2 and 3. Regarding the uptake of individual strategies, the training appeared to be related to the consistent increases in the predicted direction in the use of 'Problem identification'. The other interesting result was that, for E2, the training may be connected to the downward trend in the uptake of 'Planning ideas in advance'. Analysis by proficiency level reveals that, for E2, strategy training seemed to be related to higher activation on the part of the low-proficiency students than their high-proficiency counterparts in the uptake of 'Planning ideas in advance', 'Problem identification' and 'Functional planning'. Other than these three strategies, the use of other target strategies by all groups was too sparse to warrant meaningful comparisons.

*Non-target strategies*

Analysis by treatment indicates that, for E2 (in comparison with C and E1), strategy training could be associated with its using a wider range of and less obvious non-target strategies (i.e. 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions'). Analysis by proficiency level reveals that, for E2, strategy training might be related to the low-proficiency students being more activated than the high-proficiency students in the use of familiar, obvious strategies (i.e. 'Enhancing task knowledge', 'Checking meaning'). Again for E2, the teaching could have been associated with the high-proficiency students using strategies that were less

familiar (i.e. 'Monitoring contributions', 'Suggesting turn-taking tactics' and 'Facilitating progress'). Hence, proficiency level appeared to have made a difference.

#### 5.4.4 Summary and discussion

So far in section 5.4, we have seen clear changes in students' observed strategy use that were common to both the English group discussions and the preparatory talks in Cantonese. Notably, there were consistent increases in the predicted direction in the variety of observed use of target strategies for both the E1 and E2 groups. These findings raise the interesting issue of the possible awareness-raising effects of strategy instruction. A surprise result, however, was the short-term rise in the frequency of observed use of the target strategies from Phase 1 to Phase 2 which was not sustained at Phase 3. It is worth exploring the reasons for the apparent lack of sustained effects of strategy training on observed strategy use.

As well as the above findings which were common to both the E1 and E2 groups, the training in the use of direct and of indirect strategies appeared to be related to divergent changes. First, regarding target strategies, the rise in the frequency of use of indirect strategies was much more dramatic than that in direct strategies. Second, as for non-target strategies, there were more changes in the observed use of indirect than direct strategies. Could these results be related to the types of strategies in which the students had received training? Might the differences in observed strategy use be related to differences in aspects of improvement in task performance as reported in the earlier section, 5.2? Also, strategy instruction was related to steady and consistent increases in the predicted direction in the use of 'Resourcing' for the E1 group and in the use of 'Problem identification' for the E2 group. What might the reasons be for this?

Finally, proficiency level seemed to make some differences to the impact of strategy training on strategy use. Overall, the low-proficiency students were more activated than the high-proficiency students. What are the pedagogic implications for strategy training? The answers to this question, alongside others, will be discussed in relation to findings from other research instruments in Chapter 6.

Findings from performance data can only describe students' observable surface behaviour. The next section 5.5 turns to students' comments on the recordings in

which they participated i.e. findings of the stimulated recall interviews. The purpose was to go beyond surface behaviour and tap into students' thinking behind strategy use.

## **5.5 Assessing Reported Strategy Use in Stimulated Recall Interviews**

### **5.5.1 Introduction**

In the previous section 5.4, we studied the impact of strategy training on students' procedural knowledge of strategy use by studying changes in performance data. In this section, we go beyond the surface evidence by attempting to tap into students' minds to see what they thought they did in the recordings. This way, the findings in this section pertain to the declarative knowledge of the learners' strategy use, thereby complementing their observed strategy use in section 5.4.

### **5.5.2 Reported strategy use in English discussions**

#### **5.5.2.1 Quantitative findings**

Given the training that the E1 group had received, it would be interesting to see whether the proportions (%) of recall segments coded as 'target strategies' (i.e. strategies introduced to the students during the training) for E1 would increase over time, compared with the C group. As the data collection procedures were deliberately inclusive to elicit all strategic behaviours, there was a double focus in the sense that the proportions of both target and non-target strategies (i.e. strategies not taught in the training sessions but reported by students) were looked at. The purpose was to study whether E1 would also increase in its proportions of reported segments coded as 'non-target strategies', on the assumption that strategy training would possibly raise general strategic awareness.

#### *Findings by whole sample*

#### **Results by treatment**

Table 5.20 below compares the frequencies (N) and proportions (%) of C and E1 in terms of the different types of recall segments coded as 'target', 'non-target', and

'non-strategies' (i.e. non-strategic behaviours) across three phases. As explained in section 4.6.1, only the C and E1 students were involved in this part of the study. Each cell under the C group presents data from four students (i.e. two from a H-subgroup and two from a L-subgroup) and each cell under the E1 group from two groups of four students each (i.e. four from a H-subgroup and four from a L-subgroup).

Table 5.20 Comparison of C's and E1's frequencies (N) and proportions (%) of different types of reported segments including target, non-target and non-strategies (By class)

Class	Frequency (N)						Proportion (%)					
	C (4 students)			E1 (8 students)			C (4 students)			E1 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
Target strategies*	10	3	7	7	24	25	21.7	8.6	14.9	9.6	25.8	39.7
Non-target strategies	15	24	20	40	40	21	32.6	68.6	42.6	54.8	43.0	33.3
Non strategies	21	8	20	26	29	17	45.7	22.8	42.5	35.6	31.2	27.0
Total	46	35	47	73	93	63	100	100	100	100	100	100
Mean frequency per student	11.5	8.8	11.8	9.1	11.6	7.9						

\* denotes direct strategies introduced to E1 during training

As can be seen on the left hand side of Table 5.20, the total frequency counts in general remained substantial across the three phases for both C and E1. Besides, the mean frequency count per student (bottom of Table) per interview ranged from 7.9 to 11.8. This was considered quite high given the relatively short duration of the interviews. As none of the phases had very low scores, proportions in terms of percentages (%) were used as a standard measure of comparison and findings are presented on the right hand side of the Table.

The shaded cells in Table 5.20 show some interesting patterns regarding the overall picture. First, with respect to target strategies, there were consistent substantial increases (9.6%, 25.8% and 39.7%) (shaded) for the E1 group. In contrast, C went down and then up (21.7%, 8.6%, 14.9%), giving a random impression. Second, regarding non-target strategies, E1 displayed a steady trend for decreases in reported use (54.8%, 43.0%, 33.3%) (shaded) whereas C showed an upward trend in phase 2 but a downward trend in phase 3 (32.6%, 68.6%, 42.6%). This again gives an impression of random patterns for the C group. Third, regarding changes over time for non-strategies (i.e. talks in which no strategies were reported), E1 had a consistent tendency to report fewer non-strategies

(35.6%, 31.2%, 27.0%) (shaded) over time. Unlike E1, C did not show any predictable trend across phases (45.7%, 22.8%, 42.5%).

The general picture we have gained so far is clear-cut. E1, the target group, seemed to focus more on target strategies, less on non-target strategies and on non-strategic talks across the three phases. In comparison, the C group appeared to change its focus from time to time with no predictable patterns. The finding seems to suggest that strategy training might have had an impact on drawing the attention of E1 to the identification of target strategies during the SRIs. The training, however, did not seem to have resulted in the activation of non-target strategies as evidenced by the fact that there was a decrease in their reported use. In other words, the training did not seem to have raised general strategic awareness other than that of the target strategies.

### *Results by proficiency level*

To move from an overall picture and to see if proficiency level made a difference, a further analysis of the results by proficiency level was conducted. Table 5.21 sets out frequencies (N) and proportions (%) between the high-proficiency sub-group (H) and low-proficiency subgroup (L) of both C and E1 groups. Each cell under C presents aggregated frequency counts from 2 students and each cell under E1 from 4 students.

Table 5.21 *Comparison of C's and E1's frequencies (N) and proportions (%) of different types of reported segments including target, non-target and non-strategies (By proficiency)*

		Frequencies (N)						Proportions (%)					
		C (2 students)			E1 (4 students)			C (2 students)			E1 (4 students)		
	Phase\ Ability	1	2	3	1	2	3	1	2	3	1	2	3
Target strategies *	High	8	1	5	2	11	9	34.8	4.8	19.2	5.6	21.2	33.3
	Low	2	2	2	5	13	16	8.7	14.3	9.5	13.5	31.7	44.4
Non-target strategies	H	5	16	15	17	23	7	21.7	76.2	57.7	47.2	44.2	25.9
	L	10	8	5	23	17	16	43.5	57.1	23.8	62.2	41.5	44.4
Non strategies	H	10	4	6	17	18	11	43.5	19.1	23.1	47.2	34.6	40.7
	L	11	4	14	9	11	4	47.8	28.6	66.7	24.3	26.8	11.1
Total	H	23	21	26	36	52	27	100	100	100	100	100	100
	L	23	14	21	37	41	36	100	100	100	100	100	100

<\*> denotes direct strategies introduced to E1 during training



Regarding target strategies, for E1, analysis by proficiency level reveals largely similar patterns to results by treatment. The shaded cells reflect a general picture: both H and L subgroups followed similar tendencies to report consistently more target strategies. In comparison, the C group showed no consistent pictures exhibited by the H and L subgroups. Regarding non-target strategies, for E1, the H subgroup had a steadily decreasing trend and the L subgroup had a similar though less consistent pattern of decrease in Phase 3.

One more observation is worth noting. For E1, the L subgroup tended to identify higher proportions of target strategies as compared with the H subgroup. All the figures for the L subgroup (i.e. 13.5%, 31.7%, 44.4%) were higher than those of their respective H subgroup (i.e. 5.6%, 21.2%, 33.3%). A similar pattern was found with non-target strategies with only one exception (i.e. 41.5% in Phase 2). In other words, for E1, 5 out of the 6 comparisons between H and L subgroups indicate that low-proficiency students were more active than their high-proficiency counterparts in the reported use of both target and non-target strategies. On the other hand, for C, the H and L subgroups did not display any consistent patterns; the subgroups varied their patterns from phase to phase. Results therefore showed that, for E1, proficiency level was a factor in affecting patterns of reported use of target and non-target strategies.

#### *Findings by individual, target strategies*

So far, the findings for the whole sample of target and non-target strategies have not yielded information as to whether the overall picture reflected the majority of strategies or only a few atypical strategies with exceptionally high frequencies. Also, the reader will recall that each of the 8 target strategies was selected for strategy training with a view to facilitating students' speech production at different stages of on-line processing (see section 2.5.2). The other purpose of looking at findings pertaining to individual strategy use was to study which strategies (and at which stage of speech processing) might be more amenable to reporting.

#### *Results by treatment*

To investigate how strategy training impacted on the reporting of individual strategies, Table 5.22 compares frequencies (N) and proportions (%) of each of 8 strategies between C and E1 across phases 1, 2 and 3. As a standard measure, the proportion (%) represents the proportionate use by C and E1 of the target (direct) strategies as a proportion of each group's total reported segments including those coded as 'target', 'non-target' and 'non-strategic'. Let us take 'Resourcing' as an example. The raw scores on the left hand side of the Table indicate that E1 reported 11 counts of "Resourcing" in Phase 3. As the group's total number of reported segments was 63 (bottom of the Table), the proportionate use by E1 of "Resourcing" in Phase 3 is  $(11/63 \times 100\%) = 17.5\%$  as shown in the corresponding row on the right hand side of the Table.

Table 5.22 *Comparison of C's and E1's frequencies (N) and proportions (%) of segments coded as 'target strategies' (by treatment)*

Class	Frequencies (N)						Proportions (%)					
	C (4 students)			E1 (8 students)			C (4 students)			E1 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
1. Resourcing	0	0	0	3	16	11	0.0	0.0	0.0	4.1	17.2	17.5
2. Paraphrasing	9	2	7	4	4	7	19.6	5.7	14.9	5.5	4.3	11.1
3. Using fillers	1	0	0	0	3	3	2.2	0.0	0.0	0.0	3.2	4.8
4. Self correction	0	0	0	0	1	2	0.0	0.0	0.0	0.0	1.1	3.2
5. Self repetition	0	0	0	0	0	1	0.0	0.0	0.0	0.0	0.0	1.6
6. Asking for repetition	0	0	0	0	0	1	0.0	0.0	0.0	0.0	0.0	1.6
7. Seeking clarification	0	1	0	0	0	0	0.0	2.9	0.0	0.0	0.0	0.0
8. Seeking confirmation	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Group's total in frequencies (N) or proportions (%)	46	35	47	73	93	63	100	100	100	100	100	100
Group's aggregate in variety	2	2	1	2	4	6	2	2	1	2	4	6

In terms of the frequency of strategy use, the raw scores in the Table indicate that, for the E1 group, the frequencies of 'Resourcing' and 'Paraphrasing' were a lot higher than those of the other six strategies. For the C group, however, there was no reporting of any use of "Resourcing" and the identification of "Paraphrasing" accounted for the majority of the frequency counts for the whole sample of target strategies. By comparison, for both the E1 and C groups, the raw scores of Strategies 3-8 were too low for meaningful and reliable comparisons. The synoptic picture we have gained is that, for both C and E1, there was not much reporting of individual target strategies. In fact, the reported use of

the target strategies was limited to one or two atypical strategies i.e. 'Resourcing' and 'Paraphrasing'.

We then study "Resourcing" and "Paraphrasing" more closely. First, E1 had obvious increases in the reported use of "Resourcing" (4.1%, 17.2%, 17.5%) whereas none of the students in C reported its use at any time point. This seems to lend evidence that strategy training had a noticeable impact on raising students' awareness and reporting of "Resourcing". Second, a study of the reporting pattern of "Paraphrasing" by E1 provides no evidence for the training effects, in that there were no predictable patterns over time (5.5%, 4.3%, 11.1%). There were similar 'down' and then 'up' trends for the C group (19.6%, 5.7% 14.9%).

Let us turn to variety of reported strategy use. E1 outperformed C. Whereas both E1 and C reported using only two types of strategies in Phase 1, E1 showed a clear and consistent tendency to use more types of strategies (four in Phase 2 and six in Phase 3) and C indicated a downward trend (two in Phase 2 and one in Phase 3). This finding suggests that there may have been a novelty effect of strategy training, thereby motivating students to try out and identify more types of target strategies.

### *Results by proficiency level*

The results were subjected to further analysis by proficiency level to see whether this made a difference. Table 5.23 contrasts the proportionate uses (%) by H and L subgroups of 3 target strategies ("Resourcing", "Paraphrasing", "Using fillers"). The results of the other 5 strategies are not shown below because their raw scores by treatment are very low (see Table 5.23), not to mention those by H and L subgroups. As low values do not render any comparisons meaningful, they are not included in the following Table 5.23.

Table 5.23 *Comparison of C's and E1's frequencies (N) and proportions (%) of segments coded as individual, target strategies (By proficiency)*

Class	Ability	Frequencies (N)						Proportions (%)					
		C (2 students)			E1 (4 students)			C (2 students)			E1 (4 students)		
Phase		1	2	3	1	2	3	1	2	3	1	2	3
Resourcing	High	0	0	0	1	8	2	0.0	0.0	0.0	2.8	15.4	7.4
	Low	0	0	0	2	8	9	0.0	0.0	0.0	5.4	19.5	25.0
Paraphrasing	H	7	0	5	1	0	3	30.4	0.0	19.2	2.8	0.0	11.1
	L	2	2	2	3	4	4	8.7	14.3	9.5	8.1	9.8	11.1
Using Fillers	H	1	0	0	0	2	1	4.4	0.0	0.0	0.0	3.9	3.7
	L	0	0	0	0	1	2	0.0	0.0	0.0	0.0	2.4	5.6

For E1, there are two interesting findings from the synoptic picture from Table. First, although the H subgroup did not display any consistent pattern with either “Resourcing” (2.8%, 15.4%, 7.4%) or “Paraphrasing” (2.8%, 0.0%, 11.1%), we have a trend where the L-subgroup had strikingly higher proportionate reported uses of “Resourcing” and “Paraphrasing”. Five out of the six pairs of comparisons show that the L-subgroup had higher proportions of strategic focusing than its H counterpart, suggesting that the L-subgroup might have been more active than the H-subgroup. In contrast, for C, the H- and L-subgroups did not display any consistent trend. Second, comparing the L-subgroups of C and E1, while the L-subgroup of E1 had a consistently increasing trend in the number of recall segments coded as “Resourcing” (5.4%, 19.5%, 25.0%) and as “Paraphrasing” (8.1%, 9.8%, 11.1%), their C counterparts did not show any consistent patterns. This lends some evidence to the argument that the training may be associated with a consistent and greater impact on the low-proficiency students than on the untrained C group or the high-proficiency students of E1.

One caution, however, needs to be borne in mind concerning the findings. That is, the frequency counts (N) were low and the proportions (%) could be misleading. Nonetheless, it could be argued that if we have enough supporting evidence from other data collection methods (for the triangulation of results, see section 5.6), we can then support the case that, for E1, the target group, the L-subgroup was more active in the identification of “Resourcing” and “Paraphrasing” than the H-subgroup.

### *Findings by individual, non-target strategies*

#### Results by treatment

As mentioned at the outset of this section, we had a double focus in that the proportions (%) of non-target strategies would also be looked at. The purpose was to find out whether the tuition appeared to activate general awareness of strategy use. The overall picture we saw in the earlier section was that E1 displayed a steady trend of decreased reported use of the non-target strategies by the whole sample (54.8%, 43.0%, 33.3%) (Table 5.20) whereas C showed an unpredictable, rise-fall pattern over time (32.6%, 68.6%, 42.6%) (Table 5.20). In this section, we aim to find out if the pattern of individual strategy use

reflected the main generalization from the non-target strategies by whole sample. The purpose is to see if the result of the whole sample was due to the influence of a few atypical strategies only.

A total of 20 different types of non-target strategies were identified in the SRI protocols of students in C and E1. Table 5.24 sets out the frequencies (N) and proportions (%) of the 20 types of non-target strategies across groups and phases.

*Table 5.24 Comparison of C's and E1's frequencies (N) and proportions (%) of segments coded as individual, non-target strategies (By treatment)*

Class	Frequencies (N) <sup>a</sup>						Proportions (%)					
	C (4 students)			E1 (8 students)			C (4 students)			E1 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
1. Seeking meaning	0	1	1	2	1	1	0.0	2.9	2.1	2.7	1.1	1.6
2. Repairing	0	1	0	0	0	1	0.0	2.9	0.0	0.0	0.0	1.6
3. Elaborating	0	0	0	1	3	0	0.0	0.0	0.0	1.4	3.2	0.0
4. Focusing on task	0	1	0	1	2	3	0.0	2.9	0.0	1.4	2.2	4.7
5. Seeking views	1	0	1	0	2	0	2.2	0.0	2.1	0.0	2.2	0.0
6. Seeking agreement	0	0	0	0	1	0	0.0	0.0	0.0	0.0	1.1	0.0
7. Taking risks	2	2	1	2	0	1	4.4	5.7	2.1	2.7	0.0	1.6
8. Activating background knowledge	3	1	0	5	2	1	6.5	2.9	0.0	6.9	2.2	1.6
9. Using gestures	2	1	1	1	0	0	4.4	2.9	2.1	1.4	0.0	0.0
10. Adjusting messages	3	5	2	7	6	3	6.5	14.3	4.3	9.6	6.5	4.8
11. Planning ideas	0	1	2	1	5	1	0.0	2.9	4.3	1.4	5.4	1.6
12. Functional planning	0	0	0	0	1	0	0.0	0.0	0.0	0.0	1.1	0.0
13. Evaluating	0	1	3	0	2	0	0.0	2.9	6.4	0.0	2.2	0.0
14. Giving help	0	2	1	6	3	3	0.0	5.7	2.1	8.2	3.2	4.8
15. Asking for help	0	1	0	4	1	0	0.0	2.9	0.0	5.5	1.1	0.0
16. Facilitating atmosphere	1	2	1	0	1	0	2.2	5.7	2.1	0.0	1.1	0.0
17. Facilitating progress	1	2	3	1	2	2	2.2	5.7	6.4	1.4	2.2	3.2
18. Monitoring contributions	0	3	1	7	4	5	0.0	8.6	2.1	9.6	4.3	7.9
19. Taking turns	0	0	3	2	4	1	0.0	0.0	6.4	2.7	4.3	1.6
20. Enhancing task knowledge	2	0	0	0	0	0	4.4	0.0	0.0	0.0	0.0	0.0
Group's total in frequencies (N) or proportions (%)	46	35	47	73	93	63	100	100	100	100	100	100
Group's aggregate in variety	8	14	12	13	16	11	8	14	12	13	16	11

*<T> denotes the number of recall segments coded per class per phase (T)*

The raw scores on the left and the proportions (%) on the right of the above Table are generally small for each of Strategies 1-20. It was therefore decided not to look at individual strategies but at the patterns of all the 20 strategies taken together. A number

of reporting trends across phases 1, 2 and 3 on the Table 5.25 were identified and summarized for the C and E1 groups below in Table 5.25.

Table 5.25 *Comparisons of C's and E1's frequencies of reporting trends across phases 1, 2 and 3*

Trends across phases 1, 2, 3	Treatment group	
	C	E1
Overall fall	3	4
Overall rise	4	3
Steady state	3	1
Sub total	10	8
Rise-fall	9	8
Fall-rise	1	4
Sub total	10	12
Total	20	20

First, we look at the result of the "Overall fall" trend (i.e. decreasing tendency) to see if the majority of strategies displayed this pattern of reporting. The frequency counts of C and E1 were 3 and 4 respectively. This finding provides the evidence that, for E1, the overall decreasing trend in the identification of the non-target strategies by whole sample did not reflect that of the majority of individual strategies. Only 4 out of 20 strategies showed a clear downward trend. In fact, there were no pervasive, consistent patterns within C or with E1. For example, for the C and E1 groups, the frequency counts of 'Rise-fall' and 'Fall-rise' (i.e. random trends) taken together were 10 and 12 respectively. In other words, more than half of the total number of strategies showed inconsistent trends within C or within E1. With regard to the other consistent trends ('Overall fall', 'Overall rise', 'Steady state') considered together, both C and E1 had similar number of counts i.e. 10 and 8 respectively. In short, the overall decrease in the reported use of the non-target strategies by the whole sample were probably due to the influence of a few atypical strategies which had particularly high frequencies (i.e. Strategies 8-10 & 15 as shaded in Table 5.24).

### *Results by proficiency level*

The reader will recall that, when we presented the overall pattern of reported use of the non-target strategies (whole sample) by proficiency level, for E1, the H- and the L- subgroups displayed a broadly similar decreasing trend over time as compared with their

counterparts in the C group. Comparatively, for E1, the L-subgroup tended to be more active (i.e. with higher proportions of reported use) than the H-subgroup. Further analyses by proficiency level were therefore conducted in this section for individual strategy use to investigate whether similar findings were obtained. Table 5.26 compares the proportions of reported use (%) by ability groups across phases.

Table 5.26 *Comparison of C's and E1's proportions of recall segments coded as individual, non-target strategies (By proficiency)*

Class	Ability	C (2 students)			E1 (4 students)		
		1	2	3	1	2	3
1. Seeking meaning	H	0.0	4.8	3.8	5.6	1.9	0.0
	L	0.0	0.0	0.0	0.0	0.0	2.8
2. Repairing	H	0.0	4.8	0.0	0.0	0.0	0.0
	L	0.0	0.0	0.0	0.0	0.0	2.8
3. Elaborating	H	0.0	0.0	0.0	0.0	0.0	0.0
	L	0.0	0.0	0.0	2.7	7.3	0.0
4. Focusing on task	H	0.0	4.8	0.0	2.8	3.9	11.1
	L	0.0	0.0	0.0	0.0	0.0	0.0
5. Seeking views	H	0.0	0.0	0.0	0.0	3.9	0.0
	L	4.3	0.0	4.8	0.0	0.0	0.0
6. Seeking agreement	H	0.0	0.0	0.0	0.0	1.9	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0
7. Planning ideas	H	0.0	0.0	7.7	2.8	9.6	3.7
	L	0.0	7.1	0.0	0.0	0.0	0.0
8. Functional planning	H	0.0	0.0	0.0	0.0	1.9	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0
9. Evaluating	H	0.0	4.8	11.5	0.0	3.9	0.0
	L	0.0	0.0	0.0	0.0	0.0	0.0
10. Giving help	H	0.0	9.5	3.9	5.6	0.0	0.0
	L	0.0	0.0	0.0	10.8	7.3	8.3
11. Asking for help	H	0.0	4.8	0.0	5.6	0.0	0.0
	L	0.0	0.0	0.0	5.4	2.4	0.0
12. Facilitating atmosphere	H	4.3	9.5	3.9	0.0	0.0	0.0
	L	0.0	0.0	0.0	0.0	2.4	0.0
13. Facilitating progress	H	0.0	9.5	7.7	2.8	3.9	0.0
	L	4.3	0.0	4.8	0.0	0.0	5.6
14. Monitoring contributions	H	0.0	9.5	3.9	5.6	7.7	3.7
	L	0.0	7.1	0.0	13.5	0.0	11.1
15. Taking turns	H	0.0	0.0	7.7	5.6	5.8	0.0
	L	0.0	0.0	4.8	0.0	2.4	2.8
16. Taking risks	H	8.7	0	3.9	2.8	0.0	0.0
	L	0.0	14.3	0.0	2.7	0.0	2.8
17. Activating background	H	0.0	0.0	0.0	0.0	0.0	3.7
	L	13.0	7.1	0.0	13.5	4.9	0.0
18. Using gestures	H	4.3	0.0	3.9	2.8	0.0	0.0
	L	4.3	7.1	0.0	0.0	0.0	0.0
19. Adjusting Messages	H	4.3	14.3	0.0	5.6	0.0	3.7
	L	8.7	14.3	9.5	13.5	14.6	5.6
20. Enhancing task knowledge	H	0.0	0.0	0.0	0.0	0.0	0.0
	L	8.7	0.0	0.0	0.0	0.0	0.0
Group's total in proportions (%)	H	21.7	76.2	57.7	47.2	44.2	25.9
	L	43.5	57.1	23.8	62.2	41.5	44.4
Group's aggregate in variety	H	4	10	10	11	10	5
	L	6	6	4	7	7	8

Two levels of analysis were conducted on the Table. First, a number of reporting trends across phases 1, 2 and 3 were identified, counted and summarized in Table 5.27 below for comparison between the H and L subgroups.

Table 5.27 *Comparisons of C's and E1's frequencies of reporting trends across phases 1, 2 and 3 (by ability)*

Trends across phases 1, 2, 3	Ability	C	E1
Rise-fall	High	9	8
	Low	5	2
Fall-rise	H	2	1
	L	2	3
Sub total	H	11	9
	L	7	5
Fall	H	0	5
	L	2	3
Rise	H	3	2
	L	1	4
Steady state	H	6	4
	L	10	8
Sub total	H	9	11
	L	13	15
Total	H	20	20
	L	20	20

Let us study the 'Fall' trend, for the H subgroups of C and E1, the frequency counts were 0 and 5 respectively. That is to say, for the E1 group, only 5 out of 20 non-target strategies reflected the overall decreasing trend for the non-target strategies by the whole sample. The number of strategies that displayed inconsistent trends (i.e. 'Rise-fall', 'Fall-rise) remained substantial for both C and E1.

Another level of analysis was also conducted (Table 5.27) to compare pairs of values between the H- and L-subgroups across Phases 1, 2 and 3. The purpose was to investigate whether the L-subgroup of E1 was more active than its H-counterpart across strategies and phases 1, 2 and 3. For the C group, the number of comparisons in which the L-subgroup showed higher values than the H-subgroup is five, four and two at Phases 1, 2 and 3 respectively (see highlighted cells in the Table). This appears to indicate a downward trend. Also, the number of comparisons in which the H-subgroup showed higher values than its L-subgroup is two, nine and ten respectively. That is, there was a



consistently increasing trend. In contrast to these, for the E1 group, the number of comparisons in which the L subgroup shows higher values than its H subgroup was five, six and eight respectively, indicating an upward trend. Also, the number of comparisons in which the H subgroup was higher than its L subgroup is eight, ten and three, indicating a downward trend. These findings support the view that, for E1 group, strategy training could have influenced the low-proficiency students to be more activated than their high-proficiency counterparts in the reporting of non-target strategies over time and also more activated than the L-subgroup of C.

One proviso should be reiterated, however. The raw scores and percentages were small and could be misleading. The triangulation of findings is therefore also used to see whether these findings corroborate other kinds of evidence (see section 5.6).

### *Summary of findings*

#### Reported strategy use in English discussions (By whole sample)

##### *Target strategies*

Analysis by treatment indicates that for E1, the target group, strategy training seemed to have been associated with consistent and dramatic increases in the reporting of the target strategies across Phases 1, 2 and 3. Analysis by proficiency level revealed that, for E1, both the high-proficiency and the low-proficiency students followed similar tendencies to consistently identify more direct strategies over time. The low-proficiency sub-group, however, reported higher proportions of the target strategies at all time points.

##### *Non-target strategies*

Analysis by treatment shows that, for E1, strategy instruction might have been related to the decreased reporting of non-target strategies across Phases 1, 2 and 3. Analysis by proficiency level revealed that both the H- and L-subgroups of E1 displayed a broadly similar trend of decreased reporting across phases. However, the low-proficiency students

identified higher proportions of non-target strategies than their high-proficiency counterparts at all phases.

Reported strategy use in English discussions (By individual strategies)

#### *Target strategies*

Analysis by treatment indicates that, for E1, the target group, strategy training had a noticeable impact on their reported use of “Resourcing”. Moreover, for E1, the training seemed to be related to their reported use of more types of target strategies. Analysis by proficiency level shows that, for E1, the training may be associated with consistently striking increases in reported uses of ‘Resourcing’ and ‘Paraphrasing’ by the low-proficiency students as compared with their high-proficiency counterparts. That is, proficiency level made a difference.

#### *Non-target strategies*

Analysis by treatment indicates that, for the E1 group, strategy training did not seem to be connected to consistent decreases in the reporting of the majority of non-target strategies. Analysis by proficiency level shows that, for E1, strategy training could have been associated with the low-proficiency students being more activated than their high-proficiency counterparts in the reporting of non-target strategies over time.

### **5.5.2.2 Qualitative findings (Cases 1-4)**

The purpose of presenting qualitative findings was to probe deeper into the minds of students by assessing the impact of strategy instruction on students’ strategic thinking (if any) in qualitative terms.

This section looks in detail at what two high-proficiency and two low-proficiency students in the E1 group reported in the stimulated recall interviews (SRIs). The students varied in their ability to articulate their thoughts and in the range of reported strategy use.

Table 5.28 below gives an overview of the number of different types of strategies reported across the range of four students.

Table 5.28 *A cross-case comparison of the number of types of strategies reported*

		Target strategies (T)							Non-target strategies (NT)						Grand total *	
		Proportion (%)			Types of strategies reported per phase			Total number of types of (T)	Proportion (%)			Types of strategies reported per phase				Total number of types of (NT)
Student	Proficiency	Phase			Phase					Phase			Phase			
		1	2	3	1	2	3	1		2	3	1	2	3		
Case 1	High	15	28	60	2	2	5	5	46	50	10	5	5	1	7	12
Case 2	High	0	33	25	0	2	2	3	67	42	38	6	5	3	11	14
Case 3	Low	25	25	62	1	2	4	4	63	50	39	2	3	3	7	11
Case 4	Low	0	50	0	0	1	0	1	80	40	67	2	2	1	2	3

< \* > denotes the total number of types of target and non-target strategies reported by the students

To enhance cross-case comparison between the four students, for every student, an effects matrix was used to present data from the three SRIs conducted at Phase 1, 2 and 3. According to Miles and Huberman (1994), an effects matrix is used when “an evaluator may want to know what changes a particular program or treatment brought about in its target population” (i.b.: 37). As the present study investigated changes (if any) strategy training brought about in the experimental groups, effects matrixes are therefore considered appropriate in presenting the data. In all the matrices, the strategy names are printed in bold, followed by a number in brackets that indicates the frequency count of that strategy. One sample segment has been included in every cell to illustrate the strategy reported in the cell. The aggregate frequency counts (N) and proportions of reported use (%) are also included for comparison across phases. The following case reports 1-4 from the four students are to be read in conjunction with Matrices presented in Appendices 19 - 26.

Case report 1: (see Appendix 23) (Highly articulate; wide strategy range)

*An Overview*

Annie was one of the most articulate in the stimulated recall interviews (SRIs); her recalls were rich and elaborate as reflected by the length of the segments (particularly at Phase 2). Overall, she reported 12 different types of strategies over the three phases. She referred to 5 target strategies (2 at Phase 1, 2 at Phase 2 and 5 at Phase 3) and 7 non-target strategies (5 at Phase 1, 5 at Phase 2 and 1 at Phase 3). The general picture is clear: the number of different types of target strategies identified increased while that of non-target strategies decreased dramatically.

At Phase One, Annie commented on 2 target and 5 non-target strategies. Regarding target strategies, the data indicate that Annie explicitly identified what could be achieved by the strategic use of the notes (*“to help me think about what he was saying about ‘skin’”*) (‘Resourcing’). She also made a conscious, purposeful, strategic act to enrich her own ideas while another student was speaking. It is worth noting that, even though she was one of the best students, she resorted to this fairly obvious strategy while the task was in action. The other pre-existing target strategy was ‘Paraphrasing’. Her comment indicates that she was aware of her limitation (*“I couldn’t think of the English words”*) and of her intention to ‘fix’ the problem by taking a strategic move by using (*“simpler words like ‘no secrets’ to replace ‘no privacy’”*).

Referring to ‘Planning ideas in advance’, a non-target strategy, Annie claimed, *“I had prepared my arguments to refute him...He fell into my trap.”* This reflects conscious planning, pro-activity and goal-directedness in her strategic moves. In short, she demonstrated meta-cognitive awareness.

She also deployed two non-target strategies which were clearly oriented towards facilitating the group task. First, she was aware that *“Penny didn’t say anything”* and decided to tackle the potential problem by inviting her to give opinions (‘Monitoring contribution’), thus facilitating the conduct of the discussion. Similarly, she was aware of the intention of a group member to speak and decided to ‘opt out’ by deploying ‘Turn taking’. This way, she could let her group-mate have the floor, thereby facilitating the discussion. So, she demonstrated an awareness of the need to monitor the group task. Again, this shows Annie’s meta-cognitive awareness.

When she recalled her decision to simplify messages ('Simplification'), she revealed quite a lot of detail about her on-task thoughts. Her account was particularly elaborate and the length of the segment was long. This provides evidence that she was able to give vivid details of her mental activities.

At Phase Two, during strategy instruction, Annie reported 2 target strategies, one of which was different from those in Phase 1. While she continued to talk about the strategic use of the notes ('Resourcing'), she showed awareness of the usefulness of the strategy i.e. ("*The ideas on the second page were useful.*"). She also explicitly stated that the notes facilitated the production of ideas. As in Phase 1, she was aware of the goal that the strategic use of notes might help her achieve.

Instead of continuing with 'Paraphrasing', Annie commented on 'Using fillers', a newly identified target strategy. She easily picked up the terminology (i.e. "*strategies*") used by the teacher when talking about the use of fillers: "*I thought of the strategies which Miss Li had taught us*". Moreover, she acknowledged the teacher as a source of strategies. Last but not least, she reported that the strategies were "*really effective.*" This again gave the evidence that she was aware of the effectiveness of the strategy before using it. In fact, she claimed that the strategy facilitated her on-line speech production ("*At least I didn't have to pause for too long*").

Regarding non-target strategies, there was evidence that she evaluated the appropriacy of a strategy before deploying it. For example, when she was referring to 'Turn taking', she reported that she decided to let her turn go after evaluating and acknowledging the strength of the reasoning of her group-mate ("*Since I felt that his point was quite true, so I just gave up my turn and let him speak.*"). That is, she was aware of the appropriacy of her strategic behaviour. Similar to what she did with 'Turn taking', after assessing and acknowledging the strength her group-mate's argument ("*I felt that Stephen's points were quite good*"), she strategically set the agenda of the discussion by "*rounding off the point*" ('Switching topics') so that they could move on to other topics. This provides further evidence that she was conscious of the appropriacy of her strategy use. This quality of strategy use was not reflected in her comment on the same strategy in Phase 1.

Thus, “Evaluation” appears, and not once but twice as well. The data here gives further evidence that she assessed the interim phase of the task (i.e. *“I felt that we hadn’t discussed it thoroughly... I had the feeling that our arguments were not substantial...”*) and took steps to enhance the quality of the final product (i.e. *“checking or running through the items again”*). By evaluating how well the group performed, she demonstrated meta-cognitive awareness.

In the final Phase Three, it is striking to note that, unlike the previous phases, Annie focused on a range of target strategies and that she continued to report on ‘Resourcing’, a fairly obvious strategy. As in Phase 2, she continued to show awareness of the goals that the strategy could help her achieve (*“This helped me think of things beyond the confines of the discussion”*). She also reported having compared and contrasted the content of the notes with those in previous phases, and stated *“this time the notes had more useful information.”* This provides the evidence that she continued to be aware of the value of the strategy before using it.

Annie continued to make overt references to strategy-related-terminology used by the teacher during the training sessions (e.g. “strategies”, “gain time”, “self correct”) when referring to ‘Paraphrasing’, ‘Using fillers’, ‘Self correction’. There is also evidence that, as in previous phases, she showed awareness of her limitations: *“I didn’t know how to express some ideas in English”* (‘Paraphrasing’); awareness of the teacher as source of strategies: *“I was able to think of trying out some strategies”* (‘Paraphrasing’); and awareness of the need to monitor and fix a perceived problem: *“trying some strategies like self correction to make up for what I felt was problematic”* (‘Self correction’). One interesting point is worth highlighting. While reporting on ‘Using fillers’, she stated, *“I just said “um”, “er”, “ok”, “actually” to gain time ...and I found it difficult to say more.”* This is evidence of the fact that she began to realize and acknowledge the limitation of the strategy. This is consistent with the emerging evidence at Phase 2 that she demonstrated awareness of the effectiveness of strategies.

*Summarising comments*

Overall, Annie's demonstrated high strategic awareness and there was evidence that she could deploy a range of pre-existing and target strategies. Consistently across phases, she was aware of her own limitations and problems, and of the need to take strategic moves to monitor, solve or pre-empt on-line communication problems. Furthermore, she demonstrated meta-cognitive awareness, taking deliberate steps to plan, monitor and evaluate the group task. At Phases 2 and 3, there was emerging evidence that she evaluated the usefulness, effectiveness and appropriacy of the strategies before deploying them. In sum, she was spontaneous in the reporting of strategies. There was also clear evidence that she began using the strategy-related-terminology introduced by the teacher during strategy instruction to talk about target strategies and that she acknowledged the teaching or teacher as the source of her strategy use. \*

Annie's recalls, which were mostly detailed, free of pausing, hesitation or other signs of post-hoc rationalization, gave an impression that they were genuine recounts of what had happened during the tasks. As time went by, there is evidence that the recalls were more elaborate (particularly at Phase 2), thus suggesting that she might have become more articulate about her own thoughts.

Case report 2: (see Appendix 20) (Moderately articulate; wide strategy range)

### *General picture*

Cynthia was a lot less articulate than Annie; her comments were generally brief. Nonetheless, the total number of types of strategies referred to by Cynthia was substantial (i.e. 14). However, unlike Annie, she reported only 3 target strategies, none at Phase 1, and 2 each at Phases 2 and 3. In contrast, she referred to 11 different non-target strategies (a lot more than Annie), 6 at Phase 1, 5 at Phase 2, and 3 at Phase 3. Similar to Annie, however, she increased in the identification of target strategies but decreased in that of non-target strategies over time.

At Phase One, prior to strategy training, there was evidence that Cynthia possessed a repertoire of strategies. Her reporting included no direct strategies but revolved around 6 different non-target strategies. 'Facilitating progress' and 'Turn taking' are those that

enable the speaker to monitor the conduct of the group task. In this way, Cynthia showed meta-cognitive awareness. 2 of the remaining 4 strategy types enabled her to overcome her communication problems but might not develop her linguistic skills ('Using gestures', 'Abandoning messages') whereas the other 2 ('Asking for help', 'Taking risks') might facilitate linguistic development.

The data also indicate that she was aware of the problems that arose during the task and that she was trying to tackle those problems with some conscious moves. For example, in facing the prospect of "*dead silence*", she asked, '*what's the third one?*' to facilitate the progress of the discussion ('Facilitating progress'). When she "*didn't know what it meant*", she did not hesitate to ask ('Asking for help'). When she "*wasn't sure whether the grammar was correct or not*", she was still trying to maximize her chance to say something regardless ('Taking risks'). It should also be noted that she used "because" and "so" frequently in her account of her thought processes during the English discussion. This provides the evidence that she was conscious of the rationale behind her moves and the goals she wanted to achieve by making those moves.

To sum up, Cynthia's account indicates that she deployed a wide range of pre-existing strategies. During the English discussion task, she showed meta-cognitive awareness. She was aware of the problems arising during the task and of the strategic moves she took to tackle them. Not much detail was given to throw light on her on-task thoughts, however. Now we move to Phase 2 to see how she talked about the target strategies, which were not identified at all at Phase 1.

At Phase Two, Cynthia started describing 2 target strategies at Phase 2. This could be considered a significant change in her awareness of target strategy use. When talking about 'Resourcing', she was aware that the strategic use of the notes could facilitate her task performance ('*So I presented my own reasons and didn't have much difficulty because I referred to the suggestions in the notes to help me*'). On identifying "Self correction", she was conscious of her own problem ("*I felt that my grammar was not right*") and of a need to monitor her language production by resorting to strategy use ("*So I corrected it.*") during the task.



Regarding the 5 non-target strategies, only 'Facilitating progress' was also referred to at Phase 1 and the other 4 were newly-reported at Phase 2. Of the 5 strategies, 'Planning ideas' is a planning strategy, whereas 'Facilitating progress' and 'Monitoring contributions' are strategies that helped her monitor the conduct of the task and the contribution of the members to the task. This way, like Phase 1, Cynthia showed meta-cognitive awareness.

While commenting on the non-target strategies, as she did at Phase 1, she showed sustained awareness of problems arising during the task [e.g. "*We had nothing to say er.*" ('Facilitating progress')]; "*Stephen didn't seem to agree with me.*" ('Seeking views')]. Moreover, as in Phase 1, she was aware of the need to take conscious steps to tackle or prevent the problem [e.g. "*so I suggested 'strong heart'*" ('Facilitating progress'); "*so I was asking Penny to say something*" ('Monitoring contributions')]. Alternatively, she demonstrated awareness of the goals that her strategic moves aimed to achieve [e.g. "*to think about what they're talking about*" ('Focusing on task'); "*...and so I was trying to convince him.*" ('Seeking views')]. So far, the recall segments have indicated that the nature of strategic awareness she displayed at Phase 2 was similar to that at Phase 1. The data, however, provides emerging evidence of pro-activity [*"...well to prepare for my turn to say something.*" ('Planning ideas')]. She demonstrated awareness of her pre-meditated move that constituted a plan to enrich the content of her talk and subsequently to improve her task performance. This aspect of meta-cognitive awareness was not revealed at Phase 1.

To sum up, Cynthia began identifying target strategies in her talk. She continued to demonstrate meta-cognitive awareness. By and large, she showed sustained awareness of her strategic behaviours, of the goals they were intended to achieve, and above all, of the problems they were aimed to solve. Nonetheless, her comments remained brief throughout.

In the final Phase Three, there was clear evidence that Cynthia sustained in the reporting of 'Resourcing'. She continued to show awareness of the strategic use of her notes in facilitating the production of ideas ('Resourcing'). Similarly, when recounting her thoughts about the use of "Paraphrasing", a newly-reported target strategy, she

demonstrated awareness of her problem (“*I forgot the word.*”) and of the way the strategy facilitated her on-line production (“*it had similar meaning to the exact word*”). Other than these, no further details were given to illuminate her thoughts.

Out of the 3 non-target strategies she refers to at Phase 2, she continued to identify only 2 of them (‘Focusing on task’ and ‘Monitoring contributions’) at Phase 3. The comments on non-target strategies demonstrated a similar level of strategic awareness to that at Phase 2. For instance, when talking about her decisions to invite others to give opinions (‘Monitoring contributions’), she gave a reason without much elaboration. She said, ‘*Um.. at that time I felt that nobody responded to Annie. So I joined her in asking. ‘Yes, what do you think?....’*’ This is similar to her comment at Phase 2. That is, she was aware of the reason behind her moves and was capable of articulating it. Also, when talking about how she paid particular attention to her peers, she was able to add that she “*was analyzing what Stephen was saying*” apart from “*listening attentively to their explanations and reasoning*” (‘Focusing on task’). This analytical process was not reported at Phase 2. Last but not least, there was evidence that she was capable of giving details of her thoughts (e.g. ‘Activating background knowledge’).

To sum up, her recalls provided evidence that she continued to try out new strategies. The strategic awareness she demonstrated was similar to that at Phases 2 and 3. She remained generally brief though there was evidence that she was relatively very forthcoming in the reporting of one strategy.

### *Summarising comments*

The picture we have gained is of a student who, while offering more comments on target strategies and less on non-target strategies at Phases 2 and 3, did not seem to change much in terms of the spontaneity in reporting a range of strategies, of her awareness of the problems and goals at which her strategic moves were aimed. Throughout the three phases, Cynthia’s recall segments were not long, which might have been due to her relative lack of articulateness, as compared with Annie for example.

We will next describe two students from the low-proficiency sub-group, and will focus on whether their low proficiency in English affected their on-task thought processes and their ability to reflect on and articulate thoughts during the SRIs.

Case report 3: (see Appendix 21) (Moderately articulate; wide strategy range)

### *Overall picture*

Overall, Kwok reported 12 different types of strategies in all the SRIs. (The total is comparable to that of Annie, a high-ability student.) She referred to 4 target strategies (1 at Phase 1, 2 at Phase 2 and 4 at Phase 3) and 7 non-target strategies (2 at Phase 1, 3 at Phase 2 and 3 at Phase 3). Like Annie and Cynthia, there was an overall trend for increased reporting of target strategies and decreasing reporting of non-target strategies. The richness of her comments is moderate.

At Phase One, Kwok reported altogether 3 strategies, 1 target (25%) and 2 non-target (62.5%). ‘Paraphrasing’ was the only pre-existing target strategy reported in Phase 1 before the strategy instruction. There was evidence in the data that she showed awareness of her problem during the English task (“*That word...I just forgot it*”) and of her strategic move (“*so I said ‘to keep something’ instead*”). She was also aware of the limitation of her strategic move (“*but I used the wrong word*”) in achieving the desired outcome.

Apart from “Paraphrasing”, she commented on two non-target strategies. The first one was (‘Activating background knowledge’). She attributed the relative ease of her on-line talk to the use of the previously-learnt words: “*so when we were talking about breathing, I could say these words easily and naturally*”. Hence, she demonstrated awareness of her own ability to make use of background knowledge and of a means to harness her strength to facilitate task performance. When commenting on another non-target strategy (‘Giving help’), she was aware of a potential linguistic problem of a group-mate (“*he couldn't express himself*”) and of a strategic means to solve it (“*offering the word 'attract' to him*”).

To sum up, Kwok showed awareness of the linguistic problems of hers and of others. She took problem-oriented strategic steps to tackle the problems to facilitate performance. Moreover, she realised her own limitations in maximizing the effectiveness of some strategy use.

At Phase Two, Kwok described 5 strategies in total, 2 target (25%) and 3 non-target (50%). As in Phase 1, she commented on more non-target than target strategies.

Concerning target strategies, she continued to identify 'Paraphrasing' and added 'Using filler'. Similar to Phase 1, she was aware of a linguistic problem and of taking a strategic move to cope with it. Unlike Phase 1, she was also aware that, while the strategy could help her cope with the immediate communication problem, it did not really enhance her linguistic ability (*"I felt that 'cut' might not be very accurate"*). When referring to 'Using fillers', a newly-reported target strategy, she demonstrated awareness of her on-line problems (*"I really couldn't think of saying any more in English"*) and of the need to cope with the problem by resorting to using some empty words such as *"em"* and *"well"* in order *"to stall"*. It should be noted that these words were borrowed from the teacher during the strategy instruction and that the comment was very brief as compared with that of 'Paraphrasing'. It seems that she was less spontaneous in talking about 'Using fillers'.

We now turn to her talks on three non-target strategies. While she did not refer to any use of 'Resourcing', her comments on 'Activating background knowledge' and 'Elaborating' provide evidence that she was able to use either her background knowledge [*"So I just said similar things about the 'hands' as what I had said last time* ('Activating background knowledge')] or her interlocutors [*"So I depended on Lucy. She said a few words and then I supplemented them with my own"* ('Elaborating')] as resources to facilitate task performance. 'Facilitating atmosphere' was another newly-reported non-target strategy; it was not so much oriented directly to facilitate 'what to say' or 'how to say it' during the task, as to create a positive group atmosphere (*"So I sort of cheered up the atmosphere by making some light-hearted remarks."*) This way, Kwok was aware of the indirect way that strategies might help contribute to tasks. As in Phase 1, when identifying non-target strategies, she was explicit about the problems she faced during the English task and of

the need to make strategic moves to solve those problems. Nonetheless, it should be noted that her comment was not elaborate.

To sum up, Kwok continued to refer to the target strategy she reported in Phase 1 and added another target strategy. She continued to show awareness of making strategic moves to solve linguistic problems and of the limitation of some strategies for enhancing her linguistic skills. She also began using terminology introduced to her during strategy training. Last but not least, there was emerging evidence that Kwok was aware of an indirect strategy (support strategy) that helped facilitate a favourable atmosphere conducive to the group task.

At Phase Three, Kwok reported altogether 7 strategies, 4 target (61.5%) and 3 non-target (38.5%), a large increase in the number of types of strategies being commented on as compared with Phase 1. Moreover, for the first time, she reported more types of target than non-target strategies.

Regarding target strategies, she maintained the reporting of “Paraphrasing” and “Using fillers” and added “Self correction” and “Resourcing”. This suggests that she was oriented towards harnessing and expanding her target strategies over time. As in Phase 2, Kwok talked about the problems [e.g. “*I couldn't think of any other words to express myself*” (‘Paraphrasing’)] and the strategic moves she took to tackle them [e.g. “*I was using a simple way...It was simple*” (‘Paraphrasing’)]. She was also explicit about the goal of her strategy use [“*so that we could move on to discuss the next one*” (‘Using fillers’)]. One observation is worth highlighting: there was evidence in Phase 2 that she resorted to using strategies that involved the use of resources. It is therefore not surprising that she referred to ‘Resourcing’ (albeit newly-reported) four times at Phase 3. Strategy training seemed to have at last triggered her awareness and spontaneity of the use of this target strategy. The other newly-reported target strategy was ‘Self correction’. Again she shows awareness of her own limitation of strategy use (e.g. “*... but I couldn't... I didn't know how to say what I had intended.*” There was also evidence that she borrowed the terminology (‘self-correct’) used by the teacher.

Now we are turning to the three non-target strategies, which were not previously reported. As at Phases 1 and 2, she talked about the usual problem of “what to say” [*“Then again I was thinking what to say”* (‘Taking risks’)], about the strategic move to alleviate the potential problem [*“So I asked Lucy what her feeling was if she had no hair”* (‘Repairing’)], and about the need to monitor contribution [*“I was using eye contact to signal to my group mates to speak more.”* (‘Monitoring contribution’)]. Last but not least, she referred to ‘Repairing’ and ‘Taking risks’ in a fair amount of detail. In fact, her recall segments were more elaborate as compared with those at Phase 1.

To sum up, she continued the reporting of previously-reported target strategies, added new ones introduced in the training, and also used terminology she was exposed to in the training. The recall segments provide evidence that Kwok continued to think strategically in an attempt to fix problems with ‘how to say’ and ‘what to say it’ during the on-line talk. In addition, similar to previous phases, she was aware of the limitation of her strategy use. Overall, she seemed to be able to recall more details at Phase 3 as reflected by the longer recall segments as compared with those in Phase 1.

### *Summarizing comments*

The picture we have gained of Kwok is that she commented on a wide range of strategies. There was also clear evidence that she focused on harnessing target strategies and maintained the reporting of a selected few across the three phases. Conversely, non-target strategies was reported with decreasing frequency.

She reported deploying strategies to cope with ‘how to say’ problems. She showed awareness of not just the strength of strategy use in solving problems, but the inadequacies of some strategies in building her linguistic skills. She was also more explicit about the goals of strategy use. In addition, she showed awareness of the need to monitor group contributions and to create a favourable atmosphere conducive to task completion. There was evidence that strategy training might have led Kwok to use terminology, employed by the teacher during strategy instruction, when she was describing the target strategies in Phases 2 and 3. As time went by, her recalls became more detailed.

Case report 4: (see Appendix 22) (Inarticulate; narrow strategy range)

### *Overall picture*

Ng was the least articulate and the poverty of his comments was obvious. He talks about only 3 different strategy types in all, 2 at Phase 1, 3 at Phase 2 and 1 at Phase 3. He was the only one who did not show an increase in reported use of target strategies over time. He also failed to show any consistent decreased reporting of non-target strategies.

At Phase One, Ng reported no target strategies and two non-target strategies (i.e. 'Abandoning messages' and 'Asking for help'). There was clear evidence in his recalls that he was fully aware of his problems [e.g. "*I couldn't organise the English words I needed to express myself*" ('Abandoning messages'); "*I didn't understand the meaning of the words and didn't know how to pronounce them*" ('Asking for help')]. Moreover, he was conscious of the strategic behaviours to solve the problems [e.g. "*So I just gave up expressing the idea altogether*" ('Abandoning messages'), "*So .... (pause) I just quietly asked my neighbour for help*" ('Asking for help')]. This seems to indicate that he was able to use the indirect strategy ('Asking for help') which helped him understand the task better, but he was unable to use direct strategies which would help him solve on-line speech processing problems.

At Phase Two, Ng added 'Resourcing', a target strategy and continued to report both 'Abandoning messages' and 'Asking for help'. 'Resourcing' was the only target strategy reported at Phase 2. In fact, it was also mentioned 5 times (5 counts, 50%), more often than the two non-target strategies taken together (4 counts, 40%). When talking about "Resourcing", he was aware that the strategic use of the notes could help him ("*I could refer to the notes and then read the words aloud to help me.*"). Moreover, for the first time, he explicitly attributed his ability to say something in the English task to the use of 'Resourcing' ("*Otherwise, I wouldn't have known how to say all that*"). Last, as reflected by the length of the segment, he was fairly elaborate about the context of his strategy use; he gave details about what had happened before his use of 'Resourcing'.

There was also evidence that Ng continued with the same kinds of non-target strategies and demonstrated similar types of awareness. Typically, he gave up messages ('Abandoning messages') when facing the more challenging problem of expression but asked for help ('Asking for help') with more the straightforward pronunciation problems. He was conscious of his problems and of the rationale behind his strategic moves. His comments look more elaborate at Phase 2 those at Phase 1. Thus, Ng seemed to be aware of a target strategy had enabled him to identify problems and solutions but he appeared to be static in his strategic awareness.

At Phase Three, the only strategy which Ng identified was a non-target strategy ('Abandoning messages'); he did not continue to report "Resourcing" or refer to any other target strategies. Ng was more elaborate and detailed when referring to this strategy as compared with Phase 1. There was evidence that he distinguished two types of problems: organization and expression. He stated, "*I felt that my organization was not right at all. No one understood me...em em also my expression was very unclear.*" This way, there was emerging evidence that he was more perceptive (and more elaborate) than in the previous phases when he was referring to the same problem. Nonetheless, to tackle the problems, as in previous phases, he preferred the easier option of avoiding the problem and giving up. To sum up, apart from the more detailed description of his strategy use, there was no evidence that Ng maintained the reporting of any target strategies and that there was any expansion of his use of non-target strategies.

#### *Summarizing comments*

What we have described indicates that Ng was not forthcoming in the description of strategy use; he reported a very narrow range of strategies. Strategy training seemed to have motivated him to try out only one target strategy but the effect was not sustained. He continued in the reported use of one non-target strategy that gave him a way out and avoided taxing problems with organization and expression. However, his recalls were more elaborate in Phases 2 and 3 than in Phase 1. Overall, his description was very sparse and he remained reticent in all SRIs.

#### Summary and discussion of qualitative findings



All students reported that they had used strategies to help them cope with on-line problems in speech production, notably in ‘what to say’ and ‘how to say it’ during English group discussions. Moreover, students identified strategies to help them monitor contributions, manage turns, facilitate atmosphere, and evaluate task outcomes during the discussions. There was evidence that high-proficiency students reported a greater variety of strategy use than low-proficiency students. Moreover, high-proficiency students evaluated the effectiveness of strategy more than the low-proficiency students. Besides, strategy use by the low-proficiency students seemed to be more limited in terms of effectiveness than that of high-proficiency students.

Overall, students used strategy-related terminology to describe strategy use at Phase 2 and/or Phase 3. Moreover, students’ attention appeared to have shifted from the non-target to target strategies across Phases 1, 2 and 3. Besides, students became more articulate over time as evidenced by more elaborate reporting and longer recall segments particularly at Phase 2 and on some occasions at Phase 3. These findings suggest that strategy training which the group received might have a positive influence on their increased reporting of direct strategies.

### **5.5.3 Reported strategy use in Cantonese preparatory talks**

#### **5.5.3.1 Quantitative findings**

##### *Findings by whole sample*

##### **Results by treatment**

The frequencies (N) of recall segments coded as ‘target’, ‘non-target’ and ‘non-strategic behaviour’ across groups and phases are presented on the left hand side of Table 5.29 below. The proportional frequencies (%) of the three types of segments are shown on the right hand side. Each cell under C presents aggregate frequency counts (N) from 4 students and each cell under E2 from 8 students.

Table 5.29 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of different types of recall segments (by treatment)

Group	Frequencies (N)						Proportional frequencies (%)					
	C (4 students)			E2(8 students)			C (4 students)			E2 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
Target strategies *	6	4	8	12	35	18	22.2	14.3	33.3	15.6	39.3	35.3
Non-target strategies	12	17	5	44	42	22	44.4	60.7	20.8	57.1	47.2	43.1
Non-strategic behaviour	9	7	11	21	12	11	33.3	25.0	45.8	27.3	13.4	21.6
Total	27	28	24	77	89	51	100	100	100	100	100	100

<\*> denotes indirect strategies introduced to E2 during training

First of all, let us compare the frequency counts (N) of the two treatment groups. For the C group, the total raw scores were 27, 28 and 24 at Phases 1, 2 and 3 respectively. Given the rather low figures, any trends could only be taken as provisional. In contrast, for the E2 group, the totals were 77, 89 and 51 at Phases 1, 2 and 3 respectively. The numbers were more substantial and patterns more clear-cut when compared with those of the C group. But it should be noted that the use of two unequal groups i.e. C (4 students) and E2 (8 students) for comparisons of frequencies, proportions and variety may introduce an element of unreliability particularly when the groups are small and this should be borne in mind when findings are interpreted. (For justification of the use of unequal groups, see section 4.6.1.).

We now compare the proportional frequencies (%) of segments coded as 'target strategies', 'non-target strategies', and 'non-strategic behaviour'. The most noticeable feature was that, in general, the reporting of non-target strategies was higher than that of target strategies across all groups and phases (see the shaded figures). The only exception was the C group at Phase 3.

The other noteworthy point is that, for the C group, the proportions of segments coded as 'target strategies' and 'non-target strategies' showed variations in all directions. In contrast, for the E2 group, there were more trends in the predicted directions. Regarding target strategies, for example, the findings indicate that the C class did not display a regular pattern but a fall-rise trend over time (i.e. 22.2%, 14.3%, 33.3%). In comparison, E2 had a general tendency to increase over time (15.6%, 39.3% and 35.3%). Though there was a slight drop in Phase 3 (35.3%), it was still more than double that at Phase 1. This pattern also indicates that there was a 'peak' at Phase 2. As for non-target strategies,

the C group again showed an irregular, rise-fall pattern (44.4%, 60.7%, 20.8%). In contrast, E2 pointed to a clear downward direction; there were consistent decreases (57.1%, 47.2%, 43.1%) across Phases 1, 2 and 3.

The synoptic picture for the E2 group, as compared with the C group, in terms of the reporting of target strategies shows relatively more consistent patterns of increase over time. Strategy tuition may, therefore, have been related to broad increases in the identification of target strategies over time. In particular, the training seemed to have been associated with the biggest increase in Phase 2 rather than in the expected Phase 3. In addition, in terms of non-target strategies, for the E2 group, the training may be connected to the overall decreases in their reporting across phases as compared with the C group. Finally, the proportions of non-target strategies were invariably higher than those of target strategies most of the time.

One caution should be noted regarding the overall results, though. The low frequency counts of C group may be responsible for the higher variations, making it less likely for the group to show any consistent patterns across times. Nonetheless, I wish to argue that if we have enough evidence from other sources (for the triangulation of results, see section 5.6), we can make a case for the E2 group.

### *Results by proficiency level*

At this point, findings specific to the H- and L-subgroups are presented to address the research question as to whether proficiency level made a difference to the reported use of strategies. Table 5.30 compares results specific to the ability subgroups of C and E2. Each cell under C represents findings from 2 students per ability subgroup and each cell under E2 from 4 students per ability subgroup. We now study the H- and L-subgroups of C vis-à-vis the H- and L-subgroups of E2 across all the three phases.

Table 5.30 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of different types of recall segments (by proficiency)

Class	Frequencies (N)						Proportional frequencies (%)							
	C (2 students per sub-group)			E2 (4 students per sub-group)			C (2 students per sub-group)			E2 (4 students per sub-group)				
Phase		1	2	3	1	2	3		1	2	3	1	2	3
Target strategies	H*	5	2	5	9	20	10	H	35.7	14.3	45.5	21.4	36.4	34.5
	L*	1	2	3	3	15	8	L	7.7	14.3	23.1	8.6	44.1	36.4
Non-target strategies	H	5	12	3	20	27	13	H	35.7	85.7	27.3	47.6	49.1	44.8
	L	7	5	2	24	15	9	L	53.9	35.7	15.4	68.6	44.1	40.9
'Non strategic behaviour'	H	4	1	5	13	8	6	H	28.6	7.2	27.2	31.0	14.5	20.7
	L	5	7	8	8	4	5	L	38.4	50.0	61.5	22.8	11.8	22.7
Total	H	14	14	11	42	55	29	H	100	100	100	100	100	100
	L	13	14	13	35	34	22	L	100	100	100	100	100	100

<H\* > denotes the high-proficiency subgroup <L\* > L denotes the low-proficiency subgroup

The raw scores on the left hand side of the Table are once again small particularly for the C subgroups. Any statistical trends should best be taken as provisional. The general picture of the proportional frequencies (%) on the right side of the Table is clear.

As for target strategies, the L-ability subgroup of E2 was more active than its H-ability counterpart at Phases 2 and 3. That is, the low-proficiency students had higher proportions of use (44.1% and 36.4%) as compared with the high-proficiency students (36.4% and 34.5%), although both subgroups showed a broadly increasing trend over time with a 'peak' in Phase 2. This is striking given that at Phase 1, the L-subgroup reported a much lower proportion (8.6%) than its high counterpart (21.4%). In comparison, the L-subgroup of the C class not only showed low reported use but a lack of a strong and consistently higher reported use than its H-counterpart over time. That is, for the C class, at Phase 2 the L-subgroup (14.3%) was higher than the H-subgroup (7.1%) but at Phase 3 the direction reversed with the L-subgroup identifying a lower proportion (23.1%) than the H-subgroup (45.5%). The findings are consistent with the argument that, for the E2 group, strategy training seemed to be related to the low-proficiency students reporting higher proportions of strategy use than the high-proficiency students. Hence, proficiency level made a difference. Moreover, for the C group, a lack of training would predict a lack of strong effect in the predicted direction.

Regarding non-target strategies, the pattern was quite different. That is, for both the C and E2 groups, the high-proficiency students were more active than their low-proficiency counterparts at both Phases 2 and 3. In addition, for both the C and E2 groups, only the L-subgroups displayed a steadily decreasing pattern whereas the H subgroup showed an irregular 'Rise-fall' pattern. This being the case, there was no evidence that, for E2, strategy training was connected to any effect on the patterns of reported use of both H- and L-sub-groups. Hence, proficiency level did not seem to have made any difference.

#### *Findings by individual, target strategies*

In the previous section, findings for the reporting of target and non-target strategies (by whole sample) were presented. We should now describe the findings for individual strategy use. The purpose is two-fold: first, to investigate whether the results by whole sample were influenced by only one or two atypical strategies; second, to study whether the training had differential impacts across strategies, and if so, which target strategies may be more amenable to reporting and in turn more frequently reported.

#### *Results by treatment*

Altogether seven indirect strategies were introduced to E2 during the intervention. To find out how many strategies fitted the general picture of increases presented in the previous section, the frequency count (N) and the proportional frequency (%) of reported use of each of the seven strategies were compared between groups and across phases in Table 5.31.

Table 5.31 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of segments coded as individual target strategies (by treatment)

Class	Frequencies (N)						Proportion (%)					
	C (4 students)			E2 (8 students)			C (4 students)			E2 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
No. of recall segments coded per class per phase	27	28	24	77	89	51	100	100	100	100	100	100
1. Plan ideas in advance	2	2	5	1	3	1	7.4	7.1	20.8	1.3	3.4	2.0
2. Problem identification	1	0	0	2	7	12	3.7	0.0	0.0	2.6	7.9	23.5
3. Functional Planning	1	0	3	5	7	1	3.7	0.0	12.5	6.5	7.9	2.0
4. Evaluation	0	1	0	0	9	2	0.0	3.6	0.0	0.0	10.1	3.9
5. Giving help	1	1	0	1	1	1	3.7	3.6	0.0	1.3	1.1	2.0
6. Asking for help	1	0	0	3	6	0	3.7	0.0	0.0	3.9	6.7	0.0
7. Positive self talk	0	0	0	0	2	1	0.0	0.0	0.0	0.0	2.2	2.0
Aggregated frequencies (N) or proportions (%)	6	4	8	12	35	18	22.2	14.3	33.3	15.6	39.3	35.3
Aggregated variety of use	5	3	2	5	7	6	5	3	2	5	7	6

First, the variety of strategies identified by the E2 group was greater than that reported by the C group. As indicated at the bottom row of the Table, the aggregated varieties of strategies reported by E2 were 5, 7 and 6 at Phases 1, 2 and 3 respectively. In contrast, the numbers of strategy types reported by the C group were 5, 3 and 2 across the three phases. Nonetheless, it should be acknowledged that the two groups of students (i.e. C & E2) are unequal in number and small in size and this may, to some extent, affect the reliability of the comparisons.

Second, let us study the reporting of individual strategy use. The proportional frequencies of use (%) as indicated on the right hand side of the Table show that, for the E2 group, Strategies 1, 2, 4, 7 (shaded) showed a pattern of overall increase over time. That is, for each of these 4 strategies, the lowest percentage of reported strategy use was in Phase 1 before strategy training. Moreover, Phase 2 was the time point when the highest proportional frequency (%) of use was identified for 5 out of 7 strategies except Strategies 2 and 5 ('Problem identification' and 'Giving help'). In contrast, the C group did not show any regular patterns; there were variations in all directions. For instance, 3 out of 7 strategies (i.e. 2,5,6) showed overall decreases across phases. Two strategies (i.e. 1, 3) showed a 'fall-rise' pattern over time. One strategy ('Evaluation') had a peak in

Phase 2 and one strategy ('Positive self talk') was not reported at all. In short, unlike the E2 group, there was no predictable pattern for C. Hence, the findings for individual strategy use support the main generalizations that there were broad increases over time and that the highest frequencies were recorded in Phase 2 with 5 and not just one or two atypical strategies only.

Two points should also be noted. The findings indicate that, for the E2 group, 'Problem identification' was the only taught strategy that showed a clear and consistent pattern of increase over time (2.6%, 7.9%, 23.5%). The sharp rise at Phase 3 was dramatic. In contrast, C group identified only one count of its use in Phase 1 (3.7%) and did not comment on it again during the SRIs conducted in Phases 2 and 3. In addition, for the E2 group, the comment on 'Evaluation' was notably higher at Phase 2 though the increase was not sustained at Phase 3. In comparison, for the C group, the rise at Phase 2 was a lot more modest.

So far, the results indicate that, for E2, strategy training may have been correlated to the consistent increase in variety of the reported strategy use, to the broad increases in the frequency of reported use of many strategies, to the dramatic rise in 'Evaluation' at Phase 2, and above all, to the strong and consistent increases in the reporting of 'Problem identification' over time.

#### *Results by proficiency level*

The results for individual strategy use were further analysed according to ability to see whether the H- and L-subgroups differed in their patterns of reported use. Table 5.32 compares the proportional frequencies of reported use (%) by proficiency level.

Table 5.32 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of segments coded as individual target strategies (by proficiency level)

Phase	Proficiency level	C (2 students)			E2 (4 students)		
		1	2	3	1	2	3
No. of recall segments coded per group per phase	High	14	14	11	42	55	29
	Low	13	14	13	35	34	22
1. Planning ideas in advance	H	14.3	7.1	27.3	2.4	1.8	0.0
	L	0.0	7.1	15.4	0.0	5.9	4.5
2. Problem Identification	H	7.1	0.0	0.0	4.8	7.3	24.1
	L	0.0	0.0	0.0	0.0	8.8	22.7
3. Functional planning	H	7.1	0.0	18.2	9.5	9.1	0.0
	L	0.0	0.0	7.7	2.8	5.9	4.5
4. Evaluation	H	0.0	0.0	0.0	0.0	9.1	6.9
	L	0.0	7.1	0.0	0.0	11.8	0.0
5. Giving help	H	0.0	7.1	0.0	0.0	1.8	3.4
	L	7.7	0.0	0.0	2.9	0.0	0.0
6. Asking for help	H	7.1	0.0	0.0	4.8	5.5	0.0
	L	0.0	0.0	0.0	2.9	8.8	0.0
7. Positive self talk	H	0.0	0.0	0.0	0.0	1.8	0.0
	L	0.0	0.0	0.0	0.0	2.9	4.5
Aggregated proportions of use (%)	H	35.7	14.3	45.5	21.4	36.4	34.5
	L	7.7	14.3	23.1	8.6	44.1	36.4
Aggregated variety of use	H	4	2	2	4	7	3
	L	2	2	2	3	6	4

A clear pattern has emerged from Table 5.32. At Phase 1, for the E2 group, only one (shaded) out of the seven pairs of comparisons between the H and L-subgroups indicated that the L-subgroup was higher ('Giving help'). At Phases 2 and 3, however, there was a big increase; eight (shaded) out of the 14 pairs of comparisons showed that the L subgroup was higher than its respective H subgroup. Moreover, this was found in six out of seven target strategies. In contrast, for the C group, at Phase 1, only one (shaded) out of seven pairs of comparisons indicated that the L-subgroup was higher than its H subgroup. In Phases 2 and 3, only one (shaded) out of 14 pairs of comparisons showed that L subgroup was more active than its respective H counterpart. Once again, these results support the main generalization described earlier that strategy training had greater effects on the low-proficiency students than high-proficiency students in the identification of target strategies. Moreover, the evidence supporting this result was found in six out of seven strategies and not just one or two atypical ones.

One caution, however, again needs to be borne in mind concerning the findings. First, the frequency counts (N) were low and it could be argued that the proportions (%) might be



misleading. Nonetheless, if we have enough supporting evidence from other data collection methods (for the triangulation of results, see section 5.6), we can then support the case that the L subgroup of E2 was more active in the identification of target strategies overall than the H subgroup.

### *Findings by individual, non-target strategies*

#### Results by treatment

The findings of the whole sample of non-target strategies indicate that there were overall decreases in E2's reporting of non-target strategies across phases as compared with the C group and that the proportions of non-target strategies were higher than those of target strategies in all three phases. This section presents results for the reporting of each of the six non-target strategies to investigate whether one or two atypical strategies skewed the picture. Table 5.33 compares the frequencies (N) and proportional frequencies (%) of each of the six non-target strategies between E2 and C across phases.

Table 5.33 *Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of recall segments coded as individual non-target strategies (by treatment)*

Class	Frequencies (N)						Proportional frequencies (%)					
	C (4 students)			E2 (8 students)			C (4 students)			E2 (8 students)		
Phase	1	2	3	1	2	3	1	2	3	1	2	3
No. of recall segments coded per class per phase	27	28	24	77	89	51	27	28	24	77	89	51
1. Enhancing task knowledge	3	6	0	31	21	7	11.1	21.4	0.0	40.3	23.6	13.7
2. Resourcing	2	0	0	4	3	0	7.4	0.0	0.0	5.2	3.4	0.0
3. Rehearsing ranking	3	10	5	2	2	0	11.1	35.7	20.8	2.6	2.3	0.0
4. Monitoring contributions	0	1	0	1	1	2	0.0	3.6	0.0	1.3	1.1	3.9
5. Suggesting turn-taking tactics	3	0	0	3	1	4	11.1	0.0	0.0	3.9	1.1	7.9
6. Facilitating progress	1	0	0	3	6	5	3.7	0.0	0.0	3.9	6.7	9.8
Aggregated frequencies (N) or proportions (%)	12	17	5	44	34	18	44.4	60.7	20.8	57.1	38.2	35.3
Aggregated variety of use	5	3	1	6	6	4	5	3	1	6	6	4

As shown on the left hand side of the Table 5.33, for the E2 group, the frequencies for Strategy 1 ('Enhancing task knowledge') were the highest. Moreover, there were dramatic decreases in proportional frequencies (%) over time (40.3%, 23.6%, 13.7%). In addition, consistent decreases were reported in the use of Strategies 2 and 3 ('Resourcing' and 'Rehearsing ranking') though the proportional frequencies were much lower than those of Strategy 1. In other words, the synoptic picture of consistent decreases across phases was brought about by only three out of six non-target strategies. Similarly, the C group identified 'Enhancing task knowledge' but it used 'Rehearsing ranking' even more; the two strategies contributed the majority of the frequency counts. That is, the irregular rise-fall pattern across Phases 1, 2 and 3 described earlier was due to these two atypical strategies (as shaded).

Two interesting points are noteworthy here. First, in the identification of 'Rehearsing ranking', for the E2 group, there was evidence of decreased reporting across Phases 1, 2 and 3 (2.6%, 2.3%, 0.0%). In contrast, for the C group, there was evidence for an increasing trend with moderately high proportions (11.1%, 35.7%, 20.8%). Regarding other strategies, there was a tendency for E2 to report more 'Facilitating progress' over time (3.9%, 6.7%, 9.8%) and to show signs of increases at Phase 3 in the identification of 'Monitoring contributions' and 'Suggesting turn-taking tactics'. In contrast, for the C group, there was generally a downward trend in the reporting of each of these three strategies over time.

We now turn to the overall variety of strategy use as seen at the bottom of the Table 5.33. For the C group, there was a strong tendency to decrease over time i.e. Phases 1 (five types), Phase 2 (three types) and Phase 3 (one type). On the other hand, for the E2 group, there was a good spread of reported strategy use at Phase 1 (six types) and at Phase 2 (six types) despite a slight drop at Phase 3 (four types).

So far, the findings indicate that, for E2, strategy training may have been associated with decreases in the reporting of half of the total number of non-target strategies, with decreases in the identification of 'Rehearsing ranking' but increases in that of 'Facilitating progress', of 'Monitoring contributions' and of 'Suggesting turn-taking

tactics'. Last, strategy tuition seemed to be related to a good spread of the types of reported strategies.

### *Results by proficiency*

Regarding the whole sample of non-target strategies presented earlier, for both the C and E2 subgroups, the high-proficiency students were more active than their low-proficiency counterparts at both Phases 2 and 3. In this section, we aim to find out if this overall picture was a result of one or two atypical strategies. Table 5.34 compares the proportional frequencies of the reported use (%) of individual non-target strategies, by ability group and across phases.

Table 5.34 *Comparison of C's and E2's proportions (%) of recall segments coded as each of the 6 non-target strategies (by proficiency)*

Phase	Ability	C			E2		
		1	2	3	1	2	3
No. of segments coded per group per phase (T)	High	14	14	11	42	55	29
	Low	13	14	13	35	34	22
1. Enhancing task knowledge	H	0.0	14.3	0.0	26.2	18.2	6.9
	L	23.1	28.6	0.0	57.1	32.4	22.7
2. Resourcing	H	0.0	0.0	0.0	7.1	3.6	0.0
	L	15.4	0.0	0.0	2.6	2.9	0.0
3. Rehearsing ranking	H	14.3	64.3	27.3	0.0	0.0	0.0
	L	7.7	7.1	15.4	5.7	5.9	0.0
4. Monitoring contributions	H	0.0	0.0	0.0	2.4	1.8	3.4
	L	0.0	7.1	0.0	0.0	0.0	4.6
5. Suggesting turn-taking tactics	H	21.4	0	0	7.1	1.8	10.4
	L	0	0	0	0	0	4.6
6. Facilitating progress	H	0.0	0.0	0.0	4.8	9.1	13.8
	L	7.7	0.0	0.0	2.9	2.9	4.6
Aggregated proportions of use (%)	H	35.7	85.7	27.3	47.6	49.1	44.8
	L	53.9	35.7	15.4	68.6	44.1	40.9
Aggregated variety of use	H	2	2	1	5	5	4
	L	4	3	1	4	4	4

At Phase 1, for the C group, the L-subgroup outscored the H-subgroup on Strategies 1, 2 and 6 (3 strategies out of a total of 6, i.e. 50%). On the other hand, the H-subgroup outscored the L-subgroup on Strategies 3 and 5 (i.e. 33.3%). That is, there was not much difference between the H- and L-subgroups. Similarly, for the E2 group, the L-subgroup outscored the H-subgroup on Strategies 1 and 3 (i.e. 33.3%). On the other hand, the H-

subgroup outscored the L-subgroup on Strategies 2, 4, 6 (i.e. 50%). So there was not much difference between the H- and L-subgroups. At Phases 2 and 3, for the C group, the L-subgroup outscored the H-subgroup on 2 out of 12 pairs of comparison (i.e. 16.7%). The H-subgroup also outscored the L-subgroup on 2 out of 12 comparisons (i.e. 16.7%). That is, proficiency level did not make a difference. Similarly, for the E2 group, the L-subgroup outscored the H-subgroup on 4 out of 12 pairs of comparison (i.e. 33.3%). The H-subgroup also outscored the L-subgroup on 6 out of 12 comparisons (i.e. 50%). Based on the synoptic picture we have just described, proficiency level did not make much difference to individual strategy use.

Nonetheless, one interesting observation should be noted when studying groups of familiar and less familiar strategies together. Strategies 1, 2 and 3 are considered 'familiar' in the sense that they are the types of strategies that most students would normally use when they are given preparation time prior to an English task regardless of whether they have received strategy training. That is, in preparing for an upcoming task, it is expected that the majority of students would make use of the time to try to understand more about the task (i.e. Strategy 1), to use a dictionary to check meaning (i.e. Strategy 2), and/or to rehearse the ranking task in Cantonese (i.e. Strategy 3). This way, the strategies are common-sense and obvious. On the other hand, strategies 4, 5 and 6 are considered 'less familiar' because it is not that obvious to students that, during the English task, they should monitor the contributions of group-mates (i.e. Strategy 4), suggest turn-taking manners (i.e. Strategy 5), and facilitate the conduct of the discussion (i.e. Strategy 6). This way, the strategies are not that familiar to students as compared with Strategies 1, 2 and 3.

The findings indicate that, regarding familiar Strategies 1 and 3, for the E2 group, the L-subgroup had a higher proportion of reported use as compared with the H-subgroup. That is, regarding Strategy 1, at Phase 3, the L-subgroup had a higher proportion of use than its high-proficiency counterparts but this was not the case with the C group. Similarly, regarding Strategy 3, at Phase 2, the L-subgroup had a higher proportion of use than its high-proficiency counterparts but this was not the case with the C group at Phase 2 or Phase 3. These findings support the argument that strategy training may be related to greater activation of familiar, non-target strategies on the part of the low-proficiency

students when compared to the high-proficiency students. On the other hand, regarding less familiar strategies, for the E2 group, the high-proficiency students identified higher proportions of reported use of Strategy 4 (Phase 2), Strategy 5 (Phases 2 & 3) and Strategy 6 (Phases 2 & 3). For the C group, however, the H-subgroup did not have a higher proportion of use than the L-subgroup in any of the phases 2 and 3. These findings support the argument that strategy training may be related to greater activation of less familiar, non-target strategies on the part of the high-proficiency students when compared to their low-proficiency counterparts. (The reasons for the differential uses of the two types of strategies by the H-subgroup and the L-subgroup will be explored in section 6.3.6.)

### *Summary and discussion*

Reported strategy use in Cantonese preparatory talks (by whole sample)

#### *Target strategies*

Analysis by treatment indicates that, for E2, strategy tuition may be related to broad increases in the identification of target strategies over time. The biggest of these increases was in Phase 2 rather than in the expected Phase 3. Analysis by proficiency level shows that, the low-proficiency students of E2 reported higher proportions of strategy use as compared with their high-proficiency counterparts at Phases 2 and 3.

#### *Non-target strategies*

Analysis by treatment indicates that, for the E2 group, the training may be connected to the steady and consistent decreases in the reporting of non-target across the three phases. Analysis by proficiency level reveals that, for E2, there was no evidence that strategy training influenced the patterns of reported use of either the H- or L-sub-group.

Reported strategy use in Cantonese preparatory talks (by individual strategies)

#### *Target strategies*

Analysis by treatment showed that, for E2, strategy training may be correlated to the consistent increase in the variety of strategies reported, and in particular, to the broad increases in the frequency of the reported use of five out of seven strategies. Also at Phase 2, strategy instruction may be related to the dramatic rise in ‘Evaluation’ at Phase 2. Above all, the teaching may be associated with the strong and consistent increases in the reporting of ‘Problem identification’ across all the three phases. Analysis by proficiency level revealed that, for E2, strategy training seemed to have been related to greater effects on the low-proficiency students than high-proficiency students in that the former identified a higher proportion of strategy use than the latter in six out of seven target strategies.

#### *Non-target strategies*

Analysis by treatment indicated that, for E2, strategy training may be associated with decreases in ‘Rehearsing ranking’ but increases in ‘Facilitating progress’, ‘Monitoring contributions’ and ‘Suggesting turn-taking tactics’. Next, strategy tuition seemed to be related to a good spread of the types of reported strategies. Analysis by proficiency level revealed that, for E2, strategy training could have been related to the low-proficiency students reporting greater proportions of familiar strategies (‘Enhancing task knowledge’, ‘Rehearsing ranking’) and to the high-proficiency students reporting greater proportions of less familiar strategies (i.e. ‘Facilitating progress’, ‘Monitoring contributions’, ‘Suggesting turn-taking tactics’).

#### **5.5.3.2 Qualitative findings (Cases 5-8)**

Table 5.35 below gives an overview of the number of different types of strategies reported for each of the four students. Case reports 5-8 that follow the table below are meant to be read in conjunction with the matrices presented in Appendices 20-23.

Table 5.35 *A cross-case comparison of the number of types of strategies reported*

			Target strategies (T)						Non-target strategies (NT)						Grand total *		
			Proportion (%)			Types of strategies reported per phase			Total number of types of (T)			Proportion (%)				Types of strategies reported per phase	
Student	Proficiency	Phase	Phase			Phase			Phase			Phase					
E2			1	2	3	1	2	3		1	2	3	1	2	3		
Case 5	High		26.7	50	40	3	3	2	6	66.7	42.8	46.7	4	2	4	5	11
Case 6	High		0	27	0	0	3	0	3	100	27	0	1	3	0	3	6
Case 7	Low		8	63	63	1	3	3	4	77	38	25	3	1	1	3	7
Case 8	Low		13	60	0	1	4	0	5	38	40	50	1	2	1	2	7

< \* > denotes the total number of types of target and non-target strategies reported per student

Case report 5: (see Appendix 23) (Highly articulate; wide strategy range)

### *An Overview*

Overall, Vicky was very articulate; her comments were generally elaborate as shown by the lengths of her recall segments. She reported a wide range of strategies – a total of 11 types in all the SRIs. She referred to 6 target strategies (3 at Phase 1, 3 at Phase 2 and 2 at Phase 3) and 5 non-target strategies (4 at Phase 1, 2 at Phase 2 and 4 at Phase 3). Therefore, in terms of variety, there were no discernible trends. In terms of proportion of reported use, however, there was an overall trend for increase in target strategies with the highest at Phase 2 (i.e. 26.7%, 50%, 40%). For non-target strategies, there was also a general trend for decrease despite a slight rise at Phase 3 (i.e. 66.7%, 42.8%, 46.7%).

At Phase One, Vicky commented on 3 target strategies (26.7%) and 4 non-target strategies (66.7%) before the strategy instruction. The most often reported target strategy was “Problem identification” - one that enabled her to understand what they were “*required to do in the task*”. It is a meta-cognitive strategy that helps the learner plan for a language task by first considering its requirements. That is, she started thinking about what the group discussion was supposed to achieve. This is global planning of the task and it concerns the overall purpose of the task. ‘Planning ideas in advance’ was another planning strategy targeted which she deployed. The strategy can help with local planning as it deals the more specific aspect of ‘what to say’ than the overall purpose of the task. She seemed clear about the rationale for strategy use: “*After you have got the general idea, you will be able to express freely during the discussion.*” The goal was clear: she

was deploying the strategy to help with local planning ('what to say') in order to enhance her task performance. Besides, the strategy also enabled her to take proactive steps to prevent problems: *"If you don't try to familiarize yourself with the content of the discussion before it starts, then you may get stuck in the middle."* Hence, during the SRI, she showed awareness of both the benefit of making the strategic move and of the potential problem of not being strategic. Apart from the two planning strategies, she deployed a socially-oriented target strategy by 'Asking for help'. She was explicit about the goal that she had wanted to achieve; she said, *"...by asking you will benefit"*. This gives evidence that she believed the group-mates could support each other by giving and offering help.

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Now let us turn to study the kinds of non-target strategies that she identified before training. She referred six times to 'Enhancing task knowledge', a strategy that enabled her to check and understand the meaning of the words in the notes. The data therefore provide the evidence that she was also checking and ensuring that she had adequate linguistic resources to cope with the upcoming task and that she was employing another meta-cognitive strategy to help her prepare for the discussion. In addition, as with 'Planning ideas in advance', she was aware not only of the benefit but the potential problem of not preparing for the discussion in a strategic way: *"if we didn't check our understanding of the words during that preparation time but waited till the English discussion started, then it would waste a lot of our time."* She prepared not only for the content and for the linguistic demands, but also for the mechanics of the discussion by suggesting turn-taking tactics. Last but not least, she showed a high degree of awareness of the need to make best use of the preparation time. In this mode, she also facilitated the conduct of the preparation by constantly reminding herself and others that they had to check what they should do to prepare for the discussion ('Facilitating progress of preparation talk').

To sum up, before strategy instruction, Vicky was spontaneous in the reporting of quite a few meta-cognitive strategies that enabled her to do global and local planning for the upcoming English discussion. Moreover, there was evidence that she also deployed strategies that enabled her to cope with the linguistic demands of the upcoming task and



that helped monitor the conduct of the English task as well as the conduct of the preparatory talk.

At Phase Two, Vicky started to report more target than non-target strategies; she referred to 3 target (50%) and 2 non-target strategies (42.8%).

When talking about the use of target strategies ‘Problem identification’ and ‘Positive self talk’, she relied heavily on the terminology used by the teacher including the strategy name (*‘Problem identification’*) and the wording (*“think positive”*). This way, strategy training appeared to have led her to take up the wording used by the teacher. Moreover, she showed awareness of the rationale for strategy use [*“to know the purpose of the discussion and what we were supposed to do”* (‘Problem identification’)]. One point is also worth highlighting. She stated, *“Well we had learnt about ‘Problem Identification’ and I found it useful.”* There was, therefore, emerging evidence for the view that she had considered the effectiveness of this strategy before deploying it. This was not evident in Phase 1.

‘Functional planning’ was a newly-identified target strategy. This is another meta-cognitive strategy that deals with local planning. But unlike ‘Planning ideas in advance’, it concerns the language aspect rather than the content side of the English discussion. She commented, *“I knew what the words ‘digest’ and ‘nutrients’ meant but wasn’t sure how to pronounce them.”* This reflects that she was aware of her limitation i.e. her linguistic deficit and of her rationale for planning. Besides, she was explicit about the goal of using the strategy: *“I knew that in the upcoming discussion I would need to say them out. So I checked the dictionary.”* By preparing for the pronunciation of words, she thought she could enhance her task performance.

Regarding non-target strategies, as in Phase 1, the segment on ‘Facilitating progress’ provides evidence for the view that she was vigilant about the purpose of the preparatory talk and how it should best be conducted to facilitate the preparation for the English task.

To sum up, Vicky began resorting to terminology used by the teacher during training sessions. There was evidence that she started evaluating whether a strategy was useful or

not before deploying it. Apart from these, there was sustained evidence that she was aware of her limitation and of the goal of strategy use. Last but not least, she continued to be fully aware of the need to monitor and maximize the usefulness of the preparation time.

At Phase Three, Vicky reported 2 target strategies (40%) and 4 non-target strategies (46.7%). She maintained the frequency reporting 'Problem identification', the only target strategy referred to in all phases. Also, apart from showing awareness of this meta-cognitive strategy, she guided her group-mates in using the strategy by asking them key questions concerning the purpose and requirements of the discussion similarly to the way the teacher did during strategy training. In so doing, she was also raising the meta-cognitive awareness of her peers. This did not happen in any of the previous phases.

She also had an indirect strategy ('Giving help') in store which was similar in nature to "Asking for help" reported in Phase 1. That is, she was prepared to give help. Coupled with the evidence of her helping in Phase 1, she seemed to be in favour of socially-oriented strategies that facilitate mutual help in Phase 3. As evidenced in previous phases, she showed awareness of the usefulness of strategies to facilitate the preparatory talks as well as the English task.

Vicky continued to identify the use of 'Enhancing task knowledge'. She continued to be fully aware of the goal of the strategy and of the potential problem of not using it. She picked up "Suggesting turn taking tactics" again, which she had used in Phase 1. This reflects her awareness of the need to monitor the way the English discussion should be conducted. In addition, she was also aware of the need to monitor the amount of contribution of each member ('Monitoring contribution'). 'Facilitating progress of preparatory talk' was the only non-strategy which she persisted in identifying across all the phases. Regarding this strategy, in Phase 3 for the first time, she reported, "*I thought that it was necessary to make sure that everybody knew what to do during the preparation time.*" Moreover, she demonstrated awareness of the training as the source of strategies ("*I remembered that there were several strategies we could use*") and was explicit about using strategies during the preparation time to maximize its benefits to the upcoming English task. Strategy training thus appeared to have further raised her awareness of the need to deploy strategies to enhance task performance.

*Summarising comments*

The overall picture we have gained from Vicky is that she was ready to refer to quite a number of meta-cognitive strategies that enabled her to manage not just the English discussion but the preparatory talk. The meta-cognitive strategies enabled her to do both global as well as local planning. She was in general well aware of the goal of strategy use and of the potential problems that strategies might help her avoid. She seemed to favour socially-oriented strategies as well. Above all, there was emerging evidence that she had considered and evaluated the usefulness of the target strategies.

There was evidence that she showed heightened awareness of the terminology used in the strategy training and of training as the source of strategies. What is striking was that she also demonstrated the awareness of the need to monitor and raise the awareness of her group-mates in making strategic use of the preparation time.

Overall, Vicky remained articulate, as reflected by the generally rather detailed comments in all of the three phases.

Case report 6: (see Appendix 24) (Moderately articulate; narrow strategy range)

*Overall picture*

Rickie reported altogether 6 different strategy types (about half the number for Vicky) in all the SRIs. The most striking is that nearly all of the strategies were reported in Phase 2 but not in Phases 1 and 3. She referred to only 1 non-target strategy at Phase 1, 3 target strategies and 3 non-target strategies at Phase 2. She did not identify any strategies at Phase 3.

At Phase One, She referred only to "Enhancing task knowledge". Similar to Vicky, she tried to make sure that she had the necessary linguistic knowledge ("checking the meaning") and task knowledge ("*special functions of different body parts*") for the upcoming English task. In this, she demonstrated meta-cognitive awareness. Moreover,

she showed awareness of the goal of strategy use (“*to get a better understanding of the body part.*”) and was explicit about it in her recount.

At Phase Two, there was an obvious increase in the identification of strategies during this phase of the training. As far as target strategies were concerned, she resorted to three planning strategies. The first one was ‘Problem identification’. In her comment, not only did she refer explicitly to the name of the strategy, she also employed the exact wording (‘purpose and requirements’) in English used by the teacher in the tuition. The other interesting point to note is that she was using the strategy “*with the group*”. In other words, it is plausible that it was not just the teaching but the group that had an effect on her strategy use. That is, when a strategy is picked up by one group member, the others follow suit. This has implications for strategy instruction.

The second one was ‘Planning ideas in advance’. When talking about the strategy, she stated, “*I was worried that I would have nothing to say like what I had experienced in the previous discussion.*” Apparently, her strategic move was an attempt to pre-empt a potential problem that she had previously experienced. However, the level of detail of the reporting was not particularly high. She did not give further details. When referring to the use of ‘Functional planning’ to ensure that she knew how to pronounce the word as well, she showed awareness of the need to prepare herself for the linguistic demand (i.e. pronunciation) of the upcoming task. Nonetheless, the poverty of her comment may indicate that she was not particularly spontaneous about the reporting of the strategy.

Regarding non-target strategies, as at Phase 1, there was sustained evidence in her description of ‘Enhancing task knowledge’ that she was aware of the need to spend time understanding the “*functions and meanings of different body parts*” and in turn to prepare for the linguistic and task knowledge required of the upcoming English discussion. When commenting on ‘Resourcing’, she was explicit and seemed clear about the kind of goal that the strategic use of the notes might enable her to achieve (“*I thought we could follow them to help us in the upcoming discussion.*”) This way, there was evidence that Rickie was consciously planning for the upcoming English task. This way, she demonstrated meta-cognitive awareness. Similarly, while referring to ‘Taking risks’, she was articulate about her own strategic behaviour and about the way it should be executed

*"I was thinking that whenever I had any ideas in mind, I should just say them out without waiting or stalling. I should seize the right time to speak."* She was clearly conscious of what she aimed to achieve: that is, she should try to speak out regardless during the English discussion. This way, she was planning a strategic way to enhance her performance.

To sum up, there was evidence that Rickie continued to be aware of the need to deploy target, planning strategies in order to equip her with the necessary linguistic and task knowledge required of the task. She demonstrated awareness of the potential problems that might prop up and of the goals that strategy use might achieve to deal with the problems. The group seemed to have some influence on her strategy use. Her reporting was somewhat influenced by the terminology used by the teacher. Nonetheless, the general poverty of her comments may indicate that she was not very spontaneous about the reporting of strategies. Alternatively, it could be argued that she was not able to articulate all her thoughts.

At Phase Three, her comment provides a window into the understanding of her reticence in the SRI. She reported that she did not see the need to use any strategies to prepare for the upcoming task and therefore felt bored and did not quite want to talk. One interesting point is that she was quite elaborate about her thoughts as reflected by the length of the recall segment. As strategy use was not perceived to be particularly helpful, she gave up trying other non-target strategies altogether.

### *Summarising comments*

Overall, Rickie was aware of the need to deploy strategies, in particular those related to planning for linguistic demands required to understand and to effectively execute the upcoming English discussion. Moreover, she demonstrated awareness of the need to pre-empt problems and achieve goals that helped facilitate task performance. Strategy training seemed to have influenced her not only to report more target strategies but refer to higher use of terminology employed by the teacher during training, although this effect dropped off in phase 3.

Case report 7: (see Appendix 25) (Moderately articulate, narrow strategy range)

### Overview

Dale commented on a total of 8 strategy types in all SRIs. He reported using 4 target strategies (1 at Phase 1, 3 at Phase 2, and 3 at Phase 3) and 4 non-target strategies (3 at Phase 1, 1 at Phase 2 and 2 at Phase 3). The trend is clear: he reported more target strategies and less non-target strategies across Phases 1, 2 and 3. Dale was forthcoming and his recall segments were at a reasonable level of detail at Phases 2 and 3.

At Phase One, before strategy training, Dale referred to only one target strategy ('Asking for help'), a socially-oriented one. He was aware of the need to ask for help to solve a problem related to the linguistic aspect of the task demand (i.e. meanings of words in the task sheet). While his strategic behaviour was clearly observable, he was not explicit or elaborate about the goal which he intended to achieve by understanding the words. So there was no evidence to support the view that he was fully aware of the usefulness of the strategy in helping him prepare for the English task.

In contrast, his reporting of the non-target strategies was more elaborate and spontaneous as reflected by the rather long recall segments. The most obvious and often-used strategy was 'Enhancing task knowledge'. He did not simply report on what he was doing; instead, he gave explicit rationale for doing so: "... *the whole point of the discussion was to buy useful items. I thought that I needed to know the function of the items before we could decide whether we should buy them or not.*" This indicates that his thinking was strategic in that he was aware that possessing a good knowledge of the details of the task was the first and foremost step to facilitate its conduct. In short, he could assess the requirements of the task and consider whether his understanding of relevant information about the task was adequate to help him perform the task. This level of forward planning was also evident in his comment on 'Resourcing'. He seemed to be clear about the strategic use of the information in the notes ('Resourcing') in helping with 'what to say' during the upcoming discussion task "*I thought that the questions might help me know what to discuss.*" His strategic thinking, therefore, reflects a level of meta-cognitive awareness.

When referring to ‘Facilitating progress of preparatory talk’, Dale stated: “..I was reminding them by asking what we should do to prepare for the discussion.” The data provide the evidence that he was aware of the need to take a monitoring role to ensure that the group made the best use of the time to prepare for the upcoming task. While the researcher had instructed all the groups to make use of the time to prepare for the discussion, not all students showed awareness of the need to monitor the progress of the preparatory talk in Cantonese in order to maximize its benefits to the upcoming English task. This way, he again showed meta-cognitive awareness.

To sum up, the evidence we have gathered is that Dale was conscious of the need to assess the linguistic and task knowledge required of the upcoming English discussion. Moreover, he was aware of the need to plan and monitor ways that might benefit the conduct of the discussion.

At Phase Two, Dale reported more target than non-target strategies; he referred to 3 target strategies and only 1 non-target strategy. Similar to other students, there was evidence that he borrowed the terminology used by the teacher during tuition to describe his strategic moves (e.g. “*Problem identification*”, “*purpose of the task*”, “*what we are supposed to do*”(‘Problem identification’); “*planning language*” (‘Planning ideas in advance’). That is, reporting in Cantonese during the SRI was sprinkled with these English phrases taken from the training sessions.

As at Phase 1, his statements continue to indicate that he was very much aware of the necessity of making use of the preparation time to do prospective planning (‘Functional planning’). Moreover, his comment provides the evidence that he was aware that the goal of his strategic step was to “*make the talk easier in the English task*”. By so doing, his move aimed to facilitate the English discussion.

While he continued to identify the use of ‘Asking for help’, the context of use which he referred to was different. This time, he directed the use of the strategy to the discussion proper: “*we should ask for help while the English discussion was in progress.*” This gives the evidence that he not only showed awareness of using the strategy during the

preparation time (Phase 1) but during the English task as well. In other words, he was capable of deploying the same strategy under different though similar situations.

‘Enhancing task knowledge’ was the only non-target strategy reported and he demonstrated the awareness of this strategy use to avoid potential problems: *“I was worried that my memory would fail me when we’re doing the task.”* (‘Enhancing task knowledge’). This way, he showed pro-activity in his strategy use, which was not evident in Phase 1 when he commented on the same strategy.

To sum up, there was support for the view that the strategy instruction was associated with his willingness to try out more target strategies as compared with Phase 1 and with his use of the strategy terminology modeled by the teacher. He also continued to demonstrate meta-cognitive awareness: reporting steps to avoid problems in the task and to facilitate task performance. It should also be noted that his recall segments were generally longer than those of Phase 1.

At Phase Three, Dale’s reporting continued to lend support to the view that he was aware of the need to maximize the preparation time in order to facilitate the upcoming English discussion. He stated: [*“We had to know what we’re supposed to do in the English discussion. So I suggested using problem identification”* (‘Problem identification’); *“Em I mean planning ideas in advance for the upcoming discussion you know”* (‘Planning ideas in advance’); *“that might be useful for the discussion”* (‘Functional planning’); and *“we had almost finished discussing what we could do to facilitate the upcoming discussion”* (‘Enhancing task knowledge’)]. This evidences Dale’s awareness of the goal of strategy use. The underlined words were either exact words used by the teacher or names of strategies introduced during strategy instruction. This gives further evidence that the training equipped him with the language to describe strategy use.

To sum up, Dale’s comments are indicative of his planned steps toward the preparation of the English task. This kind of conscious planning reflects a level of meta-cognitive awareness.

*Summarizing comments*



The emerging picture of Dale shows his awareness of the need to do preparation during the preparatory talk in order to maximize its benefits to the upcoming English task. In other words, he seemed to have techniques of conscious planning and monitoring to facilitate the group's performance in the upcoming English discussion. In this, he demonstrated sustained meta-cognitive awareness over time. In his references to strategies, he also showed awareness of strategy goals, i.e. deploying them to prepare, plan, or prevent potential problems.

The strategy training apparently influenced the types of strategies he reported. As time went by, he referred to more target than non-target strategies. Besides, he employed more terminology used by the teacher in his reporting. He seemed comfortable with using the exact words or names of strategies to talk about his strategic awareness.

Last but not least, his recall segments are reasonably long and reflect a fair degree of detail in his reporting. Particularly at Phase 2, he seemed to be more elaborate about the thoughts behind the preparatory talk.

Case report 8: (see Appendix 26) (Moderately articulate; narrow strategy range)

### *An Overview*

Overall, Gary reported a range of 7 strategies in all the SRIs. He referred to 5 target strategies (1 at Phase 1, 4 at Phase 2 and none at Phase 3) and 2 non-target strategies (1 at Phase 1, 2 at Phase 2 and 1 at Phase 3). It is obvious that there was a dramatic increase in the number of types of target strategies identified (i.e. 4 types). Other than these, Gary referred to only one to two types of strategies, be they target or non-target. He did not seem to be articulate about strategy use, as reflected by brevity of his comments across all the interviews.

At Phase One, Gary referred to the target strategy ('Functional planning') once only. During the preparation time, he showed awareness of the need to think about "*how to say*" an idea. That is, he was planning the linguistic aspect of the upcoming English task. The identification of a planning strategy revealed some meta-cognitive awareness on

Gary's part before strategy training. He was, however, not explicit about the goal of his strategy use.

He mentioned the non-target strategy ('Enhancing task knowledge') thrice. There was indication that he was using the planning time to try to understand meanings of words and sentences about the task. This appears to be an obvious strategy. He did not elaborate his rationale for strategy use and there was no evidence to gauge the level of his strategic awareness.

To sum up, according to his reports, Gary resorted to strategies that are related to 'how to say' an idea, or to the understanding of task information. As such, the strategies are more local than global in that they help with specific linguistic problems rather than with overall planning of how to execute the English task. He seemed reticent and did not elaborate much about his goal of strategy use.

At Phase Two, Gary referred to 4 target strategies and 2 non-target strategies. When talking about 'Problem identification' - a target strategy, he demonstrated awareness of task requirements (i.e. giving reasons) and awareness of enhancing the discussion task by pooling ideas during the preparation talk ('Planning ideas in advance') - another target strategy. He was able to be explicit about strategy use by borrowing the exact wording in English 'breathe deeply' ('Relax and think positive') employed by the teacher during strategy instruction.

One more observation is particularly noteworthy. There was evidence in the data that he was also aware of the need to monitor the way the group conducted the preparation talk, to ensure that the time was maximally spent so as to facilitate the upcoming discussion. For instance, he stated, [*"I was reminding them that..."* ('Problem identification'); *"We should put our thoughts together, bringing out any problems for the whole group to consider."* ('Planning ideas in advance'); *"I was asking them about the meaning of the word."* ('Asking for help'); *"that could help us relax"* ('Relax and think positive')]. In these comments, unlike those at Phase 1, Gary used *"them"*, *"we"*, *"our thoughts"*, *"the whole group"* and *"us"*, which indicates that he was trying to monitor the group's awareness of the need to plan for the upcoming task. Similarly, when referring to the non-

target strategies, he reported, “*I asked them and checked if they knew*” (‘Enhancing task knowledge’); “*So I wanted them to be on the track again*” (‘Facilitating preparatory talks’)]. He was again monitoring the group process in the preparatory talk. The evidence supports the argument that there were attempts to raise the meta-cognitive awareness of the group, thereby helping the group to act strategically.

To sum up, there was sustained evidence that he was aware of the need to do local planning such as preparing for ‘what to say’, finding meanings of words in the task sheet, and spotting specific task requirements. Nonetheless, strategy training seemed to have motivated him to try out the target strategies and to occasionally use words employed by the teacher to describe his own strategy use. Moreover, he showed awareness of the need to influence the group to make strategic moves. This was not at all evident at Phase 1.

At Phase Three, Gary commented very briefly on only one non-target strategy (‘Enhancing task knowledge’) with no mention of any target strategies. The comment focused on his own behaviour rather than the group’s. That being the case, there was no evidence to support the view that he continued to refer to target strategies or to demonstrate awareness of the need to monitor the group’s behaviour.

### *Summarising comments*

Gary, in general, referred to a narrow range of strategies. There was, however, some evidence that he seemed to be willing to influence the group to try out a few target strategies and that he borrowed terminology from the teacher during tuition. His strategy use was limited to local planning for the upcoming task. Not evident were strategies that would enable him to do global planning.

His reporting was a little more elaborate at Phase 2 than at Phases 1 and 3. However, there was not much evidence to substantiate the view that he was spontaneous in talking about strategy use, as reflected by the general brevity of his comments.

### Summary and discussion of qualitative findings

In general, Case reports 5-8 show that students enlisted a range of global and local planning strategies during the Cantonese preparatory talks to help them cope with the upcoming English discussions proper. In addition, they reported some monitoring strategies to regulate the conducting of the English discussion. Specifically, some students demonstrated strategic awareness of making the best use of the Cantonese preparatory talks in order to maximally benefit the upcoming English task. Last, some students reported that they had tried to influence the strategy use of the group-mates so that they could make a strategic use of the planning time. There was also evidence that the low-proficiency students reported a lesser variety of strategy use and the highest variety was reported by a high-proficiency student. Moreover, high-proficiency students tended to evaluate the usefulness of strategy use whereas there was not much evidence that the low-proficiency students did so. In addition, strategy use by the low-proficiency students seemed to be more limited in terms of effectiveness than that of high-proficiency students.

Overall, at Phase 2 and/or Phase 3, students used strategy-related terminology to describe strategy use. Over time, in all phases, students' attention appeared to shift from the non-target to target strategies. Besides, students became more articulate over time as evidenced by more elaborate reporting and longer recall segments particularly at Phase 2 and on some occasions at Phase 3. These findings may have been associated with the strategy training which the group had received.

#### **5.5.4 Summary and discussion**

Overall, in this section 5.5, we have seen that strategy training seemed to be related to obvious changes in quantitative terms in reported strategy use. There were changes common to both direct and indirect strategies. First, there were consistent increases in the predicted direction both in terms of variety and frequency of the target strategies reported. The results raise the interesting issue of the awareness-raising effect of strategy training as brought up in the previous section. On the other hand, the results raise the interesting question as to why there were consistent increases in the reporting of target strategies in all three phases but a rise only from Phase 1 to Phase 2 in the observed use of target strategies (see previous section 5.4). In general, qualitative findings for SRIs indicate that

students produced more elaborate accounts across phases. They also took up the strategy-related terminology used by the teacher or referred to the teaching as the source of strategy use. This was apparently related to the strategy training students had received. The findings have implications for using stimulated recalls to assess reported strategy use and to enhance the teaching of the speaking skill.

Apart from common findings, the respective training in the use of direct and of indirect strategies appeared to be related to findings specific to the E1 group and to the E2 group. Regarding target strategies, for E1, there was a strong upward trend in the reporting of 'Resourcing'. For E2, there were consistent increases in the reporting of 'Problem identification' across phases. Both results were consistent with those from the observed strategy use. As for non-target strategies, there were more changes with indirect than direct strategies. That is, for E2, there were steady decreases in the reported use of familiar strategies but increases in less familiar strategies whereas for E1, there were no predictable trends. Besides quantitative findings, qualitative case reports show that, for E1, students focused on strategies that helped them solve on-line speech processing problems and that enabled them to monitor the conduct of the discussion tasks. For E2, students reported a range of global and local planning strategies to cope with the upcoming English tasks and monitoring strategies to regulate the conduct of the English tasks as well as the preparatory talks in Cantonese. These sets of findings seem to show that there training in different types of strategies may be associated with differences in the reporting of strategies both in quantitative and qualitative terms. What might the reasons be? What pedagogic implications can be drawn?

Last, proficiency level made a difference to the impact of strategy intervention. That is, for both E1 and E2, the low-proficiency students were more activated than the high-proficiency students in the reporting of the target strategies. This is consistent with findings from the performance data presented in section 5.4. Moreover, qualitative findings indicate that very strong students reported that they had evaluated the effectiveness of strategies before deployment during the tasks and very weak students identified strategies that were more limited in terms of their effectiveness. Regarding non-target strategies, for E1, the low-proficiency students were more activated than their high-proficiency counterparts in reported strategy use. For E2, however, the low-

proficiency students reported a narrow range of familiar strategies whereas the high-proficiency counterparts reported a wide range of less familiar strategies. It would be worth exploring the reasons that might account for the differences. The plausible reasons, together with other issues arising, will be dealt with in greater depth in Chapter 6.

After presenting findings from each research method, we now bring together the results from a multi-method approach in the next section, 5.6 to see how they may throw light on the research questions.

## **5.6 Triangulation of findings**

In the previous sections 5.2 to 5.5, findings from each of the research instruments were presented (i.e. rating task performance, strategy questionnaires, observations and stimulated recall interviews, SRIs). The key role of this section 5.6 is to put the results from these instruments together with a view to answering the research questions from a multi-method approach. For the sake of economy of space, only key findings from each instrument will be used to paint an overall picture of the impact of the strategy intervention on students' strategy use and task performance. Overall key findings will be organized under the three research themes and research questions explained in section 3.2. (A comparison of findings from the different research methods is presented in tabular form for easy reference in Appendix 27.)

### **5.6.1 Research Theme 1: Effects of Strategy Training on Strategy Use**

#### **Research question 1:**

Would E1, the target group which received training in the use of direct strategies, use more direct strategies (target and non-target) as compared with C, the comparison group across Phases 1, 2 and 3?

*Direct, target strategies*

The overall findings suggest that, for E1, focused training seemed to be related to increases in the predicted direction in the variety of observed strategy use across Phases 1, 2 and 3. While for E1, there was a slight rise in the frequency of observed use at Phase 2, the effect of training (if any) was rather limited given that the C group had a rise from Phase 2 to a point which was even higher than that of the E1 group at Phase 3. In addition, strategy training appeared to be associated with increases in the predicted direction in the variety and frequency of reported strategy use in SRIs across phases. Specifically, the teaching was connected to the strong and consistent increases in both the observed strategy use and the reporting of 'Resourcing' in SRIs and to 'Resourcing' having the most significant gain in effect size in the questionnaire responses (+51%;  $p=0.058$ ).

#### *Direct, non-target strategies*

There were unpredictable patterns in both observed strategy use and reported strategy use in SRIs in the majority of non-target strategies. The teaching, however, might have been connected to the significant gains in favour of E1 in the self-perceived use of 'Attentive listening' (+66%;  $p=0.028$ ) and of 'Focusing on content language' (+60%);  $p=0.007$ ) in the questionnaire responses.

#### **Research question 2:**

Would E2, the target group which received training in the use of indirect strategies, use more indirect strategies (target and non-target) as compared with C, the comparison group across Phases 1, 2 and 3?

#### *Indirect, target strategies*

The findings appear to indicate that, for E2, strategy training may be related to increases in the predicted direction in the variety of both observed strategy use and reported strategy use in SRIs. The training may be associated with a noticeable increase in the frequency of observed strategy use at Phase 2, and with broad increases in reported use of target strategies in SRIs across phases, again with the strongest association at Phase 2. Specifically, the teaching seemed to be connected to consistent increases in both the

observed and reported use of 'Problem identification'. Also, there was a dramatic increase in both the observed and reported use of 'Evaluation' at Phase 2. Last, the intervention appeared to be related clearly to 'Asking for help' (+76%;  $p=0.001$ ) and to 'Problem Identification' (+50%;  $p=0.099$ ), these having the highest gains in effect sizes in self-perceived strategy use in questionnaires.

### *Indirect, non-target strategies*

Interestingly, for E2, the strategy training seemed to be connected with a general trend for decline in the observed use and reported use in SRIs of non-target strategies. Moreover, the tuition might have been related differently to different clusters of strategies. That is, for E2, the training may be linked with decreases in both the observed strategy use and reported use in SRIs of familiar non-target strategies (such as 'Rehearsing ranking'), and with increases in both the observed use and reporting of a wider range of less familiar strategies (such as 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions'). Last, the teaching did not appear to be connected to any significant gains in any of the non-target strategies in the questionnaire responses.

### **Research Question 3:**

Would the respective training in the use of direct and of indirect strategies relate differently to students' strategy use, and if so, in what way(s)?

There were findings common to both E1 and E2, indicating that strategy training might have universal impacts. First, the teaching appeared to be consistently connected to increases in the variety of both observed use and reported use in SRIs of target strategies across phases. In addition, the tuition seemed to be associated with increases in the predicted direction in the frequency of reported use in SRIs of target strategies. Interestingly, the highest frequency of the observed use of the target strategies was at Phase 2 rather than the predicted Phase 3. The strategy instruction seemed to be related to the consistent increases across Phases 1, 2 and 3 in the observed use of a very limited number of target strategies.



Lastly, there were different effects on E1 and on E2, which had received training in direct and indirect strategies respectively. It seemed that there were more changes in the observed use and reporting of indirect strategies (target and non-target) than direct strategies (target and non-target).

### *Qualitative findings*

Findings from the qualitative evidence indicate that strategy training in both direct and indirect strategies might be related to the use of strategy-related terminology in the reporting of strategies, to the explicit acknowledgement of the teaching or teacher as the sources of strategy, and to the increasingly more elaborated reporting at Phases 2 and 3, notably at Phase 2. Last, there was also a shift of attention from non-target to target strategies across phases.

However, there were apparent differences in terms of the impact on E1 and on E2. For E1, students focused on strategies that enabled them to cope with on-line speech production problems such as ‘what to say’ or ‘how to say’. Interestingly, students also reported use of strategies that helped them monitor contributions, manage turns, facilitate atmosphere, and evaluate task outcomes during the English group discussions. For E2, on the other hand, students reported a range of local and global planning strategies as well as monitoring strategies that could help them prepare for the upcoming English discussions or regulate the conduct of the discussions. Moreover, some students reported they had tried to monitor the Cantonese planning time or the strategy use of group-mates during the time with a view to maximizing the benefits of the preparation time to the upcoming English task.

## 5.6.2 Research Theme 2: Relationship Between Strategy Training, Proficiency Level and Strategy Use

### **Research question 4:**

For the E1 group, would training in the use of direct strategies relate differently to the high-proficiency subgroups (H) and to the low-proficiency subgroups (L) as compared with their counterparts in the C group?

First and foremost, it is worth noting that the subgroups were fairly small. Hence, the findings will need to be interpreted in this light.

Regarding target strategies, for E1, strategy training appeared to be associated with the low-proficiency students being more activated (i.e. reporting higher frequencies) than their high-proficiency counterparts in both observed strategy use and reported use in SRIs. The low-proficiency students also had more dramatic increases than their high-proficiency counterparts in the observed use of “Resourcing” and in the reporting of ‘Resourcing’.

Regarding non-target strategies, for E1, the training seemed to be related to the low-proficiency students being more activated (i.e. reporting higher frequencies) than their high-proficiency counterparts both in the observed use and in the reporting of non-strategies across Phases 1, 2 and 3.

### *Qualitative findings*

There was evidence that high-proficiency students reported a greater variety of strategy use than low-proficiency students. However, the findings suggest that some high-proficiency students were more able to evaluate the effectiveness of strategies than the low-proficiency students. In addition, very weak students were limited in their use of strategies. A low-proficiency student, for example, focused on one target strategy (i.e. ‘Resourcing’) to the neglect of others and persistently identified a very narrow range of strategies that enabled him to avoid problems (e.g. abandoning messages) rather than overcome them (see case report 4).

### **Research question 5:**

For E2, would training in the use of indirect strategies relate differently to the high-proficiency subgroups (H) and to the low-proficiency subgroups (L) as compared with their counterparts in C?

Regarding target strategies, for E2, strategy training appeared to be associated with greater activation in the low-proficiency students than their high-proficiency counterparts in the observed use, but not in the reported use of target strategies across Phases 1, 2 and 3. Low-proficiency students were associated with higher observed use and reporting of a narrow range of obvious non-target strategies ('Enhancing task knowledge', 'Checking meaning'). In contrast, the high-proficiency students were at all times associated with a wider range of less obvious non-target strategies ("Monitoring contributions", "Suggesting turn-taking tactics" and "Facilitating progress").

### *Qualitative findings*

The high-proficiency students tended to identify a greater variety of strategies than the low-proficiency students. Furthermore, the high-proficiency students appeared to be more capable of assessing the effectiveness of strategies before deployment than the low-proficiency counterparts. There was evidence, for example, that the high-proficiency student found it redundant to use strategies again and hence decided to remain reticent at Phase 3 (see case report 6). Moreover, the strategy use of a low-proficiency student was limited to those that were used for the local planning of 'how to say' (i.e. pronunciation) but not for the global planning (i.e. what the English task as a whole was meant to achieve) (see case report 8).

### 5.6.3 Research Theme 3: Relationship Between Strategy Training, Proficiency Level and Task Performance

#### **Research question 6:**

Would E1, the target group which received training in the use of direct strategies, perform better than C, the comparison group, in terms of pre-post gain scores on discussion tasks? If so, would the high-proficiency subgroups (H) and the low-

proficiency subgroups (L) perform differently as compared with their counterparts in the C group?

Results by treatment showed that E1 had higher pre-post gains than C on 3 out of 4 comparisons. Results by proficiency level indicated that the L-subgroups had higher gains than their counterparts in C on 3 out of 4 comparisons and the H-subgroups on 2 out of 4 comparisons. In addition, the L-subgroups had higher pre-post gains than the H-subgroups on 3 out of 4 comparisons. Besides, the L-subgroups had higher pre-post gains than their C counterparts on 'English' scores on both the whole class task and the 'pull-out' group task. Last but not least, the L-subgroup had the highest pre-post gains in the 'English' score among all the L-subgroups across C, E1 and E2. These findings indicate that training in the use of direct strategies may be related to E1 outperforming C overall. Also, proficiency level seemed to make a difference in that strategy instruction was associated more with the L subgroups than the H subgroups in having a greater number of pre-post gains as compared with their counterparts in C. In addition, the teaching might also be connected to L subgroups having higher gains in 'English' scores.

#### **Research question 7:**

Would E2, the target group which received training in the use of indirect strategies, perform better than C, the comparison group, on discussion tasks? If so, would the high-proficiency subgroups (H) and the low-proficiency subgroups (L) perform differently as compared with their counterparts in the C group?

Results by treatment showed that E2 had higher pre-post gains than C on 4 out of 4 comparisons. Results by proficiency level indicated that both the H-subgroups and L-subgroups had higher pre-post gains than their respective counterparts in C on 4 out of 4 comparisons (i.e. both 'English' and 'Task effectiveness' scores). E2 made the highest pre-post gains on the 'Task effectiveness' scores across all groups. These showed that training in the use of indirect strategies may be associated with both high-proficiency and low-proficiency students making more improvements than their counterparts in C in both the 'Task effectiveness' and the 'English' score. Last, there were higher pre-post gains on the 'Task effectiveness' scores than 'English' scores on 4 out of 4 comparisons for E2;

3 out of 4 comparisons for E1; and 2 out of 4 comparisons for C. Most notably, the training appeared to be correlated with E2 making even higher pre-post gains in the 'Task effectiveness' scores than in the 'English' scores.

### **Research question 8:**

Would the respective training of direct and of indirect strategies have differential impacts on the performance of E1 and of E2?

These findings by treatment class indicate that strategy training may be associated with both of the experimental classes (E1 and E1) outperforming the control class. Nonetheless, the strategy tuition could have been related to E2 performing the best among the three treatment classes in terms of both the 'English' scores and 'Task effectiveness' scores where the gains in the latter score were even higher than those in the former. Proficiency level did not seem to have made much difference. Last, the tuition appeared to be correlated with greatest improvement in 'English' by the L subgroup of E1.

## **5.7 Conclusion**

We have seen from Chapter 5 that findings from a multi-method approach as a whole show that strategy training might be associated with a number of changes to students' strategy use and task performance, in both quantitative and qualitative terms. It is interesting to note that there was an impact regardless of the types of strategy training that students had received. On the other hand, there were different effects on the E1 group and on the E2 group. Proficiency level also appeared to make a difference to the impact.

On the basis of the findings, there are a number of issues and questions concerning teaching ESL learners' strategy use in oral communication tasks. They include: awareness-raising effects; duration of training; differences in terms of uptake and reporting of direct and of indirect strategies; influence of proficiency level; the strengths and weaknesses of the research instruments and of adopting a multi-method approach. The next Chapter 6 deals with these issues and questions in depth.

## **CHAPTER 6      INTERPRETATION AND DISCUSSION OF FINDINGS**

### **6.1 Introduction and Overview of Chapter**

In Chapter 5, details of the findings were presented and described. Overall, the triangulation of findings from a multi-method approach showed that strategy training might be associated with a number of changes on students' strategy use and on task performance. It is interesting to note that there was a common impact regardless of the types of strategy training that students had received. On the other hand, there were different effects on the E1 group and on the E2 group that had received instruction respectively in the use of direct strategies and of indirect strategies. Last, proficiency level also appeared to make a difference to the impact.

In sections 6.2 - 6.4, the key findings are discussed around the three research themes. Then, the use of a multi-method approach to collect evidence of the impact is appraised in section 6.5 and the use of a quasi-experimental design to assess the impact in section 6.6. Last, section 6.7 concludes the chapter, which is organized as follows:

- 6.2 Research Theme 1: The impact of strategy training on strategy use
- 6.3 Research Theme 2: Relationship between strategy training, proficiency level and strategy use
- 6.4 Research Theme 3: Relationship between strategy training, proficiency level, and task performance
- 6.5 A multi-method approach: an appraisal
- 6.6 A quasi-experimental research design: an appraisal
- 6.7 Conclusion

### **6.2 Research Theme 1: The impact of strategy training on strategy use**

#### **6.2.1 Introduction**

The first focus of the present study was to assess the effects of strategy training on strategy use. The reader will recall that, at the outset, a theoretical framework that

proposed 'directness' as the key parameter to distinguish strategy categories and to guide our selection of strategies for the present intervention study was devised by the researcher. Then a quasi-experimental design was employed to investigate the impact of training in the use of direct and of indirect strategies on the learners' strategy use.

The key research questions addressed in this section were:

1. Would E1, the group which received training in the use of direct strategies, use more direct strategies (target and non-target) as compared with C, the comparison group across Phases 1, 2 and 3?
2. Would E2, the group which received training in the use of indirect strategies, use more indirect strategies (target and non-target) as compared with C, the comparison group across Phases 1, 2 and 3?
3. Would training in the use of direct and of indirect strategies have different impacts on students' strategy use; and if so, in what way(s)?

In the following subsections 6.2.2 to 6.2.6, key findings in relation to the aforementioned research questions are discussed in detail. Specifically, similarities and differences regarding the impact of the respective training in direct and indirect strategies on students' uptake and reporting are highlighted. The purpose is three-fold: first, to understand strategy training in general; second, to assess the relative ease of training in the use of direct and of indirect strategies; and, third, to review the proposed theoretical framework for strategy selection (see section 2.4). Let us first recapitulate the key findings that were established in Chapter 5.

## 6.2.2 Recapping key findings

Key findings common to both E1 and E2 groups were as follows:

### Quantitative findings

- There were consistent increases in the variety of observed use of the target strategies across Phases 1, 2 and 3.
- There were consistent increases in the variety of reported use in stimulated recall interviews (SRIs) of target strategies across Phases 1, 2 and 3.
- There was a rise in the frequency of observed use of target strategies at Phase 2.
- There was a general upward trend in the frequency of reported use of the target strategies in SRIs across phases.
- Students in general did not show any sign of consistent increases in observed use of non-target strategies in tasks, in reported use in SRIs and in self-perceived use in questionnaire responses.

### Qualitative findings in SRIs

- Students used strategy-related terminology to describe strategy use at Phases 2 and 3 but not at Phase 1.
- Some students explicitly acknowledged the strategy training or the teacher as the source of their strategy use at Phase 2 or Phase 3 but not at Phase 1.
- Students' stimulated recall accounts were generally more elaborate at Phases 2 and 3 and notably at Phase 2 as compared with those at Phase 1.

Key findings specific to the E1 group (i.e. direct strategies) were as follows:

### Quantitative findings

#### *Target strategies*

- There was a slight rise in the observed use of the target strategies (by whole sample) at Phase 2.
- 'Resourcing' was the only target strategy on which E1 had: (1) consistent increases in the predicted direction in observed use; (2) consistent increases in the predicted direction in reported use in SRIs; and showed: (3) almost statistically significant gains in self-perceived use in the questionnaire responses (+51%,  $p=0.058$ ).
- There was a statistically significant increase in the perceived effectiveness of 'Using fillers' (+31%  $p=0.058$ ) in questionnaires.

#### *Non-target strategies*

- There were unpredictable patterns of (1) observed strategy use; and (2) reported use in SRIs of the majority of strategies in SRIs.
- There were significant gains in the self-perceived use of 'Attentive listening' (+66%  $p=0.028$ ) and 'Focusing more on content than language' (+60%  $p=0.007$ ) in the questionnaires.
- There was increased perceived effectiveness in the use of 'Using pauses to gain time to think' (+30%;  $p=0.075$ ) in questionnaires.

### Qualitative findings

- Students reported strategies that might help them solve on-line speech processing problems of 'what to say' and 'how to say it' during the English group discussions.
- Students reported strategies that might help them monitor contributions, manage turns, facilitate atmosphere, and evaluate task outcomes during the English group discussions.



Key findings specific to the E2 group (i.e. indirect strategies) were as follows:

### Quantitative findings

#### *Target strategies*

- There was a dramatic rise in the observed use of the target strategies (by whole sample) at Phase 2. (But it should also be acknowledged that E1, while not trained in these strategies, sustained a consistent gain in the use of these strategies across the three phases and used them more frequently at each Phase.)
- ‘Problem Identification’ was the only target strategy on which E2 had: (1) consistent increases in the predicted direction in observed use; (2) consistent increases in the predicted direction in reported use in SRIs; (3) near statistically significant gains in self-perceived use in the questionnaire responses (+50%  $p=0.099$ ); (4) statistically significant gains in perceived effectiveness of the strategy in the questionnaire responses (+66%  $p=0.011$ ).
- There was a sharp increase in the observed use and reported use in SRIs of ‘Evaluation’ at Phase 2.
- There were consistent decreases in observed use of ‘Planning ideas in advance’.
- There were significant gains in the self-perceived use of ‘Asking for help’ (+76%  $p=0.001$ ) in questionnaires.

#### *Non-target strategies*

- There were steady decreases in (1) the observed use and (2) the reported use in SRIs of obvious and familiar strategies across phases (e.g. ‘Rehearsing ranking’).
- There were steady increases in (1) the observed use and (2) the reported use in SRIs of unfamiliar strategies across phases (i.e. ‘Facilitating progress’, ‘Suggesting turn-taking tactics’ and ‘Monitoring contributions’).
- There were no significant gains in favour of E2 in any of the non-target strategies.

### Qualitative findings

- Students reported a range of global and local planning strategies deployed during the Cantonese preparatory talks to help them cope with the upcoming English discussions.
- Students reported monitoring strategies to regulate the conduct of the upcoming English discussion tasks and to regulate that of the preparatory talk in Cantonese.
- Students reported that they had influenced or tried to influence the strategy use of the group members during the Cantonese preparatory talks.

Findings that were common to both direct and indirect strategies are first discussed before moving on to the differences. The purpose of discussing common findings is to gain knowledge about strategy intervention in general and to draw out pedagogic issues.

### 6.2.3 The impact of training direct and indirect strategies: similarities

#### *Findings: Synopsis and key issues*

Regarding the uptake of both categories of strategies (i.e. direct and indirect), strategy training was associated with students’ increasing motivation to try out more types of

target strategies over time. More importantly, the strategy instruction was related to using the target strategies notably at Phase 2. Regarding the reporting of both categories of strategies, strategy instruction was associated with obvious increases in the identification of the target strategies in the SRIs at Phases 2 and 3. Students were generally able to use strategy-related terminology, to identify the source of strategy use and to give more elaborated recounts at Phases 2 and 3 than Phase 1. These results raise several issues relating to strategy instruction: explicit focusing via training, raising of strategic awareness, automisation of strategy use, the role of stimulated recall as a research instrument in amplifying teaching effect, differential effects on declarative and procedural strategy use, and varying degrees of activation of target and of non-target strategies. We now discuss these issues in turn.

#### *Impact on variety of strategy use*

For both E1 and E2, strategy training was consistently connected to increases both in the variety of observable use and in the variety of reported use of target strategies in SRIs across Phases 1, 2 and 3, thereby suggesting that students were (a) motivated to try out more types of target strategies during planning and on-line tasks and (b) reported them in the SRIs. The most probable reason for this result is that the teaching raises the students' awareness of the target strategies, thus alerting students to use them during tasks and to report them in the interviews (SRIs). On the other hand, without the benefit of focused training, it seems that there was a relative lack of awareness of strategy use in general as evident in the C group. Overall, it may be argued that strategy tuition seems to have made a difference to the level of strategic consciousness of the experimental groups, which is consistent with findings in other strategy research studies (Oxford & Leaver, 1996). However, it should be acknowledged that, given the small sample size of the C group and the use of quantitative analysis only on the group's stimulated recall data, the result should be taken as provisional.

The result also suggests that strategy training is in line with the concept of 'noticing' (Schmidt 1990). According to Schmidt, everything we come to know about the language is first 'noticed' consciously. That is, in order for some features of language to be acquired, it is not enough for the learner to be exposed to them through comprehensible

input (Krashen 1985), but the learner must actually notice what it is in that input that makes the meaning. In the case of the present research, it looks clear that explicit strategy training raises the level of strategic awareness of the students. This is because the explicit mentioning of strategies and rules governing their use via consciousness-raising demonstration and practice in the training enabled students to 'notice' the rules (in Schmidt's 1990 terminology), to know about strategies and their use. Such consciousness raising may contribute to the process of noticing and prepare students for the integration of strategic competence into communicative competence. However, it does not lead to integration instantly. The development of strategic competence is controlled by the learner. It might well be the case of developmental readiness. It is also very likely that it takes time for learners to internalise strategy use. This leads to the next issue related to strategy training i.e. internalisation of strategy use.

#### *Impact on observed strategy use*

For both E1 and E2, strategy training was associated with a rise in the frequency of observable use of the target strategies at Phase 2. Contrary to our expectation, however, there was no sustained rise in terms of frequency of use at Phase 3 despite a rise in terms of the variety of use of the taught strategies.

A cognitive psychologist perspective to second language learning as skill learning may offer a plausible explanation for this result (Johnson 2002). The present study aimed to investigate the teaching effects of two groups of strategies (direct or indirect). So in order to expose students to a spectrum of strategies and to comply with the time constraints of the school, only one session could be allocated to the teaching and learning of each strategy. So while the conscious effort on the part of the teachers to help students consolidate previously-learnt strategies could raise students' general strategic awareness, this was probably not adequate to bring about their sustained use because of limited practice time given to individual strategies. For one thing, without repeated and extended practice, previously-learnt strategies might have got 'lost' as strategy use was novel and was still part of the learners' declarative knowledge. It takes time for students - after 'noticing' strategies and their potentials - to store them into long-term memory and translate them to internalized and proceduralized strategy use (Anderson, 1981; O'Malley

& Chamot, 1990). “The process of proceduralisation is one of automisation: making automatic” (Johnson, 1994, p.125). In other words, while there was some evidence of increased observed strategy use at Phase 2, it was probable that strategy use was not yet automatic and students had to pay conscious attention to it during tasks and that such attention might have failed as other demands of the tasks (e.g. linguistic demands) prevailed at Phase 3. In short, there is support from this study for the view that strategy learning is like skill learning in the context of second language learning in that it may take considerable time for students to automatise strategy use to become strategic learners.

#### *Impact on the frequency of reported strategy use*

A pervasive finding common to both E1 and E2 is that the teaching was correlated with consistent increases in the frequency of the reporting of target strategies in SRIs across Phases 1, 2 and 3. This result is striking given that there was no corresponding increase in observable strategy use at Phase 3. Nor were there statistically significant gains in favour of E1 and of E2 in the reported use of the majority of the target strategies in the questionnaire responses. However, when commenting on the recordings during the SRIs, both experimental groups mentioned the target strategies with increased frequency.

The correlation between the strategy training and the reporting could have been the result of an interaction between the teaching and the research instrument (i.e. SRIs). That is, focused teaching presumably played a part and the SRIs may have strengthened the impact of the teaching resulting in the increasing frequency of reporting of the target strategies themselves. This may account for the results in two ways.

First, it is likely that strategy training may have first raised students’ awareness of the target strategies, and the explicit invitation to comment on the recordings may have directed students’ attention to them during the SRIs while watching the video play back of the tasks. So, for E1 and E2, students’ consciousness of the target strategies could have been enhanced both by the awareness-raising effect of the training and by the SRIs. On the other hand, for group C, students might have used the target strategies but were not aware of them due to a lack of training. This may explain why the experimental groups but not the control group consistently reported higher use of the target strategies though

they were subject to the same reporting conditions in SRIs. Furthermore, the finding that there were no increasing trends in the identification of non-target strategies (by whole sample) for both E1 and E2 provides strong evidence that focused training may be necessary to enhance the awareness effect of the training. (We will return to this issue concerning the non-target strategies later.)

Second, the training might have also brought out the latent effect of repeating SRIs at Phases 2 and 3. By repeating the interviews over time, students in general may have become better able to reflect on strategy use. As there was an interaction between teaching and task repetition, repeated participations in SRIs could have a latent effect on what students were reporting. It is plausible that there was latent effect from repeated SRIs which was only effective in interaction with the teaching (May 2002 Bygate, personal communication). That might explain why the control group did not benefit. To sum up, the repeated SRI condition might have amplified the teaching effect, thus reinforcing the effects of strategy training. All in all, it is possible that the resultant effect was not caused by the teaching or the SRI alone but by an interaction between focused teaching and the research instrument (i.e. SRI).

The interaction effect may also explain some other qualitative associations between the strategy training and the SRIs. That is, there was evidence of increased use of strategy-related terminology during the SRIs at Phases 2 and 3. Besides, there was increased incidence of students' explicit acknowledgement of the training or teacher as their source of strategy use. In addition, during the reporting, students were using the language and concepts that they had been exposed to during the strategy instruction. That is, strategy training possibly equipped students with the necessary terminology and concepts to talk about strategy use in the SRIs, thereby enhancing students' ability to talk about the strategies at Phases 2 and 3.

While we acknowledge that any interaction effect may make it hard to assess the training effect per se, it provides an argument in favour of strategy training because of its possible role in raising awareness about strategy use. Moreover, the results also underscore the potentially supportive role of stimulated recall methodology in pedagogy i.e. in the teaching of the speaking skill – a skill which is difficult to access. In other words, apart

from functioning as a research instrument, the SR methodology might be a potentially useful teaching aid to help teachers access students' thoughts during on-line speech production. This issue will be revisited later in section 6.5.5.

*Impact on declarative and on procedural knowledge of strategy use*

On the basis of the findings we have discussed so far, it can be argued that the strategy training may be associated with a greater impact on students' declarative knowledge than procedural knowledge of strategy use. For one thing, the strategy intervention was connected with enhanced and sustained strategic awareness on the part of the learners as evident in the consistent increases in the variety of strategy use and in the frequency of reported use in SRIs across Phases 1, 2 and 3. On the other hand, the strategy instruction was correlated to some noticeable applications of strategy use at Phase 2 but not at Phase 3. Hence, it appears that the explicit focusing of strategies in the training had a pervasive impact on students' implicit, declarative knowledge about strategy use. Such knowledge is implicit in the sense it is not yet implemented or put to use in tasks. It often takes the form of awareness-raising which may not be reflected in performance such as observed strategy use. The impact appears strong as it was consistently reflected across Phases 1, 2 and 3. In contrast, the teaching impacted on the explicit, procedural knowledge of strategy use but only in a relatively less pervasive way because observed strategy use was not sustained at Phase 3. As procedural knowledge relates to application of declarative knowledge, it is explicit, observable and can be reflected in performance.

The apparent differential effects of strategy intervention on learners' strategy use suggest that learning can be manifested in ways that may or may not be observable. Learning may be latent, implicit and not yet implemented because learners may first acquire declarative knowledge via consciousness-raising. Then, the process of "proceduralising declarative knowledge" through practice may begin (Johnson, 1994, p.125). In fact, in cognitive learning theory, which is relevant to strategy learning, "automatic and non-automatic do not seem to be two completely different types - rather a continuum, and are affected both by practice and by the ways in which tasks are combined" (Smyth, Collins, Morri & Levy, 1994). So it can be argued that declarative knowledge is on one end of the learning continuum whereas procedural knowledge is on the other. So the value of strategy

training may lie in its helping students acquire declarative knowledge, which is the first step to proceduralisation on the learning continuum, and which is often not observable and cannot be reflected in performance. Given that in strategic awareness and in the development of strategy use, learning may or may not be observable, it is desirable to employ research instruments that tap both observable and unobservable changes in order to get a full picture of the impact of strategy intervention (see section 6.5 later).

### *Impact on target strategies and on non-target strategies*

Up to now, our focus has been on the target strategies. Let us now turn to the impact of teaching on the non-target strategies. The strategy training seemed to impact on non-target strategies in a different way as compared with that on target strategies. That is, the findings of non-target strategies (by whole sample) indicated that students in general did not show any sign of consistent increases in observed use in tasks, in reported use in SRIs and in self-perceived use in questionnaire responses with the exception of a few individual indirect strategies, which we will address later in section 6.2.5. Actually, on some occasions as in SRIs, there were steady decreases in the reporting of non-target strategies across Phases 1, 2 and 3. These findings on non-target strategies (by whole sample) provide additional insights into strategy research.

In the first place, the findings suggest that strategy training may not automatically spread over from target to non-target strategies and that explicit focusing may be desirable to bring about learning of strategy use, be it implicit or explicit. This lends further support for the importance of consciousness-raising in strategy training. Incidentally, the findings of non-target strategies also strengthen those concerning target strategies in that strategy training did produce differential and desirable effects on the target strategies i.e. increases in the predicted direction. Without training, similar impact was not in sight and it may not be possible to raise general strategic awareness - as one would hope - by focusing on target strategies only.

Second, the findings indicate that, in strategic awareness (i.e. declarative knowledge) and in the development of observed strategy use (i.e. procedural knowledge), students' attention can be shifted, and in the case of the present study, from non-target to target

strategies as evident in the decreasing reporting of non-target, direct and non-target indirect strategies in SRIs and in the downward trend in the observed use of non-target, indirect strategies. If students' attention to non-target strategies can be redirected, it raises the ethical issue in education as to whether it is desirable to direct students' attention away from their own repertoire of preferred, pre-existing, non-target strategies and to make them focus only on those strategies targeted in the instruction. It may well be the case that strategy training reaps benefits if students are alerted - beside target strategies - to their preferred, pre-existing, non-target strategies and are encouraged to harness the use of both target and non-target strategies. After all, perhaps the aim of strategy training is to raise general strategic awareness instead of inadvertently instructing students to replace non-target with target strategies. No doubt, this has implications for strategy training.

#### *Summary and pedagogic implications*

The discussion we have had so far indicates that, irrespective of the nature of the strategies (i.e. direct or indirect), strategy training seems to require explicit focusing to raise strategic awareness. Such awareness appears to be a necessary condition for developing declarative knowledge of strategy use, which is likely to be the first step to developing automatised strategy use. It takes time for strategy use to be fully proceduralised (automatic) because it may well be the case that the development of strategy use is like the development of language skills (e.g. speaking). Hence, training in the use of direct or indirect strategies may have a greater impact on learners' knowledge about strategy use (i.e. declarative knowledge) than implementation of strategy use (i.e. procedural knowledge) when the strategy intervention is conducted in a relatively short duration. A longitudinal study across course years may be desirable to track the development of strategy use. In addition, as explicit focusing appears to be needed, there was no evidence that learners' awareness and use of non-target strategies were enhanced. In fact, students' attention to non-target strategies might have been shifted to target strategies, which may not be pedagogically desirable. Last, the strategy training and the SR methodology seem to have raised learners' strategic awareness, equipped them with the necessary terminology, and most important of all, provided them with an opportunity to reflect on and talk about strategy use in action.



As it is likely that strategy instruction takes considerable time to produce sustained results in observable use, it may be necessary to conduct strategy training for an extended period of time. Besides, to maximize the benefits of strategy training, it may be worth considering providing consciousness-raising exercises and practices that help students develop awareness of both target and of non-target strategies. This may facilitate the ‘wash over effect’ from target to non-target strategies and enhance the overall efficacy of training. Last, it may be desirable to accompany strategy training with the stimulated recall (SR) methodology not just as a research instrument but as a teaching tool that plays a supportive role in facilitating learners’ development of strategic awareness in oral communication tasks. (We will return to the SR methodology later in the section 6.5.5 for more elaborate discussion.)

We now turn to the differences between direct and indirect strategies in terms of uptake and reporting. An understanding of the difference in the results may help us account for the differential impacts of strategy training on the two categories of strategies so that we can handle them more effectively in the language classroom in future. Moreover, the understanding helps us review the strategy selection framework devised by the researcher, which identifies ‘directness’ as the key parameter to distinguish and select major categories of strategies for training in L2 oral communication tasks.

#### 6.2.4 Impact on training direct and indirect strategies: differences

##### *Findings: Synopsis and key issues*

Considering student uptake, direct strategies appeared to be less teachable than indirect strategies. A comparison of the quantitative findings (i.e. frequency of strategy use) specific to direct strategies and to indirect strategic shows that the strategy intervention was associated with relatively fewer changes in the former than the latter category. With respect to target strategies, for example, the rise in observable use of direct strategies was only modest for E1 but relatively dramatic for E2 at Phase 2. Moreover, the training only appeared to have an impact on ‘Resourcing’ for E1, whereas for E2, it affected the frequency of the use of ‘Problem identification’, ‘Evaluation’, ‘Planning ideas in advance’ for E2. Similarly, regarding non-target strategies, whereas there was little effect,

with generally unpredicted patterns of use over time, for E1, the impact on familiar and less familiar indirect strategies was rather clear-cut for E2. These findings raise several key issues for discussion: respective nature, roles and functions of direct and indirect strategies, cognitive and linguistic demands of strategy use, task type and strategy use. We now move on to these issues in turn.

### *Different effects on student uptake*

The differences in the uptake of the two categories of strategies are not surprising not least since they differ fundamentally in nature. The reader will recall that, for the purposes of the present research, direct strategies are those involved in facilitating on-line speech processing at different stages of speech production whereas indirect strategies subsume meta-cognitive and socio-affective strategies that help learners cope with language tasks without being involved directly in speech processing. Hence, the fundamental difference is that direct strategies are directly involved in speech production while indirect strategies are not. Therefore, I wish to argue that the differential degrees of uptake of the two categories of strategies might have been related to the differences in cognitive demands inherent in the nature of strategy use.

As mentioned, direct strategies are on-line strategic behaviours or thoughts; they are directly involved during speech processing. As such, their use is in direct competition with resources needed for the different stages of speech production including conceptualization of ideas, formulation and articulation of speech (see section 2.5.2). The evidence from the SRIs also indicates that students gave prime attention to working at ‘What to say?’ or ‘How to say it?’ during on-line speech. Hence, given the limitation of attentional resources in real-time speech, novice speakers will probably give priority to messages (i.e. what to say?) and to language (i.e. how to say it?), thus leaving little attention and memory space for strategy use unless and until it is proceduralised and does not take up processing space to execute. In short, direct strategies that are not yet internalized are cognitively demanding and are likely to incur memory loads on the part of the learners. Hence, teaching direct strategies is subsequently demanding as well.

On the other hand, the teaching of indirect strategies is comparatively easy to handle. Learners of indirect strategies had the time and space to deploy and develop strategy use - either during the planning time prior to the English task proper or before it is their turn to speak during the English group task. In fact, it can be argued that it is the conditions of use that render indirect strategies more easily taught and learnt. Take meta-cognitive strategies such as 'Problem identification', 'Planning ideas in advance' and 'Functional planning' as examples. They are normally deployed before the task or before one's turn to speak. That is, learners could give deliberate attention to the deployment of the indirect strategies because of the provision of time and space during the planning stage or before it was their turn to speak. The deployment of these strategies does not take up processing space; the deployment *is* the processing itself. It follows that the problem of attentional capacity is less, thereby enabling indirect strategies to be cognitively less demanding, and subsequently more easily deployed, practiced and proceduralized.

So far, it seems apparent that cognitive demands of strategy use might have contributed to the differential degrees of uptake of the two categories of strategies. It follows that cognitive demands of strategy use may affect the success of strategy training and that cognitive demands may be moderated by conditions of use such as provision of time and space to facilitate or develop strategy use. To improve the efficacy of strategy training, it may therefore be desirable to engineer conditions that can relieve students of the cognitive loads of strategy use. One way is to include the practicing of both direct and indirect strategies during the planning stage before an upcoming task. Again, we will return to the pedagogic applications later in section 6.2.6.

Let us now compare direct and indirect strategies in terms of reporting (i.e. reported use of strategies).

#### *Different effects on reporting of strategy use*

With regard to the ease of reporting, it seems that direct strategies are less amenable to reporting than indirect strategies. E1, for example, reported in the SRIs using strategies in solving on-line problems of 'what to say' and 'how to say it'. These strategies are spontaneous and often elusive; they are tactical strategies behind talk, aimed at producing

and sustaining speech, and are not easily uncovered. However, very often, they are so closely bound to the moment of talk that they are very often inseparable from the speech itself. They are performance strategies 'on the fly'. What we uncovered on the basis of the reporting was probably the level of strategic awareness just below the surface of discourse (Hoey, 1983). It probably takes a lot of self-awareness on the part of L2 speakers to report the use of direct strategies, which are not easily captured.

In contrast, for E2, there was clear evidence from the SRIs that students reported using indirect strategies such as planning and monitoring strategies which are reflection-based. These strategies are probably, therefore, by virtue of their nature, more amenable to reflection and to explicit explanations and reporting. Furthermore, students were given the time and space to talk about the use of indirect strategies during the preparation. Such provision no doubt facilitates the reporting of indirect strategies. Put simply, both the nature and conditions of reporting are more favorable to the reporting of indirect strategies.

So far, I have argued that the ease of reporting of strategy use may contribute to the success of strategy training not least because reporting may facilitate the development of strategic awareness. Strategy use requires a lot of self-awareness on the part of the learners. To help students develop strategic awareness, it may help if conditions that are conducive to the reporting of strategies are provided. The ease of reporting of strategy use may be moderated by conditions of reporting. For example, in view of the possible difficulties inherent in the reporting of direct strategies, it might be desirable to provide conditions that facilitate their reporting and subsequently raise their level of awareness. The conditions may typically embrace the provision of planning time in which not only indirect strategies may be developed - as evident in findings of the present study, but the awareness of direct strategies might also be raised prior to an upcoming L2 oral communication task. In so doing, planning time might help students develop awareness of direct strategies and the awareness as well as use of indirect strategies.

As mentioned in section 6.2.1, the third purpose of comparing and contrasting findings pertaining to direct and to indirect strategies is to review the theoretical framework for strategy selection devised by the researcher using a hypothetical-deductive approach at

the outset of the study. Based on the empirical evidence of the study, we now revisit the framework to see how it works.

### *Reviewing the key parameter 'directness' for categorising strategies*

The strategy selection framework was drawn up on the basis of the existing frameworks for general learning and for language learning strategies. The proposed framework used 'directness' as the key parameter to distinguish 2 major types of strategies (i.e. direct and indirect). The framework was then applied to L2 oral communication tasks. It seems that the proposed framework is useful to strategy training in L2 oral communication. For one thing, we have seen the differential effects of strategy intervention on direct strategies and on indirect strategies in terms of student uptake and reporting. These findings support the view that learners were receptive (albeit of varying degrees) to both types of strategies in handling speaking tasks. The qualitative evidence collected from SRIs also supports the view that the two categories of strategies seem to have different roles and functions. For example, students reported strategies that might help them solve on-line speech processing problems (i.e. direct strategies) in English tasks as well as strategies that might help them monitor contributions, manage turns, facilitate atmosphere, and evaluate task outcome (i.e. indirect strategies) both in the preparatory talks in Cantonese and in the English discussions proper (see section 6.2.2). So it seems that there is value of teaching both categories of strategies. There is further support for this view when we study the relative contributions of the two categories of strategies to improvements in different aspects of task performance, the third research theme which we will address in section 6.4 later. All in all, it appears that adopting 'directness' as a key parameter to propose major strategy types for training in L2 oral communication tasks is useful.

### *Summary and pedagogic implications*

To sum up, the deployment of direct strategies takes up processing space and attentional capacity for a novice learner who has to struggle for 'what to say' and 'how to say it' during on-line speech production. This way, the cognitive demand of using direct strategies is likely to be high as strategy use is probably not yet automatized. On the other hand, the deployment of indirect strategies is cognitively less demanding because it does

not take up processing space. Instead, the deployment is the processing itself. In addition, space is literally provided for learners to use indirect strategies because they are given planning time prior to the English tasks. Planning time provides a favourable condition for learners to 'acquire' indirect strategies. In short, differences in the nature and the conditions of use of the two categories of strategies seem to have rendered indirect strategies more 'teachable' and more amenable to reporting than indirect strategies.

In view of the differences between direct and indirect strategies, the effective handling of the two categories of strategies will need to first and foremost take account of the cognitive demands of strategy use and conditions of use that may affect student uptake and reporting of strategy use. This might be done by incorporating planning time and the SR methodology into strategy instruction with a view to promoting the effectiveness of handling direct and indirect strategies in the language classroom. As a matter of fact, the preparation time not only facilitates the development of indirect strategies but direct strategies. For instance, students can be asked to practice the use of 'Resourcing', 'Using fillers', 'Paraphrasing', etc. during the planning time so that they may take up less processing time if and when they are activated during the English discussions.

Moreover, adopting 'directness' as the key parameter in categorizing strategies for training seems useful as the two types of strategies play different roles and functions and have different conditions of use in L2 oral tasks. This gives further support to the position that both direct and indirect strategies should be targeted in the strategy lessons, as they may both be beneficial to learners. In other words, it may be desirable to incorporate both direct and indirect strategies to the same group of students for training in future studies.

So far, we have discussed the findings in terms of the whole sample of direct and of indirect strategies without referring to individual strategies. The purpose has been to study the overall impact of strategy training on the two categories of strategies that are distinguished on the basis of the key parameter 'directness'. We now study the impact on individual strategies. The aim is to find out which specific strategies may be more amenable to teaching and to reporting and to review the selection framework based upon which individual strategies for the present study were selected.

### 6.2.5 Impact of strategy training on individual target strategies

Direct strategies that might play specific roles in helping L2 learners solve problems at different stages of speech processing were chosen on the basis of the strategy selection framework (section 2.5.2). The target strategies selected for training were: ‘Resourcing’, ‘Paraphrasing’, ‘Using fillers’, ‘Using self repetition’, ‘Self correction’, ‘Asking for clarification’, ‘Asking for confirmation’, and ‘Asking for repetition’. In addition, on the basis of the same framework, indirect strategies were sub-categorised into reflection-based, meta-cognitive strategies and non-reflection-based, socio-affective strategies (section 2.5.3). The target strategies selected for training were: ‘Problem identification’, ‘Planning ideas in advance’, ‘Functional planning’, ‘Evaluation’, ‘Asking for help’, ‘Giving help’, and ‘Positive self.

Let us now turn to the impact of the intervention on specific strategies to see which seemed most ‘teachable’ and most amenable to reporting. The purpose is to gain insights into strategies for oral interaction and for handling oral tasks favoured most by junior L2 speakers. The insights will guide us to make informed decisions about the development of strategic competence in L2 oral communication in the language classroom in the future. In addition, the findings might provide us with further information to review the strategy selection framework.

#### *On direct strategies*

‘Resourcing’ was the only target, direct strategy on which E1 had consistent increases in observable strategy use, and showed reported use both in SRIs and in the questionnaire responses. The strategy is aimed to facilitate speech production by helping students make strategic use of the notes (with suggested ideas and language structures for the discussion tasks).

One plausible reason for the apparently high uptake of ‘Resourcing’ is that it enables the L2 speakers to cope with the problem of ‘Resource deficits’ during the initial phase of speech processing as delineated in the framework for guiding the selection of direct strategies for training (section 2.5.2). Most L2 speakers, and elementary-intermediate learners in particular, probably face the problem of a lack of L2 vocabulary with the

accompanying grammatical knowledge. The finding that only 'Resourcing' was consistently used by E1 is perhaps consistent with the argument that the deployment of this strategy might help fill lexis-related knowledge gaps of the L2 speaker. That is, the strategic use of the notes (i.e. 'Resourcing') enables the L2 speaker - almost effortlessly under time pressure - to get 'what to say' in the conceptualizer and to encode 'how to say it' in the formulator.

The other reason for the apparently high uptake of 'Resourcing' may be related to the learning stage (cognitive level) and proficiency level of the students and the corresponding linguistic and cognitive demands of 'Resourcing'. When the intervention began and students started receiving strategies-based instruction and doing group discussion tasks, they had only 7 years of English. When using 'Resourcing', students only had to be able to comprehend, select and read suggested ideas or language structures from the notes aloud in order to operate at a basic level during the English tasks. This is consistent with the notion that strategies that demand only surface processing tend to be favoured by elementary learners (Chesterfield & Chesterfield, 1985; Oxford & Erhman, 1995). It is therefore possible that oral strategies that enable speakers to formulate ideas and to express them in a relatively effortless way may serve as 'bedrock strategies' in oral communication for young learners, an example of which appears to be 'Resourcing'.

The notion of 'bedrock strategies' may also explain why strategy training did not have much impact on 'Paraphrasing', which was another strategy on the assumption that learners might use it to solve 'resource deficits' problems. The plausible reason for the lack of effect on 'Paraphrasing' may be attributed to its high linguistic demands. That is, L2 speakers have to have a repertoire of linguistic structures (i.e. vocabulary with accompanying grammatical structures) at their disposal in order that they can choose without effort. In other words, it may well be the case that a linguistically deficient speaker is likely to deploy 'Paraphrasing' to little avail. To maximize the benefits of strategy use, it may therefore be desirable to match the linguistic demand of a strategy with the proficiency level of the learner. This underscores the importance of matching the cognitive/linguistic demands of strategy use with learners' stage of learning in the teaching of oral strategies directly involved in speech processing. That is, the linguistic demands of strategy use may need to be considered carefully before incorporating any



strategies into the programme. Alternatively, it may be desirable to provide linguistic scaffolding for strategy use, thereby enabling speakers to use 'Paraphrasing', for example.

Last, the finding regarding 'Resourcing' appears to indicate that the speech processing framework - based on Levelt's (1987) speech model and on Dörnyei and Kormos's (1998) - as discussed in section 2.5.2 is useful for guiding the selection of direct strategies for learners at different course levels. For one thing, junior learners engaging in L2 oral tasks may find strategies that help them first and foremost solve problems at the initial stages of speech processing (i.e. planning and encoding the preverbal message) more 'user-friendly' than those strategies that presumably help learners solve problems at the higher stages of speech processing (i.e. monitoring the phonetic plan and the articulated speech; post-articulatory monitoring). This might explain why 'Self correction', 'Seeking clarification', 'Seeking confirmation' and 'Asking for repetition' were sparsely used or reported by students in the present study while there was evidence that some of these interaction strategies were picked up by more advanced students in earlier studies (e.g. Bejarano et al., 1997; Lam & Wong, 2000).

#### *On indirect strategies*

'Problem identification' was the only target, indirect strategy on which there were consistent increases in observable strategy use, reported use in SRIs, and in questionnaire responses. The strategy enables the learners to find out first and foremost the purpose and requirements of the speaking task before it commences. The qualitative evidence from the SRIs indicates that students reported that they did indeed do global planning by analysing the purpose and requirements of the discussion task. The finding is consistent with the hypothesis that the learner needs to develop executive control over the task by acquiring some kind of task knowledge encompassing task purpose and task demand (Wenden, 1995). This finding about 'Problem identification' seems to suggest that indirect strategies for handling speaking tasks that have high student uptake are likely to be those that facilitate students' understanding of the task purpose and requirements.

The other key finding from the present study is that E2 increased their observable use and reporting of a few non-target strategies (i.e. 'Facilitating progress', 'Suggesting turn-

taking tactics' and 'Monitoring contributions'). This is striking given the fact that, generally speaking, the impact of strategy training did not seem to spread over from target to non-target strategies as discussed earlier. In addition, qualitative evidence from the SRIs of E1 indicates that students reported using similar strategies to monitor contributions, manage turns, etc. despite the fact that their attention was not drawn to these strategies during training. Based on an extrapolation of this finding, it is possible that training in the use of 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions' as target strategies will probably have a considerable impact on student uptake and reporting.

Let us examine the nature of these non-target strategies that were activated. They are strategies for managing topics, taking turns and facilitating interaction as well as the conduct of the group discussion task (Bygate, 1987; Levelt, 1989; Richards & Schmidt, 1983). I wish to argue that these strategies are task-specific in that they may be used in two-way, interactive tasks but not one-way, non-interactive tasks such as oral presentations, story telling, picture description, reading aloud, etc. that are normally done on an individual basis. That is, participants in group discussions are, by virtue of the nature of the task, expected to interact with one another. That being the case, there was evidence to indicate that indirect strategies that are pertinent to the specific nature of the task, and in this case, the group discussion tasks, are likely to have high student uptake. Task type probably impacts on task requirements and in turn on strategy use. As McDonough (1995) postulates, "task requirements are very influential in choice of strategy". In short, the task type may well have influenced the students to decide which strategies should get priority.

#### Summary and pedagogic implications

To sum up, as far as direct strategies are concerned, 'Resourcing' was the most-often used and reported among all the target strategies, thus lending evidence that direct strategies that require only surface processing without incurring a memory load and yet enable the L2 speaker to achieve their communicative intent under real time constraints are favoured most by junior L2 speakers. Moreover, 'Resourcing' seems to be functioning as a 'bedrock strategy', helping learners to solve communication problems at the initial phases of speech processing i.e. (i.e. planning and encoding the preverbal

message). As such, the proposed strategy selection framework - based on Levelt's (1987) speech model and on Dörnyei and Kormos's (1998) model on speech processing - appears useful in guiding the choice of direct strategies for training.

Regarding indirect strategies, 'Problem identification' was the most-often used and reported among all the target strategies, thereby supporting the view that strategies that may facilitate students' understanding of the purpose and requirements of the tasks and enable them to do global planning for the tasks are favoured most by junior learners. In addition, task type seems to impact strongly on strategy choice and strategy use because non-target strategies such as 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions' were activated in the intervention. It may therefore be necessary to modify the strategy selection framework by adding 'task type' - in addition to 'reflection' - as another parameter to sub-categorise indirect strategies. In short, the discussion has highlighted the importance of task knowledge and task type in enhancing the uptake and reporting of indirect strategies for managing speaking tasks. when trying to cope with L2 oral communication tasks.

On the basis of what we have discussed, to enhance the efficacy of teaching direct strategies, it might be desirable to match the cognitive/ linguistic demands of strategy use with the learners' proficiency level. Similarly, in the teaching of indirect strategies, it may also be necessary to match strategy use with task types (e.g. oral presentations, recounting experiences, picture description, debating, etc.) for optimal training effects.

#### 6.2.6 A summary of implications for strategy training

##### *Strategy teaching for L2 oral communication*

##### A. Explicit awareness of strategy use

As was the case in the present study, it may be desirable to maximize the actual knowledge on the part of the students of the general focus of the instruction. This can be done by explicit strategy instruction that facilitates the 'noticing' of the rationale for strategy use accompanied by demonstration of strategy use.

## B. Engineering favourable conditions

It may be necessary to provide time and space prior to the task proper for the learners to practise the use of strategies (direct strategies in particular) to enhance uptake. Moreover, the SRIs are particularly effective in providing once again the necessary time and space for learners to reflect upon and report strategy use. This is especially essential for direct strategies that are by nature not amenable to reflection and to reporting.

## C. Incorporating stimulated recall interviews (SRIs) to track thought processes

It may be desirable to incorporate procedures to access the learners' thought processes on a post-task basis. The purpose is to facilitate and assess the development of strategic awareness, which is part and parcel of effective strategy training. One procedure is to incorporate the use of SRIs notwithstanding that there may be others. (This will be further developed when we appraise research methods later in section 6.5.)

## D. Maximizing the amount of exposure

Strategy training is likely to be a gradual process combined with developing awareness of the learning process on the part of the learners. To make provisions for strategies to be assimilated, applied and transferred to similar tasks, it is desirable to fully incorporate strategy-based instruction into the normal curriculum on a longitudinal basis to yield optimal results.

### *Teaching direct strategies to facilitate speech production*

#### A. Focusing on 'bedrock' strategies for beginners

It may be effective to introduce 'Bedrock strategies' (Green & Oxford, 1995) as fundamental strategies for beginners. One example is 'Resourcing'. For one thing, these strategies require only surface processing without incurring memory load and yet enable the L2 speaker to achieve their communicative intent under real-time constraints. They enable the learners to keep going and operate at a basic level. As time passes, they might

be able to internalize some of the vocabulary or structures and in turn enhance linguistic development.

#### B. Ensuring cognitive/linguistic matches

In general, when dealing with direct strategies, it is probably desirable to match the cognitive/linguistic demands of strategy use with learners' stage of learning. Such matching is likely to be particularly pertinent to direct strategies for on-line speech processing. That is, elementary ESL learners might benefit from exposure to strategies that help them first and foremost cope with the difficulty of 'what to say' or 'how to say it' while more advanced learners may be able to benefit from a spectrum of strategies that may enable them to tackle problems at different stages of speech processing. Alternatively, junior learners may also benefit if they are provided with linguistic scaffolding when deploying strategies which have some linguistic demands. For example, some students may need to be taught the language of clarification or they may need to see examples of paraphrase and be encouraged to use it when they do not have the right word(s) to express themselves. In many circumstances, too, teachers may need to provide students with appropriate and accurate linguistic models. (Littlewood & Liu, 1996).

#### *Teaching indirect strategies for handling L2 oral communication tasks*

##### A. Focusing on task-specific and reflection-based strategies

Reflection-based, meta-cognitive strategies such as planning and monitoring strategies may be incorporated in teaching L2 learners to handle speaking tasks. Planning strategies that facilitate students' understanding of the task purpose and requirements appear to be 'user friendly' for beginners, a particularly salient example of which is 'Problem identification'. In addition, it may be equally desirable to expose learners to monitoring strategies that are pertinent to a specific task type such as group discussions. These strategies presumably help the speaker to monitor the topics, the turn-taking manner, the contributions and the conduct of the discussion as a whole. It might yield great benefits if these task-specific strategies are incorporated in strategy instruction.

## B. Incorporating both direct and indirect strategies

One way to help relieve the linguistic and cognitive demands of the use of direct strategies might be to include the practicing of both direct and indirect strategies during the planning stage before an upcoming English oral task. During the planning stage, learners might be given time to try out 'Resourcing' and other appropriate strategies before they are asked to use them during the English task. This may have the advantage of raising strategic awareness and practicing strategy use before on-line tasks. This way, the planning stage may provide learners with an opportunity both to 'notice' direct and indirect strategies and to develop the use of indirect strategies such as meta-cognitive strategies that are specific to the type of the upcoming oral task.

### 6.2.7 Conclusion

To conclude, the discussion on the findings relating to the first research theme regarding strategy training and strategy use has cast light on our understanding of: (1) strategy training in general; (2) the relative ease of training in the use of direct and of indirect strategies; (3) the appropriacy of using the key parameter 'directness' to categorize strategies for training in the strategy selection framework proposed.

We now move on to discuss findings on the second research theme to study whether proficiency level made a difference to the impact of strategy training on strategy use.

## **6.3 Research Theme 2: Relationship between strategy training, proficiency level and strategy use**

### 6.3.1 Introduction

The second focus of the present study was to investigate whether proficiency level made a difference to the effects of strategy training on strategy use. Findings in relation to the two categories of strategies are discussed. The purpose is to further our understanding of the shared and distinct ways in which proficiency level affects training in the use of direct and of indirect strategies. The understanding will provide us with further insights, in

addition to those from Research Theme 1, into the effective teaching of the two categories of strategies in language classrooms of mixed proficiency.

The key research questions addressed in this section are:

4. For the E1 group, would training in the use of direct strategies relate differently to the high-proficiency subgroups (H) and to the low-proficiency subgroups (L) as compared with their counterparts in the C group?
5. For E2, would training in the use of indirect strategies relate differently to the high-proficiency subgroups (H) and to the low-proficiency subgroups (L) as compared with their counterparts in the C group?

### 6.3.2 Recapping key findings

Key findings common to both the E1 and E2 groups were as follows:

#### Quantitative findings

- The low-proficiency students were generally more activated than their high-proficiency counterparts both in observed strategy use and in reported strategy use in SRIs of the target strategies (by whole sample)

#### Qualitative findings

- Very strong students reported evaluating the effectiveness of strategy use.
- Very weak students identified strategies that were generally more limited in terms of effectiveness.

Key findings specific to the E1 group (i.e. direct strategies) were as follows:

- The low-proficiency students showed more dramatic and consistent increases both in observed use and in reported use in SRIs of 'Resourcing' than the high-proficiency counterparts.
- The low-proficiency students were more activated than their high-proficiency counterparts both in observed use and in reported use of non-target strategies (by whole sample).

Key findings specific to the E2 group (i.e. indirect strategies) were as follows:

- The low-proficiency students were associated both with higher observed use and with reported use in SRIs of a narrow range of familiar non-target strategies whereas the high-proficiency students were associated with higher observed use and with reported use of a wider range of less familiar non-target strategies.

### 6.3.3 Findings: Synopsis and key issues

Broadly speaking, strategy training seemed to be associated with the low-proficiency students being more activated than their high-proficiency counterparts in strategy use. Nonetheless, very proficient students were critical in strategy use. Last, strategies employed by very weak students as evidenced in Cases 4 and 8 may be of limited effectiveness. These findings raised the following interesting issues: helping low-proficiency students in particular to develop strategic competence; harnessing strengths of high-proficiency students in enhancing quality and flexibility of strategy use; promoting peer help in strategy use by using mixed groupings in terms of both language proficiency and learning styles and strategies.

### 6.3.4 Strategy training and proficiency level

In terms of the quantity of strategy use, both strategy training and proficiency level seemed to be related to similar findings for both direct and indirect strategies. That is, for both E1 and E2, the low-proficiency subgroups showed either higher frequencies or more consistent increases in the observable or reported use of target strategies than the high-proficiency subgroups, thus suggesting that the low-proficiency students were more activated and their awareness raised rather more than their high-proficiency counterparts in the strategy instruction. This is consistent with findings in some studies that strategy training seems to benefit the low-middle range of students more than the high-proficiency students (Kern, 1989).

It is perhaps not surprising that, given their linguistic limitations, the low-proficiency students would be more receptive to strategy use, which after all, aims to help them do the tasks more effectively. In contrast, high-proficiency students may choose not to use or notice the strategies as often as the low-proficiency students on the assumption that strategy use may not be news to them as they have a repertoire of pre-existing strategies that enable them to do the tasks with relative ease. It follows that it may be desirable to help low-proficiency students to develop strategic competence to compensate for lack of linguistic competence. Let us explore the theoretical underpinning for this.



According to Bachman (1990) and Bachman and Palmer (1996), communicative language ability comprises three components, namely: (1) language competence (2) strategic competence and (3) psycho-physiological mechanisms. In other words, linguistic competence alone does not constitute communicative language ability for communicative competence. Strategic competence is also seen as part and parcel of communicative competence as it enables the learners to assess, plan, monitor and evaluate ways to achieve a communicative goal by the most effective means. On this basis, it may make sense to incorporate strategy instruction in the language classroom, especially for low-proficiency students who need strategic competence more often to perform a compensatory function in the language learning experience when their linguistic competence is inadequate (Canale & Swain, 1980).

In terms of the quality of strategy use, there were also findings common to both direct and indirect strategies. First, the evidence from the SRIs indicates that, for both E1 and E2, the high-proficiency students did not follow the instructions to try out the target strategies simply because they were told to do so in the tuition. Instead, some of them did evaluate the usefulness and effectiveness of strategy use. An illuminating example of this is the comment from a high-proficiency student in E2 during the SRI conducted at Phase 3. She reported that she did not find it necessary to deploy much strategy use given that it was the third time she did the task. After having done the same task twice, she reported that she was not motivated to use 'Problem identification' as the discussion task at Phase 3 was basically the same (despite some modifications) as that in previous phases. (For details of the special remark made by the student, refer to the bottom of Effects Matrix presented in Appendix 24 for Case 6.) Her comment also implies that it may be more appropriate to apply indirect strategies such as 'Problem identification' and 'Planning ideas' to new discussion tasks rather than repeated tasks to enhance the novelty and applicability of the strategies. This has implications for task design, an issue to which we will return in section 6.6.3.

Second, the qualitative evidence from the SRIs shows that, for both E1 and E2, very low-proficiency students tended to stick to a very limited number of strategies. For instance, for E1, a very reticent and weak student relied on 'Resourcing' to the neglect of other target strategies. Besides, the only non-target strategy that he reported employing was an

'avoidance' rather than 'achievement' strategy that enabled him to avoid rather than resolve the problems (Case report 4, section 5.5.2.2). This way, the strategy that the student reported using was limited in terms of effectiveness. By the same token, a very weak student in E2 reported only local planning strategies that helped him rehearse pronunciation but not strategies that enabled him to perform more global functions of understanding the purpose and requirements of the English task (Case report 8, section 5.5.3.2). This way, the effectiveness of the local planning strategies that the student used was also limited in terms of effectiveness.

The qualitative findings indicate that the low-proficiency students surpassed their high-proficiency counterparts in terms of quantity but not quality of use. This is consistent with findings from previous studies supporting the notion that it is not so much the quantity but the quality of strategy use that distinguishes the successful from the less successful learners (Reiss, 1983).

In a nutshell, proficiency level can affect the impact of strategy training on strategy use in similar ways. The most notable is that the low-proficiency students surpassed their high-proficiency counterparts in terms of quantity of strategy use but not quality of strategy use. The finding suggests the need for a difference in the focus of strategy instruction for proficient and less proficient students.

#### *Coping with learner differences in strategy training*

In view of the fact that the low-proficiency students are more activated in strategy use, it is probably desirable to encourage low-proficiency students to continue to deploy strategies to overcome problems or to facilitate task performance even though some of the strategies they feel comfortable using are limited in their applications. This at least has the advantage of keeping less able students going during the language learning process so that they can pick up more effective strategies as they mature both cognitively and linguistically. In fact, that there may well be a greater urgency to conduct strategy training with low-proficiency students who need to develop strategic competence to compensate for their linguistic inadequacies.

The finding regarding the quality of strategy use of learners raises an interesting question as to whether language teachers should discourage low-proficiency students from using their own pre-existing strategies and expect them to adopt the so-called ‘effective’ strategies favoured by higher achievers in the hope that they will become more effective users of strategies. This is probably not desirable. In the first place, despite the apparent limitations of some strategies, low-proficiency students continued to use them intensely to cope with problems or facilitate task performance in the intervention. There is obvious pedagogic value in engaging less proficient learners in learning tasks not least because the present study has provided evidence that the low-proficiency students made more improvements in terms of pre-post ratings (as judged by raters) than the high-proficiency counterparts in group discussion tasks (see the following section 6.4). Besides, strategies that are more ‘effective’ normally have wider applications and probably require higher linguistic competence for execution. So it is not realistic to expect low-proficiency learners to acquire them when they are linguistically not proficient enough. On the other hand, it might be desirable to find out from the high-proficiency students what constitutes effective strategies for oral tasks. After all, high-proficiency students are normally better able to reflect on and articulate strategy use as evidenced by the qualitative findings in Case report 1 (section 5.5.2.2) and Case report 5 (section 5.5.3.2). So it is reasonable to harness their strengths in order to gain more insights into the quality use of strategies.

The present study also offers evidence that the nature of strategies interacts with proficiency level to influence the effects of training on strategy use in distinct ways. We now turn to direct and indirect strategies for speaking tasks to see the differences.

### 6.3.5 Direct strategies and proficiency level

For E1, the teaching was associated with the low-proficiency sub-groups showing much more dramatic and consistent increases in observable use and reported use of ‘Resourcing’ than the high-proficiency sub-groups. Given the demands of using direct strategies, the less proficient speakers may find it even more necessary than the more proficient ones to rely on ‘Resourcing’. Linguistically, low-proficiency students are not able to use strategies which require an underlying language competence. So they tend to rely heavily on ‘Resourcing’, which may function as a ‘bedrock strategy’ as discussed in

the previous section. On the other hand, while the proficient speakers also resort to 'bedrock strategies', they are in a better position to combine them with other strategies which are not frequently and effectively used by less successful learners. Hence it is likely that, having done the task twice (i.e. first at Phase 1 and then at Phase 2), the high-proficiency students might not have found 'Resourcing' effective and challenging enough to feel like using it so much at Phase 3.

This raises an issue relating to the development of direct strategies. It seems that the acquisition of direct strategies involved in speech processing could well be developmental. That is, given the nature of direct strategies, it is only natural that young learners and particularly less proficient students need to rely on fundamental strategies such as 'Resourcing' to get by. When they are linguistically more capable, they will be able to resort to 'Paraphrasing' and then 'Self correction', the use of which demands higher levels of awareness and monitoring. This view would be supported by the "natural order" of the development of language learning strategies postulated by Chesterfield and Chesterfield (1985). They argue that children invariably start using memorization and repetition as their fundamental strategies in verbal interaction. As children grow up, they add to their initial repertoire of strategies with more sophisticated ones like verbal interaction getters, formulaic expressions and last of all strategies showing awareness and monitoring of grammatical errors.

There would be pedagogic implications that follow from this. The high-proficiency students in the present study might have suffered because of inadequate time allocated to the teaching and consolidation of more demanding strategies. It seems desirable to continue with the introduction of 'bedrock' strategies that require only surface processing such as 'Resourcing' so that low-proficiency students can use it to good effect. On the other hand, resources and time permitting, we may also need to strengthen the teaching of more challenging strategies such as 'paraphrasing' and 'Self correction' that require deep processing (i.e. more manipulation of the target language) for those high-proficiency students who are developmentally ready to combine and use them with 'bedrock strategies' to cope with problems of 'resource deficits' in on-line speech processing.

### 6.3.6 Indirect strategies and proficiency level

The results for E2 suggested that the teaching was associated with the high-proficiency subgroups showing more consistent observable use and reporting in three non-target strategies (“Monitoring contributions”, “Suggesting turn-taking tactics” and “Facilitating progress”) than the low-proficiency subgroups. As discussed in the previous section, these are meta-cognitive strategies for monitoring that are specific to oral group tasks. Hence, strategy training may have chimed in with the higher awareness of meta-cognitive strategies on the part of the high-proficiency students having a “ripple effect” over onto other potential types of strategic behaviours which had not been explicitly targeted. This finding is in line with those from previous studies which suggested that proficient students use more meta-cognitive strategies and are more able to develop executive control over a learning task than the less proficient students (e.g. Abraham & Vann, 1987; Anderson & Vandergrift, 1996; Brown et al., 1983; Chesterfield & Chesterfield, 1985; Dreyer & Oxford, 1995; O’Malley et al., 1985). Moreover, this finding also supports the notion that successful students are able to use strategies related to originality and creativity while the less successful do not venture beyond those that are offered to them in the textbook (Reiss, 1983).

One effective way to help the low-proficiency students may be to capitalize on the conditions of use of indirect strategies as delineated in the earlier section . That is to say, we can make use of peer influence during group tasks. That is, learners who use a wide range of strategies can be grouped with those who use a narrow range in the hope that learners of mixed styles in terms of strategy range may influence each other when completing a common group task. This recommendation can be supported by evidence from the present study. Results by treatment presented in the earlier section showed that students made a number of considerable remarks about monitoring or trying to monitor the strategy use of group members. Besides, there was a dramatic uptake of ‘Evaluation’ at Phase 2, which was actually initiated by one member and then taken up by other group members (see Transcript in Appendix ). That is, the behaviour of one student was picked up and spread by others in the same group. These findings lend support to the view that the uptake of some indirect strategies (e.g. ‘Monitoring contributions’, ‘Facilitating progress’, ‘Asking for help’, ‘Giving help’, etc.) can be enhanced by group

influence. This view is in line with that of a recent strategy intervention study which highlights the importance of peer help, cooperation and support in encouraging and sustaining strategy use in group discussion tasks (Lam & Wong, 2000). Learners need to support each other to maximize the benefits of strategy use. In short, it is feasible that peer help may facilitate the development of some indirect strategies on the part of less proficient students even though they are not yet ready to use meta-cognitive strategies flexibly on their own. Once again, it may be the conditions of use of indirect strategies that render this possible.

### 6.3.7 Summary and pedagogic implications

To sum up, the discussion on whether proficiency level made a difference to the impact of strategy training has thrown more light on the relationship between strategy training and strategy use. In general, there is strong support for helping low-proficiency students to develop strategic competence and for further enhancing the quality and flexibility of strategy use on the part of the high-proficiency students. Moreover, there was evidence to encourage mixed groupings not just in terms of language proficiency but learning styles and strategies as well so that different types of learners might help each other in strategy use when completing L2 oral group tasks.

It may well be that the motto is to adopt a versatile approach to strategy training to cater for individual differences. Pedagogic implications are as follows:

#### *Coping with learner differences in teaching strategies for L2 oral tasks*

1. It seems desirable to help low-proficiency students in particular to develop strategic competence to compensate for their lack of linguistic competence.
2. Quantity of strategy use seems more relevant to low-proficiency students when they are linguistically not ready to improve the quality of their strategy use. It is still beneficial for the low-proficiency students to keep applying whatever strategies (including less effective ones) that their linguistic abilities permit to help them cope with oral tasks.

3. Quality, and not just quantity, of strategy use needs to be focused upon. It might be desirable to strengthen the rationale for strategy use and to find out from the high-proficiency students what they consider to be effective strategies for oral tasks.

*Coping with learner differences in the teaching of direct strategies*

1. It may be beneficial to help low-proficiency students to focus on 'bedrock strategies' (e.g. 'Resourcing') and to sustain in using them to keep them going regardless.
2. It may be desirable to help high-proficiency students to combine and use 'bedrock strategies' with other alternatives (e.g. 'Resourcing', 'Paraphrasing', 'Self correction') to good effect. The idea is to promote flexibility of strategy use.

*Coping with learner differences in the teaching of indirect strategies*

It may be pedagogically desirable to encourage mixed-ability groupings so that the high-proficiency students can influence and help low-proficiency students to develop competence in deploying indirect strategies (e.g. 'Monitoring contributions', 'Managing turns', 'Asking for helping' etc.) and to venture beyond target strategies. It might also be possible to arrange students of different learning styles and strategies together in completing group tasks on the premise that the arrangement helps facilitate cross-fertilization of strategy use. The nature and conditions of the use of indirect strategies render it feasible to encourage peer cooperation in the learning process.

*Limitations of the findings*

In the first place, it must be borne in mind that the sample size of the ability subgroups was very small. That being the case, it was difficult to eliminate individual differences within the subgroup, and the findings might have been highly vulnerable to the influence of individuals. Second, there could still be initial differences between the H subgroup and the L subgroup in terms of learning style and preference, motivation, etc. as mentioned in section 3.3. So at the outset of the study, the low-proficiency subgroups could have been more active, motivated and receptive to strategy use while the high-proficiency subgroups may have been more critical and versatile in strategy use. In short, group

effects might have contributed to the apparent finding that proficiency level made a difference to the impact of strategy training in terms of quantity and quality of strategy use. Third, it should also be remembered that the proficiency level of the subgroups was determined by the students' general English proficiency rather than by performance on oral tasks, which was not available (see section 4.2.2). So, there might still be initial differences in students' oral standards and such differences might subsequently have resulted in experimental groups having higher pre-post gained scores in 'English' than the comparison group. Last, the quantitative findings were analysed only by descriptive statistics (which are more appropriate for small samples) so that no claims were made with respect to statistical probability.

Let us now move on to discuss findings on the third research theme, investigating the relationship between strategy training, proficiency level and task performance.

#### **6.4 Research Theme 3: Relationship between strategy training, proficiency level and task performance**

##### **6.4.1 Introduction**

The third focus of the present study was to compare the effects of training in the use of direct and of indirect strategies on task performance. The comparison serves three purposes: firstly, to assess if strategy training was associated with task improvements; secondly, to relate the respective training in the use of direct and of indirect strategies to aspects of tasks improvements (if any); and thirdly, to see if proficiency level made a difference to the effects of strategy use on task performance.

It should be remembered that task performance was expressed in terms of improvements, which were measured in terms of the pre-post differences between ratings of the group discussion tasks at Phases 1 and 3. (No task assessment was conducted at Phase 2.) The ratings were given by 4 assessors and the assessment was of 'English' and of 'Task effectiveness'. A gain in the post rating of 'English' and/ or 'Task effectiveness' was considered an improvement. So, any improvement was based on the judgements of the raters.



The key research questions addressed in this section are:

6. Would E1, the target group which received training in the use of direct strategies, perform better than C, the comparison group, in terms of pre-post gain scores on discussion tasks? If so, would the high-proficiency subgroups (H) and the low-proficiency subgroups (L) perform differently as compared with their counterparts in the C group?
7. Would E2, the target group which received training in the use of indirect strategies, perform better than C, the comparison group, in terms of pre-post gain scores on discussion tasks? If so, would the high-proficiency subgroups (H) and the low-proficiency subgroups (L) perform differently as compared with their counterparts in the C group?
8. Would the respective training of direct and of indirect strategies relate differently to the performances of E1 group and of E2 group as compared with C group?

#### 6.4.2 Recapping key findings

Key findings specific to the E1 group (i.e. direct strategies) were as follows:

- Overall, it had higher pre-post gains than C on 3 out of 4 comparisons.
- The low-proficiency subgroups had higher pre-post gains than the high-proficiency subgroups on 3 out of 4 comparisons.
- The low-proficiency subgroups had higher pre-post gains than their C counterparts on 'English' scores but not on 'Task effectiveness' scores on both the whole class task and the 'pull-out' group task.

Key findings specific to the E2 group (i.e. indirect strategies) were as follows:

- Overall, it had higher pre-post gains than C on 4 out of 4 comparisons.
- Both the high-proficiency subgroups and low-proficiency subgroups had higher gains than their respective counterparts in C on 4 out of 4 comparisons including both the 'English' and 'Task effectiveness' scores.
- There were higher pre-post gains on the 'Task effectiveness' scores than 'English' scores on 4 out of 4 comparisons for E2, 3 out of 4 comparisons for E1, and 2 out of 4 comparisons for C.

### 6.4.3 Findings: Synopsis and key issues

Overall, both the E1 and E2 groups outperformed the C group, thereby lending support for the proposition that strategy training might be related to improvements in task performance. Moreover, for E1, the tuition appeared to have enabled the low-proficiency students to do better in terms of English as compared with high-proficiency students. For E2, the strategy instruction seemed to have benefited students' performance in terms of both the 'English' scores and 'Task effectiveness' scores and the gains in the latter scores were even higher than those in the former. These results raise some interesting questions: (1) For the E1 group, why did the low-proficiency students appear to improve more than their high-proficiency counterparts in terms of the 'English' score? (2) Why did the E2 group have higher pre-post gains in the 'Task effectiveness' scores than the 'English' scores? (3) What might the reasons be for the apparent differences, between the E1 and E2 groups, in terms of the impact of strategy training on aspects of task performance? We now explore the reasons for these questions in turn together with other issues.

### 6.4.4 Direct strategies and task performance

E1 had greater pre-post gains (between Phases 1 and 3) than C on 3 out of 4 comparisons, thereby in general supporting the hypothesis that strategy training was related to the greater gains in task performance. The result is particularly encouraging for E1 given that it had higher initial scores than C and that gains may have been harder for E1 because of the potential ceiling effect for the E1 group.

For E1, low-proficiency subgroups outperformed the high-proficiency subgroups in terms of pre-post gains, and particularly on the 'English' score. The most noteworthy result was that the low-proficiency subgroups had the highest pre-post gains in the 'English' score among all the low-proficiency subgroups. This is striking given that the low-proficiency subgroup of E2 had a lower initial score than E1 and yet failed to make higher gains than E1. The findings seem to indicate that the strategy instruction may have been related to the low-proficiency students of E1 having made the greatest improvement in terms of the 'English' score.

Results in the previous section showed that strategy training was related to higher activation on the part of the low-proficiency students than their high-proficiency counterparts in observable and reported use of target strategies. Moreover, the teaching was associated with much more dramatic increases in the observable use and reporting of “Resourcing” by the low-proficiency students than their high-proficiency counterparts (see Table 5.23). Therefore, it can be argued that the consistent and dramatic increases in the use of ‘Resourcing’ could have been related to the positive effects on the perceived accuracy of English produced by low-proficiency students, not least because the use of ‘Resourcing’ (i.e. using suggested vocabulary and structures from the notes) can enable students to produce accurate English in the least demanding and yet effective way during on-line speech production.

So far there has been evidence that higher activation in the use of the target, direct strategies and particularly in the use of ‘Resourcing’ on the part of the low-proficiency students might have been associated with their outperforming the high-proficiency students in terms of ‘English’ scores.

#### 6.4.5 Indirect strategies and task performance

E2 had higher pre-post gains than C on 4 out of 4 comparisons. Besides, proficiency level did not make much difference in the sense that the high-proficiency and low-proficiency subgroups both outperformed their C counterparts in terms of pre-post gains on both the ‘English’ and ‘Task effectiveness’ scores.

It could be argued that E2 had the lowest initial scores and so it might have been easier for it to make higher gains than C. In other words, the apparently greater improvements made by E2 as compared with C could have been due to the low initial scores rather than the strategy instruction. Nonetheless, there were differential effects both on ‘Task effectiveness’ and on ‘English’ scores. There were higher pre-post gains on the ‘Task effectiveness’ scores than ‘English’ scores on all the 4 comparisons for E2 but this was not the case with E1 and with C. It should be noted that, for E2, the initial ‘Task effectiveness’ score was higher than the ‘English’ score on the majority of comparisons. The results therefore indicate that E2 made greater improvements in ‘Task effectiveness’

than in 'English' though both aspects of task performance seemed to benefit from the tuition. Although this is not entirely surprising as students' attention had been directed to this aspect of task performance, it supports the case for strategy training for 'noticing' and 'awareness raising'.

This result is also consistent with our expectation as E2 showed consistent increases over time in the observed use and reporting of 'Problem identification', a meta-cognitive strategy that enables students to understand the purpose and requirements of the group task. The sustained use of 'Problem identification' at Phase 3 might have been related more to consistently higher pre-post gains in 'Task effectiveness' ratings than 'English' ratings as the focus of teaching was on strategies not English.

Qualitative evidence from the stimulated recall interviews has also lent support for the view that training in the use of indirect strategies could have been associated with the greater gains in 'Task effectiveness'. Students in E2 reported deploying a range of global and local planning strategies during the planning time (i.e. Cantonese preparatory talk) to cope with the upcoming English discussion task. In addition, they identified some monitoring strategies to regulate the conduct of the upcoming English discussion task. This demonstrates a heightened level of meta-cognitive awareness on the part of the students. This could be related to their being more effective in handling the discussion tasks and hence the higher gains in 'Task effectiveness' scores.

So far, then, we have seen evidence that the consistently increasing use of 'Problem identification' by both the high-proficiency and low-proficiency students might have been related to their outperforming their respective counterparts in the control group in terms of 'Task effectiveness' scores. This may explain why there were higher pre-post gains on the 'Task effectiveness' scores than 'English' scores on 4 out of 4 comparisons for the E2 group but only 2 out of 4 comparisons for the C group.

#### 6.4.6 Direct strategies, indirect strategies and task performance

Regarding direct strategies, it is possible that 'Resourcing' is associated with greater improvements in 'English' scores. As for indirect strategies, 'Problem identification' is that strategy that may have been associated with greater improvements in 'Task

effectiveness' scores on group discussion tasks. So far, the evidence from both E1 and E2 is also consistent with that from previous studies: complexes of strategies might be differentially related to various aspects of proficiency level. In other words, specific groups of strategies may be related to specific aspects of language proficiency (Ellis, 1994; Politzer & McGroarty, 1985).

In the case of the present study, direct strategies that aim to facilitate L2 learners' speech production may be related to task improvements in terms of language production. On the other hand, indirect strategies that aim to enable the learners to handle the learning task more effectively may be associated with task improvements in terms of effectiveness in satisfying task requirements and in competing the group discussion tasks. That is, direct strategies may relate to language performance while indirect strategies may relate more to task effectiveness than English though both aspects seemed to have benefited from the training. This way, the findings on task performance give further support for using the key parameter 'directness' to dichotomise the two types of strategies for training as their relative contributions to aspects of task performance seem to be different. In a word, the strategy selection framework proposed at the outset of the study may stand.

#### 6.4.7 Summary and pedagogic implications

For E1, it is possible that the greater use of 'Resourcing' and the higher activation of the target, direct strategies may have helped low-proficiency students improve in terms of their 'English' ratings. On the other hand, for E2, it may well be the case that the increased use of 'Problem identification' enabled both the high-proficiency and low-proficiency students to improve more in terms of their 'Task effectiveness' scores than the 'English' scores. Broadly speaking, direct strategies may relate to language improvements whereas indirect strategies may relate more to handling of tasks than language performance.

#### *A case for strategy training*

On the basis of these findings, it stands to reason to propose that training in the use of direct strategies might facilitate the language production of low-proficiency students.

This once again confirms the desirability of helping less proficient L2 speakers to rely on strategies that are of low linguistic demands in order to help them produce accurate spoken language to at least operate at a basic level.

On the other hand, the findings for E2 show that training in the use of indirect strategies is particularly promising in helping groups with low initial scores. If less proficient groups consistently make more gains as a result of strategy instruction, there is a strong case for strategy training especially for low-proficiency students. Again, this is consistent with the argument in the previous section that it is desirable to help the low-proficiency students to compensate for lack of linguistic competence. In fact, they may benefit more than their high-proficiency counterparts in terms of improvements based on the judgements of raters.

#### *Limitations of the findings*

At the outset of the study, it was only feasible to control for the general English standards but not the oral proficiency of the three intact classes (C, E1 and E2). That being the case, there were unavoidable differences in the ratings on the group discussion tasks across the three groups at Phase 1. As can be seen in Table 5.1 (section 5.2.2.1), the ratings of E2 at Phase 1 were in general the lowest as compared with those of C and of E1. This might make it easier for E2 to make progress and attain higher pre-post gains as compared with the other two classes. By the same token, E1 had the highest initial scores on most occasions when compared with C and E2, there might have been a 'ceiling effect', rendering it harder to make gains. Hence, this should be borne in mind when interpreting task improvement measured by pre-post gains in ratings on the group discussion tasks.

#### 6.4.8 Conclusion

So far, in sections 6.2-6.4, we have discussed key findings on the impact of strategy training. Our discussion has addressed all the research questions, which were organized under the three research themes: (1) the impact of strategy training on strategy use; (2) the relationship between strategy training, proficiency level and strategy use; (3) the relationship between strategy training, proficiency level and task performance. In section 6.5 that follows, we focus on the use of a multi-method approach to assess the impact of

strategy intervention and discuss what additional insights the approach may throw on our understanding of the effects of strategy training on ESL learners' task performance and strategy use.

## **6.5 A multi-method approach to assessing the impact of strategy training: an appraisal**

### **6.5.1 Introduction**

In the present study, a quasi-experimental design was employed to investigate the impact of strategy training on learners' performance and on strategy use in L2 oral communication tasks. In the earlier sections 6.2-6.4, the discussion of findings in general supported the view that, for the experimental groups, the teaching was associated with obvious changes (albeit of varying degrees) both in task performance and in strategy use.

In this section, we appraise the value of adopting a multi-method approach to gauging the impact of the intervention. The purpose is two-fold: first, to address the distinct role of each research instrument to see how it has contributed to our understanding of the impact of the strategy training from a different perspective; second, to study how the methods complement each other - notwithstanding their own limitations - in portraying an interesting picture of the learners' use of strategies in handling oral communication tasks.

The research methods employed in the present research included: ratings of task performance, strategy questionnaires, observations and stimulated recall interviews (SRIs). The theoretical basis for each of these methods and the rationale for a multi-method approach were delineated in section 3.4. We now review each research instrument and the value of the multi-method approach on the basis of the findings of the present study.

### **6.5.2 Rating task performances**

In attempting to explore the impact of the intervention through a quasi-experimental design, the first stage was to devise a data collection method that focused on the

observable, performance data. This is because it is a research tradition that the effects of treatment are normally measured in terms of observable changes. Hence, the first method used was to assess the impact of strategy training by observing students' performances in group discussion tasks.

The findings discussed in the preceding section 6.4 indicated that, for both the E1 and E2 groups, the teaching was associated with some obvious changes in terms of pre-post gains in the 'English' and/or 'Task effectiveness' scores as judged by four independent raters. Moreover, there was evidence that the impact might be correlated with improvements in different aspects of task performance. These findings relating to observable changes are valuable in at least two ways. First, they provide information for us to assess the effectiveness of treatment i.e. strategy intervention in terms of whether students who had received strategy training did better than those who had not. After all, the main aim of strategy training studies in language learning is arguably to enhance students' performance in tasks. Second, the reader will recall that the ratings were given to all groups (i.e. whole-class tasks) involving all students in all the treatment classes and not just to the pull-out group. This way, the ratings have provided us with information pertaining to the big picture (i.e. all treatment classes) as to the overall impact of the intervention.

### Limitations

While data on changes in task ratings are valuable as they help paint an overall, big picture of the impact of strategy training on observable changes in task performance, it gives little information as to whether the improvements in performance might have been associated with changes in students' strategy use (if any). There are also problems in taking the gains completely at face value. For one thing, there might have been changes not amenable to observable improvements in performance. As explained in section 3.4.4, the questionnaire data were then collected to probe underlying changes in perceptions and attitudes (if any) regarding students' reported frequency and effectiveness of strategy use. The questionnaires were administered to all students in the three treatment classes. Hence, the findings gave us an overall, big picture of the impact of the strategy intervention on



internal changes (if any) that are not amenable to observation. Let us now turn to the questionnaire findings to see what additional light they have cast on the issue.

### 6.5.3 Probing changes in self perceptions via questionnaires

The questionnaires used in the present study assessed the impact of strategy training in two aspects. First, they aimed to investigate whether students would increase in the self-perceived use of strategies after training. Second, they aimed to study whether students' perceptions of the effectiveness of the strategies in doing group discussion tasks would change through training. That is, students' reports of frequency of use and reports of effectiveness of the strategies were collected by the questionnaire as a research instrument. As such, the questionnaire data are useful in that they yield two types of information that go beneath the surface level of observable changes in task performance.

First, reports of frequency of use yield information about students' awareness of strategy use. For instance, the questionnaire findings showed that, for E1, there were significant increases in the self-perceived use of two non-target strategies [(‘Attentive listening’); +66%,  $p=0.028$ ] and [(‘Focusing more on content than language’); +60%,  $p=0.007$ ]. The questionnaire findings therefore suggest that the strategy intervention might have some ‘wash over effects’ from target to non-target strategies (albeit limited) in that it raised students' awareness of two non-target strategies, thereby resulting in students' reporting of their use in the questionnaires although without necessarily putting the strategies into use. By the same token, for the E2 group, there was a significantly big increase in the self-perceived use of [(‘Asking for help’); +76%,  $p=0.001$ ], which was not detected by other means of observation or reporting in the present study. These findings support the view that the questionnaire data help assess the impact of strategy training on students' awareness, or specifically, declarative knowledge of strategy use. This level of information goes below the performance level and is not detectable or reflected in ratings of task performance.

Second, reports of strategy effectiveness yield information on students' underlying changing beliefs about the effectiveness of strategy use, which is unavailable from other sources of information employed in the present research. For example, E1 reported

significantly higher perceptions of the effectiveness of one target strategy [(‘Using fillers’); +31%,  $p=0.058$ ] and one non-target strategy [(‘Using pauses to gain time to think’); +30%,  $p=0.075$ ] after training. It follows that the next step might be to conduct interviews with some students to find out what made them consider these strategies effective to group discussion tasks. The findings will yield useful insights into our understanding of student’s changing beliefs about the effectiveness of strategies, which are not detectable by rating task performances. As proposed in section 6.6 later, it may be desirable to understand students’ beliefs about strategies and their pre-existing repertoire of strategies before implementing strategy intervention. This kind of information will certainly be valuable when considering what strategies should be incorporated into future strategies-based instruction.

Last, questionnaire as a research method is nice complement to the other methods used in the present study in corroborating findings. For one thing, the quantitative nature of the questionnaire data permits them to be processed by statistical analyses. Statistically significant findings from these analyses can be used to strengthen evidence from observed strategy use and from reported strategy use in SRIs, which is basically qualitative in nature. For example, E1 and E2 had statistically significant gains in the frequency of self-perceived use of ‘Resourcing’ and ‘Problem identification’ respectively after training. These results from the questionnaires corroborate those from both the observation data and the SRI data to be discussed in the later sections.

### *Summary*

Questionnaire findings contribute to the overall, big picture of the effects of the teaching on learners’ strategy use in three distinct ways. First, as far as strategy use is concerned, the questionnaires provide findings that indicate that teaching might have an impact on raising students’ awareness of a few individual strategies i.e. on declarative knowledge of strategy use, which is not detectable by performance data. Second, with regard to students’ opinions towards the effectiveness of strategy use, the research instrument reveals information about students’ underlying changing beliefs of some strategies after training. This kind of information is otherwise unavailable in the present study. Third, questionnaire data are amenable to statistical analysis and may be used to corroborate key

results from the data collected from observed strategy use and from reported strategy use in SRIs that are basically qualitative in nature.

### *Limitations*

We acknowledge that questionnaire findings are not always valid given that there is a tendency on the part of the respondents to give socially favourable answers (i.e. compliance effect). Nonetheless, there was evidence in the present research that students in the experimental groups did not always give positive or “expected” answers. In fact, there were quite a few items on which the experimental groups had lower pre-post gains than the C group. This provides evidence that mitigates the argument that students indiscriminately gave positive responses to all questions because students wanted to ‘look good’. Moreover, the use of non-target strategies in the design of the questionnaires employed in the present study strengthens the validity of the response (see section 4.4.1).

So far, the value and logic of two research methods have been discussed. That is, first, ratings of task performance were used to assess the impact of strategy training on students’ observable performances in group discussions. Then, the questionnaire data were used to solicit additional, unobservable information by probing into students’ perceptions of strategy use and of strategy effectiveness to find out whether the intervention impacted on students’ awareness and attitudes that are beyond the surface level. In addition, in collecting data from the ratings and the questionnaires, all students in the three treatment classes were involved. Hence, the two research methods provide an overall, big picture of the impact of the strategy instruction.

However, questionnaires have the weakness of dealing with self-reported strategic behaviour, not actual strategic behaviour. Hence, we now move on to the next section which scrutinizes students’ strategic behaviour in action (if any) by using the third data collection method i.e. observation. As students’ language behaviours were analysed closely by coding, only pull-out groups from each treatment class were observed. In a sense, we are also moving from the big, global picture based on whole-class results to a focused, close-up picture based on findings from pull-out groups.

#### 6.5.4 Observing strategy use in action

Hence, when turning to the pull-out groups to assess the impact of strategy training, we first focused on observable changes as what we did with the big picture of whole-class results. There is a value in using observation. As mentioned before, the practice is in line with the research tradition of using observable changes in quasi-experimental design. Moreover, observations enable the analyst to discover how far the students actually did what they were trained to do and how far they went beyond what they had been taught. In other words, observation as a research method has a distinct contribution in the present study in that it assesses the impact of strategy intervention on students' procedural knowledge of strategy use i.e. on what students were able to do in terms of strategy use. The data collected from observations are not available via other means in the present study.

Nonetheless, it should be remembered that not all the strategies are observable and that surface behaviours are not necessarily evidence of strategy use. However, because some strategies are observable, a profile of their occurrence would be relevant to the study. Performance data provides strong evidence for observable strategic behaviours and hence serves as a useful source of information to corroborate findings from other methods.

Two types of observation data were collected: one pertaining to the use of indirect strategies elicited during the Cantonese preparatory talks prior to the English discussions; the other pertaining to direct strategies generated during the English discussions. (For full justifications of the method, see section 3.4.5). We now study the findings to see how the observational data makes distinct contributions to our understanding of strategy use.

##### *Preparatory talks in Cantonese*

Indirect strategies (target and non-target) in the Cantonese preparatory talks were identified in the recording data. In analyzing target strategies, predetermined categories were used with a view to assessing whether students would use the target strategies as a result of teaching. It is encouraging to find out that students did increase in their observed use of the target strategies (by whole sample) from Phase 1 to Phase 2. This way,

observational data have provided support for the view that strategy training had the desirable effect on changing students' behaviour in a strategic way i.e. on students' procedural knowledge of strategy use although the effect was not sustained at Phase 3 as one would hope. Last but not least, there were consistent increases across Phases 1, 2 and 3 in the observed use of 'Problem identification', a finding which corroborates those from other sources of information.

In identifying and coding non-target strategies, categories emerged from the data and no *priori* schemes were used. In so doing, we came up with additional and interesting information about the repertoire of strategies that students preferred using. Notably, the experimental group used more strategies such as 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions' across Phases 1, 2 and 3. By using observations, we can access overt non-target strategies that emerge from the performance data, thereby understanding the kind of strategies that the students might use at their discretion and on their own accord if given the opportunities. This way, employing observational data enables the researcher to know whether the effect of teaching extended beyond the specific strategies targeted. This way, the information yields additional insights into our understanding of the learners' strategy use.

### *English discussions*

Language behaviours (i.e. language forms) were observed and ascribed strategic attributes during the English discussion tasks. (For justifications of the methodology, see section 3.4.5). Regarding direct, target strategies, the findings echo those of indirect strategies discussed in the preceding section i.e. students increased (albeit slightly) in their observed use of the target strategies (by whole sample) from Phase 1 to Phase 2. This way, observational data have provided support for the argument that strategy training had an impact on changing students' strategic behaviour i.e. on students' procedural knowledge of strategy use at least on a short-term basis. It is important to know that students did change their actual strategic behaviour when engaging in L2 oral communication tasks. Last but not least, there were consistent increases across Phases 1, 2 and 3 in the observed use of 'Resourcing', a finding which corroborates those from other sources of information.

As for non-target strategies, categories emerged from the data and quite a variety was identified from the recording data. It should be noted that using observations to assess strategy use provides us with information about an array of proceduralised strategies. They included: (1) pre-existing ones which were only available in performance data but not reported elsewhere; (2) pre-existing strategies, the use of which was enhanced by training; (3) pre-existing strategies, the use of which remained stable over time despite training; (4) those which were activated and then automated (i.e. conscious in Phase 2 and automated in Phase 3); and (5) those which were activated as a result of stimulation from practice sessions or strategy work. While conscious strategies are amenable to reporting elsewhere, proceduralised strategies are often internalized and not available for reporting. This way the performance data complements other findings particularly in profiling proceduralised and often unreported strategy use.

Let us now use the findings from the present study to illustrate how knowledge about possible proceduralised strategy use might help us in future studies. The data show that three non-target strategies (i.e. 'Repeating others', 'Stalling' and 'Responding') were heavily used by all the groups including the control during the discussions but were not reported at all in SRIs (see Table 5.10). It follows that these were probably proceduralised strategies that the learners deployed during speech production. On the basis of this additional information, which was only available in observational data, we are able to make some informed decisions on future training programmes. For example, the finding about 'Stalling' (i.e. using 'em', 'er', 'um', etc) is interesting and informative. Perhaps, it may be worth considering enhancing the efficacy of the training by providing students with practices in which they are asked to replace some frequently-used 'em', 'ur', 'urh', etc., which make them sound too hesitant, by words such as 'well', 'you see what I mean', 'you know', etc. to help them sound more fluent and natural. The association between the pre-existing and new strategies might help bridge the gap between prior and new knowledge, thus facilitating the acquisition of the latter.

### *Summary*

So far, we have illustrated that profiling observable strategy use is relevant to the study. First and foremost, it yields direct information as to whether strategy training had an

impact. The findings indicated that the intervention did impact students' actual behaviour as they did what they were taught in the instructional sessions. Second, profiling observable strategy use in on-line speech is particularly insightful because information on proceduralised strategies may not be reported elsewhere. Third, such information may provide us with additional information about students' strategy use, which may serve as a useful guide to decisions about future intervention studies. Last, performance data from observations can be used to corroborate the evidence from other sources of information. As such, it provides a way for findings to be cross-validated.

### *Limitations*

While there is value of using observation as a research instrument to assess the impact of strategy intervention on students' strategy use, there are some problems with the instrument. One is that students' behaviour might simply reflect their obedience; another is that students may be trying to do more than they succeed in doing. A third is that their use of strategies may have been automatic, reflecting pre-existing patterns of behaviours. Above all, some strategies are unobservable. That is, observations fail to detect these phenomena. Hence, observation, while important in its own right, does not enable us to research fully the uptake of strategy instruction, the attempt to use strategies, students' awareness of their strategic behaviours - whether their own or those of their peers. Above all, it is also sometimes difficult to interpret in terms of whether surface behaviours are genuinely strategic or not.

Hence, let us turn to the fourth research method i.e. stimulated recall (SR) methodology, which attempts to go beneath surface behaviour by tapping the covert thoughts of students when the tasks were in action.

#### 6.5.5 Assessing reported strategy use in stimulated recall interviews (SRIs)

The SR methodology has the strength of identifying the thought processes of students and of obtaining reasonably reliable though not perfect evidence of their thinking, which is particularly valuable in helping us understand whether surface behaviours are genuinely

strategic or not. In addition, the method enables us to get a picture of the extent to which students are aware of their strategic behaviour in action. This way, the research instrument offers information about students' declarative knowledge of strategy use i.e. their awareness of or knowledge about strategy use and such information may not be reflected in performance data collected from observations. That is, the SR method contributes to our understanding of the learners' strategy use in two distinct ways: first, in providing a 'window' into the 'black box' of students' minds and into their strategic thinking (if any); second, in enabling us to understand students' awareness of what counts as strategic. As such, the method plays a specific and distinct role in our understanding of students' strategy use. In the light of this role, we now appraise the value of the SR methodology on the basis of the findings from the present study,

#### *On strategic awareness*

First and foremost, findings of SR data showed that, for both the E1 and E2 groups, there was a general upward trend in the frequency of reported use in SRIs of the target strategies across Phases 1, 2 and 3, thus suggesting that strategy training had a pervasive effect on raising the students' awareness of strategy use. In short, SR data gives us a general picture of learners' awareness of what in the data might be strategic. Moreover, the findings support the argument that students' declarative knowledge was probably enhanced through explicit training. This is particularly noteworthy given that the findings from observations which basically assess procedural knowledge of strategy use did not support sustained increases in the frequency of observed use of the target strategies at Phase 3. Hence, putting the findings from SRIs and from observations together, strategy training appeared to have differential impacts on students' knowledge about and awareness of strategy use and on students' ability to put strategies to use. Simply put, strategy training might have an impact on enhancing declarative knowledge but not yet procedural knowledge of strategy use, at least not on a long-term basis. These findings have, therefore, provided evidence for the view that the uptake of strategy training may be manifested in terms of enhanced strategic awareness, which may not be fully reflected in performance data.

#### *On students' thought processes*



The SR data are an indicator of the extent to which students' were thinking and were thinking strategically. The SR methodology goes well below surface behaviours by tapping students' thought processes. The qualitative evidence in the Case reports 1-8 (see Sections 5.5.2.2 and 5.5.3.2) supports the view that students were able to operate at two levels of thinking.

The first level of thinking operated in the preparatory talks in Cantonese and in the English on-line discussions. Case reports 1-8 and qualitative findings specific to the E1 group and to the E2 group (section 6.2.2) showed that students deployed strategies to solve on-line speech processing problems such as 'what to say' and 'how to say it', to do local and global planning, to monitor contributions of group members, and to facilitate the conduct of task. The recall segments recorded during the SRIs were students' reports - in their own voices - of what had been going on in their minds during the tasks. It is this first level of thinking during the tasks that may reflect strategic operations.

The second level of thinking operated during the SRIs in which students were able to reflect on and talk about the thought processes that had taken place during the preparatory and discussion tasks. That is, in the post-task activities, students could think back and comment on events (albeit in varying levels of detail) that had taken place. Overall, both high-proficiency and low-proficiency students were capable of looking at the video playback, reflecting on planning or performance, and talking about strategy use in a reasonably comfortable way. This way, the SRI data indicates that students' were able to reflect on and handle meta-talk on oral performance decisions and processes. It is this second level of thinking during the post-task interviews that may reflect students' awareness of strategic operations.

In a nutshell, the SR data indicate that students were able to operate at two levels of thinking. As such, the information obtained from SR methodology goes well below the surface level of behaviours.

*On the quality of strategy use*

The SRI data yields information that can be used to assess the impact of strategy training on changes in the quality of learners' use of strategies (if any). The 8 case reports, for example, showed evidence that the strategy tuition resulted in the learners' use of strategy-related terminology to describe strategy use, and in students' explicit reference to the teacher or the training as a source of strategy use. In addition, there was emerging evidence to support the view that high-proficiency students were more able to appreciate the effectiveness and evaluate the usefulness of strategies before deploying them (e.g. Case reports 1 and 5), thereby mitigating the argument that the students resorted to strategies simply because they had been instructed to do so.

We acknowledge that, given the short duration of the training, it is not realistic to expect widespread qualitative changes and that the changes detected in this study were limited in nature (e.g. using strategy-related terminology). Nonetheless, the tracking of qualitative changes is valuable for assessing the effects of strategy intervention in that it confirms the viability of strategy training in bringing about not just changes in terms of variety and frequency of use, but even more importantly, changes in quality of strategy use. Furthermore, the changes are related in the participants' own voice and cannot be tracked differently by other means.

#### *On learner differences*

The SRI data also revealed that students varied greatly in the range of both target and non-target strategies reported. There were variations even among high-proficiency and among low-proficiency students. (See sections 5.5.2.2 and 5.5.3.2.) Some students tended to harness a few target strategies and consistently increased in deploying them over time (e.g. Case report 3) whereas others referred to more non-target than target strategies without focusing on any across Phases 1, 2 and 3 (e.g. Case report 2). In fact, it is not surprising that different students used and reported different strategies and deployed them in a diversified way. Strategies are in fact personal approaches of learners to coping with tasks. This raises the interesting issue of coping with learner differences in strategy training. On the basis of the findings presented in the preceding sections 6.5.4, there are alternative strategies within the strategy selection framework proposed in this study that could be introduced to learners. It may be worth considering the possibility of recommending to students a range of strategies and helping them to map their own

linguistic abilities on the recommended strategies. It seems likely that the pedagogically desirable job of teachers is to try to have a repertoire of strategies that can cater to the diversified needs of students.

### *SR methodology as a research and teaching tool*

Unlike writing tasks whereby students can be asked to produce drafts for our understanding of students' possible use of composing strategies, speaking is performed under real time and is much less accessible. Speaking strategies are therefore inherently elusive and inaccessible. This makes the teaching of speaking skills difficult. The SR methodology, however, suggests a viable way in which we can get closer to the 'black box' of the students' mind and subsequently to more effective teaching of the speaking skill. Because of the accessibility of some strategy use through the SR methodology, teachers are in a better position to help learners to access their own problems, strategies and, more generally, process of performance. This could be done in a micro teaching session in which students' oral communication tasks are videotaped and played back as post-task reflection and analysis activities.

This way, the SR methodology is useful not just to researching strategies but to performance teaching and the teacher can certainly work on learners' strategies in this area. In short, the SRI data are an indicator of the pedagogical viability of teaching incorporating attention to on-line performance, strategies and planning. Hence, there is justification for using SR methodology not just in strategy research but in performance teaching.

### *Limitations*

As acknowledged in section 4.7, the possible interaction effect between the training and the research method might have raised the students' awareness, thereby influencing their focus of reporting. As a result, students could have identified and reported more strategies over time because their focus was already influenced and their awareness raised. To help strengthen the potential values of using SR methodology to gauge strategy use, several ways are suggested to combat its limitations.

First, to minimize the interaction effect between teaching and testing, it may be desirable to conduct SRIs only on a post-test basis only, thus minimizing the interaction between the treatment and the method.

Second, in view of the richness of the SRI data, it is desirable to harness the strengths of the SR methodology in assessing the impact of treatment on students' strategic thinking. Then the SR methodology can be employed to track more qualitative changes, and more importantly, to link any of these changes to aspects of strategy training. Specifically, the SR methodology can be used to investigate ways in which strategic thinking may be affected by strategy training.

Last but not least, the SR methodology can be used in conjunction with observations as an instrument to arrive at a better understanding of what constitutes strategic features in oral data. Surface behaviours might not always reflect underlying strategic processing, which is often inaccessible by observations. By combining SR methodology and observations, it is possible to identify performance features (e.g. hesitations, pauses, false starts) in oral production that reflect covert strategic processes. Reliable ways to identify performance features of strategic behaviour in oral tasks will pedagogically useful to help learners solve communication problems.

### *Summary*

To sum up, the SR methodology, notwithstanding its limitations, has excellent potential to contribute both in terms of research and pedagogy. First, the SRI data provide evidence to support the view that students' uptake of strategy training in SRIs can be in the form of declarative knowledge which may not be observable. That is, students' awareness of strategy use may be enhanced by strategy instruction and students may not yet be ready to use them in tasks. Second, the SR methodology provides valuable information about students' ability to think strategically and to handle meta talk on oral communication tasks and processes. Third, the SR methodology yields information about learners' strategies from students' own perspectives and in their own voices on the quality of strategy use. Fourth, the SR methodology offers another channel to study the long-standing issue of coping with learner differences in educational contexts. That is, it may

be desirable to map students' linguistic abilities on strategy use. Last but not least, the methodology confirms the pedagogical viability of teaching incorporating attention to on-line performance, strategies and planning.

#### 6.5.6 A concise overview of findings by different methods

Before concluding this section, it seems apt to give a concise overview of the discrepancies and similarities of findings revealed by the different research methods. (For a concise overview in tabular form, see Appendix 28 where discrepancies are highlighted in red and similarities in blue).

##### Direct strategy use

With regard to strategies targeted in the training, For E1, there were increases in the reported use in stimulated recall interviews (SRIs) and gains in questionnaires but not in observed use across Phases 1, 2 and 3. The likely explanation for this discrepancy is that, given the nature of the direct strategies and the short period of training, it may be easier to raise learners' awareness of strategy use than to have students use the strategies right away (see section 6.2.4). This argument may be supported by the converging evidence from observations and from SRIs that the variety of strategy use was on the increase. The most consistent finding from the different instruments is that strategy training appeared to have a positive impact on one target strategy only i.e. 'Resourcing', the reason for this was delineated in section 6.2.5. Analysis by proficiency level indicates that there were broadly consistent results both by observations and SRIs. That is, the L-subgroup reported greater proportions of use than the H-subgroup, the explanation for this was discussed in section 6.3.5.

As for strategies not targeted in the training, analyses by the different research methods reveal rather conflicting results. The discrepancy may be accounted for by several reasons. First, strategy training might have shifted the attention of students from non-target to target strategies while they were reporting strategy use in SRIs and hence there was a decrease in the reporting of non-target strategies in SRIs but there were no discernible patterns in actual strategy use. Second, the non-target strategies asked about in the

questionnaires are somewhat different from those observed and/or reported in SRIs. The differences are necessary because the non-target strategies included in the questionnaire function as distractors to minimize the effect of social desirability (see section 4.4.1) and they were identified by the researcher. On the other hand, the non-target strategies recorded from observations and from SRIs were used and reported respectively by the students and not identified by the researcher. The other reason for the discrepancy is that both 'Attentive listening' and "Paying more attention to content than language' are mentalistic and hence they were not reflected in observations though there were significant gains in their reported use in the questionnaires. Analysis by proficiency level, however, reveals relatively more consistent findings by the different instruments. That is, the L-subgroup used or reported greater proportions of strategies than the H-subgroup. The plausible explanation for this was again discussed in section 6.3.5.

#### Indirect strategy use

As far as target strategies are concerned, results from the different instruments indicate a similar pattern to that of direct strategies. That is, while there were consistent increases in terms of reported use in SRIs and gains in questionnaires, there was no evidence of sustained increase in observed use in Phase 3. Similar to the case of direct strategies, given the short duration of strategy instruction, it may have a greater effect on awareness raising and reported strategy use than on observed strategy use. This argument may be supported by the findings from observations and from SRIs that there was an increase in the variety of strategy use over time though it should be acknowledged that the frequencies of the use of some strategies were low and that there might have been a ceiling effect on the comparison group. It can be argued, however, that students' consciousness of different types of target strategies may have been heightened. It is interesting to note that the significant gain in the self-perceived increase in 'Asking for help' in the questionnaire was not reflected in observations or in SRIs. One possible reason is that, whereas the observational data and SRI data were basically elicited during the preparatory talks in Cantonese prior to the English discussion task proper, the questionnaire data focused more on the English task (see section 4.4.1). Hence, students probably found it more useful to 'ask for help' during the English task and hence reported greater use in the questionnaires than in the preparatory talk when they were not yet

doing the English discussion. There were, however, consistent results from different research instruments regarding the use of 'Problem identification'. In addition, analysis by proficiency show that there was a broad similarity in findings from different methods i.e. the low-proficiency had higher proportions of strategy use as compared with the high-proficiency students. This is similar to the case of direct strategy use.

With respect to non-target strategies, findings from observations and from SRIs were consistent i.e. there were decreases in 'Rehearsing ranking' but increases in 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring progress'. However, it looks that these results are not supported by those from the questionnaires which show that there were moderate gains in favour of E2 in 6 out of 7 strategies. But as mentioned previously, these non-target strategies included as distractors in the questionnaires are necessarily different from those recorded in observations and in SRIs. This might explain the apparent discrepancies. In fact, analysis by proficiency indicates that findings are basically similar from observations and from SRIs in that the low-proficiency students used and identified respectively a higher proportion of 'Rehearsing ranking' whereas the high-proficiency students deployed and reported a higher proportion of 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring progress', the reasons for these were explored in section 6.3.6.

All in all, it is worth reiterating that some differences of findings from the different research instruments are expected given that observations are meant to track overt strategies while SRIs and questionnaires are employed to uncover the use and/or reporting of covert strategies.

#### 6.5.7 Conclusion: contributions of a multi-method approach

We have seen from the findings collected from different data collection methods varied. For instance, the uptake of strategy training in SRIs was different from that in observations. That is, differences between data collected from different instruments tell us that student learning can be manifested in different ways including: changes in ratings of task performance (via recording data); changes in underlying perceptions (via questionnaire data); changes in proceduralised strategy use (via observation data); and

changes in underlying strategic thinking and awareness of strategy use (via SRI data). This suggests that strategy training may have impacted on the learning process in different ways. In other words, teaching and performance may not have one-to-one relationship; teaching does not necessarily lead to observable changes right away. Rather, learning may not be explicit; it may be implicit, latent and not implemented. A multi-method approach has the advantage of providing evidence that the strategy intervention might impact student learning in a different way and very often in an unobservable way. So the impact was reflected not just in terms of performance but perceptions and awareness. In fact, these findings from the multi-method approach are consistent with those from previous strategy research in that the impact of strategy training may show up in different measures (Dansereau, 1985; Oxford, 1996). •

In addition, what we have seen so far is that each research method has yielded distinct and different kinds of information about the impact of strategy intervention on learners' strategy use in oral communication tasks. Each adds something valuable to our understanding of the impact of strategy training. This way, the different research methods complement each other as each method serves as one source of information for assessing strategy use. Through method triangulation, the information generated from one source can corroborate and complement that from the others. As is true with any research instrument, each method used has its own strengths and weaknesses and hence a multi-method approach renders it possible for the methods to offset each others' weaknesses to yield interesting information. All in all, the multi-method approach was in fact in line with a recommendation by McLaughlin (1987) to offset any biases that may be inherent in a hypothetical-deductive approach such as an experimental approach to research.

Of course, this still does not completely avoid the possibility that the strategic thinking and behaviours noted were superficial responses to the teaching. However, since the research methods go well below the surface of behaviour, there was evidence to substantiate the argument that teaching strategies had an impact on learners' behaviour.

## **6.6. Research design: an appraisal**



### 6.6.1 Research paradigm

As with most strategy studies (Cohen, 1998), the present research adopted a quasi-experimental design to assess the impact of the strategy instruction on students' strategy use and task performance. Notably, a deductive-hypothetical approach was used in proposing a framework that used a key parameter 'directness' to distinguish major categories of strategies for training in the interventionist study. Findings in terms of students' task performance, uptake and reporting of direct and of indirect strategies were then compared across treatment and control classes with a view to gauging the impact of the strategy training. The results indicate that another parameter 'task type', in addition to the originally proposed parameter 'reflection', might be added to sub-categorise indirect strategies. This way, the proposed strategy selection framework was revised after it was empirically tested with students in the intervention. The overall research design is then one of analytical-nomological (Grotjahn, 1987) and has yielded valuable findings and potentially important insights.

In the light of the findings of the present study, I wish to propose a research design which incorporates both the exploratory-interpretative paradigm and the analytical-nomological paradigm (Grotjahn, 1987).

Instead of starting with a theoretical framework about strategy use, first of all, we may start from the data by understanding learners' current strategy use. Models of strategies-based instruction (Chamot & O'Malley, 1994; Hosenfeld, 1977; MacIntyre, 1994; Oxford, 1990) underscore the importance of starting from where the learners are by needs analysis to understand what strategies they may be using, how effective they are, and how they might be improved. Nonetheless, one major problem of assessing students' initial strategy use is that instruments such as questionnaires (e.g. SILL Oxford 1989; 1990), learning style surveys, interviews, diaries, etc. are often used. Yet, these instruments can only reflect students' beliefs and perceptions, which can be far remote from reality. With the benefit of the findings of the present study, I wish to argue that the stimulated recall methodology may help us get closer to reality by enabling us to tap students' thought processes during oral tasks. That is, we may begin, with the help of stimulated recalls (i.e.

reports) and the performance data (i.e. recordings) on which the recalls are based, by exploring what high-proficiency students currently use with respect to the direct strategies that may be involved in different stages of L2 on-line speech production and to the indirect strategies that may enable learners to cope with an upcoming L2 on-line oral task. This way, we start with data emerging from naturalistic environments; the research approach is data-driven and exploratory in nature and is one of exploratory-interpretative paradigm (Grotjahn, 1987; McLaughlin, 1987).

Then, on the basis of the findings generated from students in the exploratory study, we will be provided with information about students' pre-existing strategies which high-proficiency students currently use. Then we may select those direct strategies which are reported by students during SRIs and supported by performance evidence in the recordings to help them solve problems at different phases of speech production for training in an intervention study. For instance, apart from 'Resourcing', the data from an exploratory-interpretative approach will provide us with information as to the kinds of strategies that students currently use to help them solve the problems of 'what to say' and 'how to say it'. Similarly, with regard to indirect strategies, we may choose reflection-based as well as non-reflection-based strategies that high-proficiency students seem to be currently using to help them cope with an upcoming on-line oral task in English. After the selection, we then test the uptake of the strategies and the adequacy of the strategy selection framework by implementing an intervention study with students of mixed-proficiency.

There are at least two advantages of the combined exploratory-then-experimental design. First, strategies are selected not just on the basis of a sound, theoretical framework but of first-hand information about current strategy use of learners. As McDonough (1995) cautions, strategy use can vary greatly between individuals. Incorporating particular strategies, however sensible they are, into teaching contexts can constrain rather than extend the learner's range. Consequently, many materials for introducing a strategic approach concentrate on discovering the learner's beliefs and preferential modes of action and adapting them, rather than prescribing remedies. The combined approach then has the advantage of taking learners' own preferred learning strategies into account. This way, the efficacy of strategy intervention may be enhanced. Second, information about students'

current strategy use may be useful to the selection of treatment groups in the intervention. It may be possible to select groups which are comparable not only in terms of English standards but strategy use as well. This may further minimize initial differences across treatment groups in an intervention study. That is, the other advantage of the combined approach has the added value of providing some pre-training assessment of the learners' use of strategies, this has been found to be desirable in previous studies (Oxford, 1996).

### *Treatment groups*

Findings presented and discussed in previous section indicate that training in the use of direct and of indirect strategies may be related to differences in learners' strategy use and task performance. It might be beneficial to incorporate both direct and indirect strategies in an experimental class and help students orchestrate their use by combining direct and indirect strategy use and by linking them to specific language tasks.

### *Proficiency level*

In the present study, only high and low-proficiency students of the same course level (i.e. Secondary Two) were compared. Resources permitting, it may be desirable to compare students at different course levels (e.g. Secondary 2 and Secondary 6) to see in what ways proficiency might make a difference to the impact of strategy instruction.

## 6.6.2 Strategy teaching materials and approaches

### *Teaching materials*

Based on the experience gained from the piloting, the design of the training materials used in the main study incorporated two principles. First, the materials aimed to let students know that strategy use was a recommendation and that they were encouraged to try out the target strategies during oral tasks. Second, students were to be given a chance to reflect on and evaluate the usefulness of strategy use at the end of every strategy lesson. It was an attempt to engage students in a collaborative dialogue to see how they felt about strategy use. However, the evaluation part of the strategy lessons was often not implemented because of the pressure to allow adequate time for the discussion tasks. So,

the present study suffered from a lack of adequate class time to solicit students' feedback on strategy use. In future studies, it may be better to structure opportunities in the teaching materials for small group or whole class evaluations. This may reap at least two benefits. First, evaluations enhance the awareness-raising effect of strategy instruction when students reflect on the effectiveness of the target strategies and on their own strategy use. Second, the discussion of findings in the previous section 6.2 showed that conscious-raising may play an important role in strategy training. So, it may be worth considering engineering opportunities for students' open discussions of strategy use in strategy training programmes.

In addition, it may be necessary to strengthen and expand the 'think aloud' demonstration on the part of the teacher during the warming-up or awareness-raising phase of the training. The feedback from the teachers shows that the 'think aloud' demonstration provided opportunities for students to 'observe' strategy use in action in the human mind i.e. how a strategy was being deployed. Students found it novel and interesting to 'see' the process. The thinking aloud serves three purposes. First, it is a way of giving insight into the thinking process behind strategy use. After all, strategies are mostly mentalistic. So, the teacher's thinking aloud can help students 'see' the unobservable, strategic, thought processes. Second, by thinking aloud, the teacher can demonstrate the functioning of the strategies themselves i.e. how they might be deployed and what is exactly involved. For instance, the teacher can let students 'see' how he/she is searching for similar words when facing a linguistic problem by deploying 'Paraphrasing'. Third, thinking aloud can underscore the message that strategy use involves not simply changes in surface behaviours but crucially in the underlying thought processes. It is possible to build into the teaching materials opportunities for the teacher(s) to demonstrate thinking aloud and for the students to model on the 'think aloud' process themselves.

### *Teaching approaches*

As described in sections 4.2.1 and 4.2.2, the teaching approaches suggested and the materials designed by the researcher were first tried out and then revised in the light of the feedback from both teachers and students in the piloting. The key principle underlying the approach and materials was that the rationale and thinking behind would

need to be made very clear to the teachers conducting the strategy training. This way, they were given a structure for the teaching. On the other hand, the teachers were given flexibility in implementing the structure. That is, they were able to follow the framework provided in the teaching materials and to make changes as they went along so that they would not find the teaching approach and materials imposing and restrictive. In future studies, it may be desirable to ask teachers to verbalise their thoughts as they are preparing the materials at least in the first few strategy lessons. This way, we may be able to see how the teachers might interpret the steps and rationale behind, and how they approach the strategy material. In fact, the mode of teaching may become part of the study. After all, differences in teaching style may impact on the degree of students' receptivity to the training and in turn on the success of the instruction.

Last but not least, in the present research, the strategy training materials were developed solely by the researcher though they had been tried out in the pilot studies and revised in light of the teachers' feedback. Nonetheless, the training materials may preferably be jointly developed by the researcher and the teachers. In so doing, the teachers may develop a sense of ownership and they are in a better position to integrate the materials into their everyday class materials. This can enhance teaching effectiveness. After all, impetus for change comes from the inside and not the outside (Chamot et al., 1988; O'Malley & Chamot, 1990).

### 6.6.3 Discussion tasks

Most of the discussion tasks used in the main study aimed to develop students' confidence in small group interactions by providing them with the opportunity to freely express their views or exchange opinions in solving some problems. Although students had to arrive at some kind of group consensus on most occasions, they could come up with different suggestions and solutions. That is, more than one outcome was expected. In other words, the oral tasks are basically "divergent" in nature (Courtney, 1996). As there is more than one possible outcome in such tasks, students are not required to focus so much on negotiating meaning. For instance, even if a student does not really agree to the importance of an item, he/she might have the option of not saying what she/he is really thinking about in order to avoid any potential communication problems. As such,

the need for using strategies such as 'Seeking clarification', 'Seeking confirmation' and 'Asking for repetition' in divergent' oral tasks is not as pressing as that in 'convergent' tasks (ibid.) in which only one outcome is possible (e.g. 'information gap activities') and the participants have to be pushed to use accurate language to convey meaning. Hence, given the 'divergent' nature of most tasks, students in the present research might not have felt a pressing need to try out the direct strategies to help them think of 'what to say' and 'how to say it' in producing accurate language. In a word, in future research, it may be necessary to use more 'convergent' tasks so that students see a greater need for using strategies that might facilitate the production of accurate language to arrive at a definite outcome.

In addition, the "interactional activity" (Pica et al., 1993) required of 'divergent' tasks is expected rather than obligatory among group-mates. For example, although students were asked to reach a group consensus in the present study, it was not feasible to ensure that every one contributed evenly to the discussion. Yet, to facilitate language learning in group discussion, there have been studies to indicate that obligatory rather than optional interaction will be needed (Bejarano et al., 1997). This kind of obligatory interaction will probably bring about negotiation of meaning, which has been found to be conducive to developing modified language output and ultimately to language learning (Pica, 1987; Pica et al., 1991).

In any case, it may be desirable to vary the task type. For one thing, as discussed in the earlier section 6.2, the parameter 'task type' may be used to sub-categorise indirect strategies for training. This is consistent with Wenden's (1995) that there is a strong relationship between task demand and strategy selection. That is, different task types (e.g. individual presentations, information-gap activities, role plays) have different task demands which probably impact on strategy use and selection differently. In fact, in future studies, it may be desirable to try out different oral task types which incorporate the use of different skills, strategies and routines on the part of the speaker, and which probably call for the production of different targeted language features and patterns (Bygate, 1987; 1998a). For another, the finding in the earlier section 6.2 indicated that it may be more appropriate to apply indirect strategies to new tasks rather than repeated tasks to enhance their novelty and applicability. Hence, instead of using similar tasks

across the three phases, it may be desirable to use new tasks of different task types such that opportunities for strategy use may be enhanced.

#### 6.6.4 Summary

The quasi-experimental design adopted in the present research has produced valuable findings and insights. With the benefit of the findings produced from the analytical-nomological design and from the SR methodology, it may then be desirable to build on what has been done in the present study by starting from where the learners are in terms of strategy use and by using a design of exploratory-interpretative paradigm. In so doing, we may be able to understand more about current strategy use of high-proficiency students in particular. Based on the findings, strategies currently used may be selected in accordance with the revised strategy selection framework and introduced to another intervention study for experimenting. To improve the experimental design, it may be desirable to teach both direct and indirect strategies to the same experimental groups to enhance training effects. Students from two different course levels may be used to further investigate the relationship between strategy training, proficiency level and strategy use.

Regarding teaching materials and approaches, it may be necessary to strengthen the evaluation of strategy use by students, to expand the 'think aloud' demonstration, to track teachers' thinking and interpretation by asking them to 'think aloud' while they are interpreting the training materials, and whenever possible, to involve teachers in the development of the teaching materials. Last, 'convergent' tasks, in addition to 'divergent' discussion tasks, may be used to enhance negotiation of meaning and possible use and activation of interaction strategies. New tasks of comparable demands may be used for assessment purposes to enhance the novelty and applicability of indirect strategies, an issue which arose in section 6.3.4. All in all, variation of task type is desirable for future studies as 'task type' has been proposed as an additional parameter in the revised strategy selection framework.

## 6.7 Conclusion

In this Chapter, we have explored plausible reasons that might interpret the key findings around the three research themes and accompanying research questions. We have also systematically dealt with interesting issues and questions arising from the interpretations. In addition, in the light of the findings, the multi-method approach has been appraised and the research design, the teaching materials and discussion tasks used in the training have been reviewed. On the basis of what has been discussed so far in this chapter, position statements regarding strategy research, strategy training for L2 oral communication tasks, research methodology and pedagogic implications can be drawn up to conclude the study. We now turn to Chapter 7.



## **CHAPTER 7      SUMMARY AND CONCLUSIONS**

### **7.1      Introduction and Overview of Chapter**

The present research has served two purposes. At one level, the purpose has been to assess the effects of strategy training on ESL learners' use of different types of strategy for oral language tasks. At another level, the purpose has been to explore the impact of learners' use of the two types of strategy on their oral performance. In addition, the research has explored learners' own understandings of the instruction, the oral strategies, and their own oral performance. To do this, the study has adopted a quasi-experimental design.

This chapter revisits the key aspects of the research. It begins with an overview of the intervention process in section 7.2. It then highlights major findings, conclusions and pedagogic implications in section 7.3. The contributions of the present research are summarized in section 7.4. Finally, the limitations of the study and directions for future research are included in sections 7.5 and 7.6 respectively.

### **7.2      The interventionist study: an overview**

What prompted this present study was the realization that the teaching of oral skills in the secondary English language classroom receives inadequate attention in Hong Kong although this is probably also the case in many other parts of the world. L2 learners are at best provided with the opportunity to engage in oral tasks. Training students in the use of strategies for L2 oral communication is almost unheard of in very many local classrooms. At the same time, research into the teaching and learning of speaking is also relatively neglected. Specifically, interventionist studies that give an exclusive focus on the speaking skill are far from adequate in strategy research. With regard to training outcomes, previous studies have produced mixed results, leaving unresolved issues and many unanswered questions. In view of this, the present interventionist study is an attempt to explore the feasibility of teaching ESL students' strategy use on L2 oral communications tasks.

The study began by defining speaking strategies in the context of the present research. The significance of the strategies has been justified with special emphasis on their learning potential and on strategic competence as part of language competence. Then, a review of strategy research pertaining to the speaking skill has been conducted and several unresolved issues that warrant further investigation have been identified. First, whereas it has been generally considered desirable to investigate the impact of strategies in groups rather than in isolation, there has been little agreement on the types of strategies considered important for learning and training. Hitherto, the outcomes of strategy training have been still far from clear. It has not been clear to what extent students use the taught strategies and whether strategy use is associated with improvement in task performance. Third, one of the key factors believed to affect the result of strategy training is the proficiency level of students, but its relationship with strategy use is complex. Last but not least, other studies have employed a limited range of methods of investigation. While there is strong support for a synthesis of approaches to assessing the impact of strategy training on strategy use, up until now there have been no systematic approaches to the selection of an array of research methods available for use.

This study has aimed to address these issues. To address the issue of the identification of strategy types for training, a strategy selection framework has been derived from existing classification schemes. In the framework, the parameter 'directness' was used to identify direct and indirect strategies, which were then applied to distinguish direct strategies and indirect strategies for L2 oral communication. In addition, the parameter 'reflection' was used to sub-categorise indirect strategies, distinguishing meta-cognitive and socio-affective strategies. A set of target strategies was systematically selected under the 'direct' and the 'indirect' category for training. For the purposes of the present study, direct strategies were defined as those that may be deployed by the L2 speaker to facilitate speech processing. The learning potential of the direct strategies has been argued for. On the other hand, indirect strategies were defined as those that may play an important role in facilitating task completion and performance in planning, monitoring and evaluating and in keeping the learners at an optimal affective state conducive to learning. The role of indirect strategies (i.e. meta-cognitive and socio-affective strategies) has been well documented in the literature. As such, both direct and indirect strategies selected for training in the present research are considered relevant to learning in the context of L2 oral communication.

To answer the questions of whether students will use the target strategies and whether strategy use is related to improvement in task performance, a quasi-experimental design was adopted and an interventionist study was implemented in the Secondary Two ESL classroom. Three intact groups were involved: one received training in the use of direct strategies, one in indirect strategies, and one had no strategy training. To explore the complex issue of the relationship between proficiency level and strategy use, students in each of the three treatment groups were divided into high-proficiency and low-proficiency subgroups. Strategy intervention was implemented over a span of five months through eight strategy lessons for each of the two experimental groups while the comparison group received eight regular lessons. Strategy training materials were developed by the researcher, field tested and revised on the basis of the reactions of the teachers and students during the piloting. The regular teachers who conducted the training in the main study had been previously involved in strategy instruction in the various pilot studies. Students' uptake of the target and non-target strategies (strategies that were not actually introduced in the training) as well as their task performances were assessed and compared across groups and proficiency sub-groups at Phase 1 (pre-training), Phase 2 (while-training) and Phase 3 (post-training). Apart from using whole-class results of each of three intact groups, two pull-out groups (four students each) from each intact class were invited to do additional discussion tasks with a view to eliciting data collected via a multi-method approach.

To resolve the problems of a lack of a systematic way to employing a multi-method approach and interrelating the data collected through such an approach, four instruments have been systematically selected and justified. The data sets collected from the three instruments (i.e. questionnaires, observations and stimulated recall interviews) have served to answer the three research questions organized under Research Theme 1 on strategy training and strategy use as well as the two questions under Research Theme 2 on strategy training, strategy use, and proficiency level. The data set on task ratings has addressed the three questions organised under Research Theme 3 on strategy use and task performance (see section 7.3 below).

### 7.3 Key findings, conclusions, and pedagogic implications

#### 7.3.1 Research theme 1: The impact of strategy training on strategy use

##### *Outcomes of strategy training in general*

Overall, irrespective of the types of strategies, strategy training seems to have been associated with positive results on learners' strategy use.

##### Key findings

- There were increases across Phases 1, 2 and 3 in the variety of strategy use.
- There were increases across Phases 1, 2 and 3 in the frequency of reported strategy use in stimulated recall interviews.
- There were increases in observed strategy use in Phase 2 but not in Phase 3.
- There was little spreading of the awareness or use of target to non-target strategies, but there was evidence to support the view that attention had been shifted away from non-target strategies to target strategies.

##### General conclusions

- Focused teaching probably raises awareness, which appears to be a necessary condition for developing a declarative knowledge of the use of target strategies.
- There were differential effects on declarative and procedural knowledge of strategy use because it probably takes time and practice to fully implement strategy use.
- Learning (i.e. uptake of strategies) can be manifested in both observable (i.e. explicit learning) and unobservable ways (implicit learning).

##### Pedagogic implications

- Strategy instruction seems to have an impact on the desirable 'noticing' of strategy use.
- To maximize the benefits of strategy training, it may be worth alerting students to try out not just strategies targeted in the intervention but strategies they feel comfortable experimenting. The purpose is to raise general strategic awareness on the part of the learners, to facilitate the 'wash over' effect from target to non-target strategies and to enhance the overall efficacy of training.

### *Outcomes of strategy training pertinent to L2 oral communication tasks*

Overall, strategy training appeared to be related to greater use of the indirect strategies than direct strategies.

Adopting ‘directness’ as the key parameter in categorizing and identifying broad strategy types for training seems useful not least because students reported using the two categories of strategies - albeit of varying degrees - for different purposes on L2 group discussion tasks. The categorization has enabled the impact of strategies in groups rather than in isolation to be assessed and compared for oral tasks.

#### Key findings

- Overall, there was a higher student uptake of indirect strategies than direct strategies.
- There was higher reporting of indirect strategies than direct strategies.
- Qualitative findings from the case reports indicated that students who had received strategy instruction on direct strategies reported using strategies to help them solve on-line speech processing problems whereas students who had received training in the use of indirect strategies reported a variety of planning and monitoring strategies to help them cope with an upcoming English oral task or facilitate the conduct of the task.

#### General conclusions

- The deployment of direct strategies may take up more mental processing space and subsequently direct strategy use may impose greater cognitive demands. On the other hand, indirect strategy use may not take up so much mental processing space as students are given time and space to deploy indirect strategies.
- Direct strategies seem to be less amenable to reporting than indirect strategies.
- The major differences in the nature of the two types of strategy deployment seem to have repercussions on the student uptake and consequently success of training.

#### Pedagogic implications

- It may be desirable to incorporate planning time and space into strategy instruction with a view to promoting the effective use of both direct and indirect strategies in the language classroom. As a matter of fact, the preparation time not only facilitates the

development of indirect strategies but also of direct strategies. The provision of time and space for students to practise direct strategies prior to the English discussions may lead to their needing less processing time if and when the direct strategies are activated during the English tasks proper.

- It may be desirable to target both direct and indirect strategies in the same strategy training programme as both categories can be beneficial to learners.

### *Strategies specific to L2 oral communication tasks*

#### Key findings

- Strategy training was consistently associated with increasing uptake and reporting of one direct strategy ('Resourcing') and one indirect strategy ('Problem Identification').
- Students' uptake of three non-target, indirect strategies namely, 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions' was enhanced. This is striking given that there was little activation of other non-target strategies in both experimental groups.

#### General conclusion

- The speech-processing model appears useful in identifying direct strategies for training. For one thing, 'Resourcing' requires only surface processing on the part of the elementary L2 speaker to cope with 'what to say' or 'how to say it' during on-line speech production and may function as a favourite 'bedrock strategy'.
- The parameter 'reflection' seems useful in identifying reflection-based meta-cognitive strategies for training. 'Problem identification', which enables learners to assess task purposes and requirements and to do some global planning for an upcoming task, may be considered most effective by junior learners trying to cope with L2 oral communication tasks.
- The activation of non-target indirect strategies (i.e. 'Facilitating progress', 'Suggesting turn-taking tactics' and 'Monitoring contributions') seems to indicate that task type may impact strongly on strategy choice and use because the three strategies are particularly pertinent to interactive, participatory group tasks.

- While there was little activation of other non-target strategies in both experimental groups, the activation of the three non-target strategies suggests that learners can generalize what they have been taught to other kinds of strategic behaviours.

#### Pedagogic implications

- To enhance the efficacy of teaching oral strategies directly involved in speech processing, it might be desirable to match the cognitive/linguistic demands of strategy use with the learners' proficiency level. Alternatively, it may be necessary to provide linguistic scaffolding to strategy use.
- In the teaching of indirect strategies, it may be useful to match strategy use with task types (e.g. individual presentations, pair discussions, group discussions).

### 7.3.2 Research theme 2: Strategy training, proficiency level and strategy use

#### Key findings

- Broadly speaking, there was higher activation on the part of low-proficiency students than high-proficiency students in terms of frequency of strategy use.
- There was evidence from qualitative findings that very strong students were able to evaluate the effectiveness of strategy use whereas very weak students tended to use only strategies which had limited functions.
- Nonetheless, the relationship between strategy use and proficiency level remains complex depending on strategy types. Specifically, with regard to direct strategies, the low-proficiency students showed more dramatic increases in the use of 'Resourcing' than their high-proficiency counterparts.
- With regard to indirect strategies, the performance of low-proficiency students was associated with higher use of a narrow range of familiar, non-target strategies and the high-proficiency students with a wider range of less familiar, non-target strategies.

#### General conclusions

- There is strong support for using instruction to help low-proficiency students to develop strategic competence to compensate for their lack of linguistic competence. Quantity of strategy use seems relevant to low-proficiency students when they are linguistically not yet ready to improve the quality of their strategy use. It may still be

beneficial for these students to keep applying whatever strategies that their linguistic abilities permit.

- For high-proficiency students, quality, effectiveness and flexibility of strategy use may need to be focused upon. It may be desirable to strengthen the rationale for strategy use and to understand what strategies are considered effective for oral tasks by the high-proficiency students.

Pedagogic implications: coping with learner differences

#### *Teaching of direct strategies*

- It may be beneficial to help low-proficiency students to sustain their use of ‘bedrock strategies’ (e.g. ‘Resourcing’) to keep them going in on-line speech production regardless of difficulty and to encourage the high-proficiency students to use ‘bedrock strategies’ in combination with other alternatives (e.g. ‘Resourcing’, ‘Paraphrasing’, ‘Self correction’) to good effect. The idea is to promote flexibility of strategy use.

#### *Teaching of indirect strategies*

- It may be pedagogically desirable to encourage mixed-ability groupings in group tasks. The high-proficiency students can initiate the use of less familiar strategies (i.e. ‘Facilitating progress’, ‘Suggesting turn-taking tactics’ and ‘Monitoring contributions’), thereby bringing about ‘wash over’ effects to the low-proficiency students in the hope that they may also venture beyond familiar strategies.
- It might also be possible to arrange students of different learning styles and strategies together in completing group tasks on the premise that the arrangement helps facilitate cross-fertilization of strategy use. The nature and conditions of the use of indirect strategies render it feasible to encourage peer cooperation in the learning process.

### **7.3.3 Research theme 3: Strategy training, proficiency level and task performance**

#### **Key findings**



- Broadly speaking, strategy training was associated with an improvement for the two experimental groups compared to the comparison group particularly in some aspects of learners' task performance.
- Specifically, training in the use direct strategies was related to improvement in the 'English' score. On the other hand, training in the use of indirect strategies was associated with both the 'Task effectiveness' and 'English' scores but the effect was a lot more dramatic on the former than the latter.
- The relationship between strategy training, proficiency level and task performance remains complex depending on strategy types. Regarding direct strategies, proficiency level seemed to be a factor in the sense that low-proficiency students made more improvements in terms of their 'English' ratings than their high-proficiency counterparts. This finding may be related to their higher use of 'Resourcing' and activation of the target strategies.
- In contrast, regarding indirect strategies, proficiency level did not make much difference to the overall finding. This finding may be associated with the overall high uptake of 'Problem identification' regardless of students' proficiency level.

#### General conclusions

- The relative contributions of the two broad strategy types to task performance appear clear: direct strategies may relate to language improvement whereas indirect strategy may relate to effective handling of tasks and language improvement.
- It makes sense to select direct and indirect strategies for training and to compare the effects of training of the two groups of strategies on task performance.

#### Pedagogic implications

- It may be worth implementing strategy training to help L2 speakers to cope with oral tasks, providing a means to help students improve in language and facilitate task completion.

#### 7.3.4 A multi-method approach

Overall, each of the four instruments has added something valuable to our understanding of the impact of strategy training in a distinct way. Moreover, the results from different methods complement each other in portraying a fuller picture of the impact.

### Key findings

- First, task ratings assessed the effectiveness of the intervention in terms of whether students who had received strategy training performed better than those who had not. Broadly speaking, strategy training was associated with positive results on task performance.
- Then, questionnaire findings have indicated that focused teaching was related to increased frequency of self-perceived use of several strategies. Moreover, the research instrument has yielded information about changes in the students' perceptions of the effectiveness of some strategies after training. This kind of information could not have been available elsewhere in the present study.
- Profiling observed strategy use has produced direct information as to whether strategy training had an impact. The findings have indicated that the intervention did impact on students' actual behaviour at Phase 2. Furthermore, observing strategy use in on-line speech has been particularly insightful because information on automatised strategy use was not reported elsewhere.
- Finally, the stimulated recall (SR) methodology has opened a window into the 'Black Box' of the human mind, providing valuable evidence to support the argument that students were able to think strategically and to handle meta talk on oral communication tasks and processes. The SR methodology has provided qualitative information on learners' strategies from students' own perspectives and in their own voices. While it was unrealistic to expect widespread qualitative changes in students' use of strategies over a 5-month period of strategy training, there were indications that different learners approached strategies differently. Last but not least, the use of the SR methodology suggests that it might be useful not just to research but to pedagogy.

### General conclusions

- The distinctive findings from the four different instruments have confirmed that student learning can be manifested in different ways. The impact of strategy training may be reflected not just in terms of performance but perceptions and awareness.
- The results from the four methods complement each other. Task ratings reflect the effects of strategy training on task performance, but they do not give information about strategy use. Whereas questionnaire findings do not necessarily reflect actual behaviours, the performance data from observations do. While performance data

cannot help us access the thought processes of students, the SRI data can. The triangulation of findings from the four methods has provided a fuller picture of the impact of strategy training.

#### **7.4 Contributions of the present study**

On the macro level, the study has yielded theoretically interesting findings which help to identify strategies which are learnable and researchable in oral language in the ESL context. Learners have also demonstrated evidence to show awareness of them and even use them on some occasions. On the micro level, the study has produced field-tested and usable strategy-based instructional materials for public use.

The findings can be summarized into a small number of summary statements:

1. It may be useful to use 'directness' as the key parameter to dichotomise and identify direct strategies and indirect strategies for training for use on L2 oral communication tasks.
2. It may be useful to rely on the speech processing model to identify specific direct strategies and to use 'reflection' as parameters to sub-categorise indirect strategies to identify specific strategies for training purposes.
3. It may be feasible to train ESL learners in the use of direct and indirect strategies on L2 oral communication tasks.
4. Training in the use of direct strategies may be related to language improvement whereas training in the use of indirect strategies may be related to task effectiveness and language improvement but the impact is greater on the former than the latter.
5. 'Resourcing' may function as a bedrock strategy for low-proficiency students in facilitating speech processing. 'Problem identification' may be acceptable to all students as a meta-cognitive strategy that enables them to do global planning as well as assessment of task purposes and requirements.
6. It may be desirable to help low-proficiency students to develop strategic competence to compensate for their lack of linguistic competence.
7. It may be desirable to adopt a systematic, eclectic approach to assessing the impact of strategy training because different results may show up at different measures and the strengths of one method may help offset the weaknesses of the others.

8. It may be desirable to incorporate the stimulated recall methodology to the teaching and research of the speaking skill as a unique avenue to students' thoughts and learning processes in the ESL context.

### **7.5 Limitations of the present study**

As is the case with any research studies, the present one has its own limitations. First, the study had to subject to the constraints imposed by the school in which the intervention was implemented. Notably, the number of lessons was limited to eight in total for each of the three groups involved. As such, the study might have suffered from a lack of adequate time devoted to strategy training and to students' development of strategy use. In addition, given that only intact groups were available, the sample sizes were small (i.e. 20 in each group, with only three high-ability subgroups and two low-ability sub-groups in each). It was therefore not appropriate to subject the findings to computation and to claim statistically significant results. This study can only be exploratory in nature; a bigger study is required to make strong recommendations on the basis of the findings.

Second, as true experimental design was not feasible and indeed not desirable in educational contexts (see section 3.3), a quasi-experimental design was adopted. Intact classes were used and only the language standards of the three treatment groups were controlled for at the outset of the study. It was not feasible to control for all variables. That means the three groups might still have differed in terms of cognitive styles, initial strategy use, personality, motivation, etc. Such variables might have affected the results of training.

Last, while every effort was made to address most of the threats to the validity of the quasi-experimental design (see section 3.3), it was not possible to rule out the possibility of an interaction effect between the strategy training and the research instruments (e.g. SRIs). In addition, there was likely to have been some degree of Hawthorn effect. These effects might have affected the results. Nonetheless, a systematic, multi-method approach was carefully implemented to make sure that the weaknesses of one method might have offset those of the others and that triangulation of results was conducted. In particular, participants showed in their various responses that they were not simply doing as they had been told or conforming to what the researcher had intended.

## 7.6 Directions for future research

First, a more long-term longitudinal study is recommended so that qualitative changes in strategy use (if any) can be tracked and the sustainability of strategy use may be studied. The present research has explored the complex relationship between proficiency level and strategy use but has not answered the question as to whether strategy use brings about language proficiency or vice versa. Skehan (1987:93) urges the necessity to conduct longitudinal studies and the monitoring of change over time to separate out the “two possibilities of strategies-as-caused and strategies-as-causal”. Second, the same strategy-based instruction may be implemented at a different course level (e.g. Secondary Six) so that the results can be compared with findings of Secondary Two students in the present study. This way, we may be able to understand whether students at a more advanced course level would respond differently to the same set of strategies. Finally, as ‘task type’ has been found to influence which strategies get priority, it seems necessary to conduct interventionist studies using different task types such as, individual presentations, pair negotiations, experience recounting, etc. to investigate strategy use and task performance across task types.

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## Appendix 1 An inventory of strategic language devices

Table 1

*Inventory of Strategic Language Devices with Descriptions / Definitions, Examples (Based on Dörnyei & Scott, 1995a, 1995b), and Indications Whether They Were Included in Any Other Taxonomies (T=Tarone, 1977; F&K=Færch & Kasper, 1983b; B=Bialystok, 1983; P=Paribakht, 1985; W=Willems, 1987; N=Nijmegen Group)*

STRATEGY	DESCRIPTION	EXAMPLE	OTHER TAXONOMIES
1. Message abandonment	Leaving a message unfinished because of some language difficulty.	<i>It is a person er... who is responsible for a a house, for the block of house... I don't know... [laughter]</i>	T, F&K, W
2. Message reduction (topic avoidance)	Reducing the message by avoiding certain language structures or topics considered problematic languagewise or by leaving out some intended elements for a lack of linguistic resources.	[Retrospective comment by the speaker:] <i>I was looking for "satisfied with a good job, pleasantly tired," and so on, but instead I accepted less.</i>	T, F&K, W
3. Message replacement	Substituting the original message with a new one because of not feeling capable of executing it.	[Retrospective comment after saying that the pipe was broken in the middle instead of "the screw thread was broken":] <i>I didn't know "screw thread" and well, I had to say something.</i>	F&K, W
4. Circumlocution (paraphrase)	Exemplifying, illustrating or describing the properties of the target object or action.	<i>it becomes water instead of "melt"</i>	T, F&K, W, P; B: "description"; N: appr. "analytic strategies"
5. Approximation	Using a single alternative lexical item, such as a superordinate or a related term, which shares semantic features with the target word or structure.	<i>plate instead of "bowl"</i>	T, W; B and P: "semantic contiguity"; F&K: "generalization"; N: appr. "holistic str."
6. Use of all-purpose words	Extending a general, "empty" lexical item to contexts where specific words are lacking.	The overuse of <i>thing, stuff, make, do</i> , as well as words like <i>thingie, what-do-you-call-it</i> ; e.g.: <i>I can't can't work until you repair my ... thing.</i>	W: "smurfing"
7. Word-coinage	Creating a non-existing L2 word by applying a supposed L2 rule to an existing L2 word.	[Retrospective comment after using <i>dejunktion</i> and <i>unjunktion</i> for "street clearing":] <i>I think I approached it in a very scientific way: from 'junk' I formed a noun and I tried to add the negative prefix "de-"; to "unjunk" is to 'clear the junk' and "unjunktion" is 'street clearing'.</i>	T, F&K, B, W; N: appr. "morphological creativity"
8. Restructuring	Abandoning the execution of a verbal plan because of language difficulties, leaving the utterance unfinished, and communicating the intended message according to an alternative plan.	<i>On Mickey's face we can see the... so he's he's he's wondering.</i>	F&K; W: under "self-repair"
9. Literal translation (transfer)	Translating literally a lexical item, an idiom, a compound word or structure from L1/L3 to L2.	<i>I'd made a big fault</i> [translated from French]	T, W, N; F&K: under "interlingual transfer"; P and B: "transliteration"
10. Foreignizing	Using a L1/L3 word by adjusting it to L2 phonology (i.e., with a L2 pronunciation) and/or morphology.	<i>reparate</i> for "repair" [adjusting the German word 'reparieren']	B, W; F&K: under "interlingual transfer"; N: under "transfer"
11. Code switching (language switch)	Including L1/L3 words with L1/L3 pronunciation in L2 speech; this may involve stretches of discourse ranging from single words to whole chunks and even complete turns.	Using the Latin <i>ferrum</i> for "iron".	T, F&K, B, W; N: under "transfer"
12. Use of similar-sounding words <sup>1</sup>	Compensating for a lexical item whose form the speaker is unsure of with a word (either existing or non-existing) which sounds more or less like the target item.	[Retrospective comment explaining why the speaker used <i>cap</i> instead of "pan":] <i>Because it was similar to the word which I wanted to say: "pan".</i>	
13. Mumbling <sup>1</sup>	Swallowing or muttering inaudibly a word (or part of a word) whose correct form the speaker is uncertain about.	<i>And uh well Mickey Mouse looks surprise or sort of XXX</i> [the 'sort of' marker indicates that the unintelligible part is not just a mere recording failure but a strategy].	
14. Omission <sup>1</sup>	Leaving a gap when not knowing a word and carrying on as if it had been said.	<i>then... er... the sun is is... hm sun is... and the Mickey Mouse....</i> [Retrospective comment: <i>I didn't know what 'shine' was.</i> ]	
15. Retrieval	In an attempt to retrieve a lexical item saying a series of incomplete or wrong forms or structures before reaching the optimal form.	<i>It's brake er... it's broken broked broke.</i>	F&K

Table 1 (continued)

*Inventory of Strategic Language Devices with Descriptions / Definitions, Examples (Based on Dörnyei & Scott, 1995a, 1995b), and Indications Whether They Were Included in Any Other Taxonomies (T=Tarone, 1977; F&K=Færch & Kasper, 1983b; B=Bialystok, 1983; P=Paribakht, 1985; W=Willems, 1987; N=Nijmegen Group)*

STRATEGY	DESCRIPTION	EXAMPLE	OTHER TAXONOMIES
16a. Self-repair	Making self-initiated corrections in one's own speech.	<i>then the sun shines and the weather get be... gets better.</i>	W
16b. Other-repair	Correcting something in the interlocutor's speech.	Speaker: ... <i>because our tip went wrong...</i> [...] Interlocutor: <i>Oh, you mean the tap.</i> S: <i>Tap, tap...</i>	
17. Self-rephrasing <sup>2</sup>	Repeating a term, but not quite as it is, but by adding something or using paraphrase.	<i>I don't know the material... what it's made of...</i>	(Tarone & Yule, 1987)
18. Over-explicitness (waffling) <sup>3</sup>	Using more words to achieve a particular communicative goal than what is considered normal in similar L1 situations.	(This CS was not included in Dörnyei & Scott's, 1995a, 1995b, taxonomy)	(Tarone & Yule, 1987)
19. Mime (nonlinguistic/paralinguistic strategies)	Describing whole concepts nonverbally, or accompanying a verbal strategy with a visual illustration.	[Retrospective comment:] <i>I was miming here, to put it out in front of the house, because I couldn't remember the word.</i>	T, F&K, B, P, W; N: under either "analytic" or "holistic strategies"
20. Use of fillers <sup>4</sup>	Using gambits to fill pauses, to stall, and to gain time in order to keep the communication channel open and maintain discourse at times of difficulty.	Examples range from very short structures such as <i>well; you know; actually; okay</i> , to longer phrases such as <i>this is rather difficult to explain; well, actually, it's a good question.</i>	
21a. Self-repetition <sup>5</sup>	Repeating a word or a string of words immediately after they were said.	[Retrospective comment:] <i>I wanted to say that it was made of concrete but I didn't know 'concrete' and this is why "which was made, which was made" was said twice.</i>	(Tarone & Yule, 1987)
21b. Other-repetition	Repeating something the interlocutor said to gain time.	Interlocutor: <i>And could you tell me the diameter of the pipe? The diameter.</i> Speaker: <i>The diameter? It's about er... maybe er... five centimeters.</i>	
22. Feigning understanding <sup>6</sup>	Making an attempt to carry on the conversation in spite of not understanding something by pretending to understand.	Interlocutor: <i>Do you have the rubber washer?</i> Speaker: <i>The rubber washer? ... No I don't.</i> [Retrospective comment: <i>I didn't know the meaning of the word, and finally I managed to say I had no such thing.</i> ]	
23. Verbal strategy markers <sup>7</sup>	Using verbal marking phrases before or after a strategy to signal that the word or structure does not carry the intended meaning perfectly in the L2 code.	E.g.: (strategy markers in bold): (a) marking a circumlocution: <i>On the next picture... <b>I don't really know what's it called in English...</b> it's uh this kind of bird that... that can be found in a clock that strikes out or [laughs] comes out when the clock strikes; (b) marking approximations: <i>it's some er... it's some kind of er... paper;</i> (c) marking foreignizing: <i>... a panel [with an English accent], <b>I don't know whether there's a name in English or not</b> [laughter] just it's a panel flat;</i> (d) marking literal translation: <i>it's er... a smaller medium flat and in, we call them blockhouse, but it's not it's not made of blocks;</i> (e) marking code switching: <i>the bird from the clocks come out and say "kakukk" or I don't know what;</i> see also the example for message abandonment.</i>	
24a. Direct appeal for help	Turning to the interlocutor for assistance by asking an explicit question concerning a gap in one's L2 knowledge.	<i>it's a kind of old clock so when it strikes er... I don't know, one, two, or three 'clock then a bird is coming out. What's the name?</i>	T, F&K, W
24b. Indirect appeal for help	Trying to elicit help from the interlocutor indirectly by expressing lack of a needed L2 item either verbally or nonverbally.	<i>I don't know the name...</i> [rising intonation, pause, eye contact]	T, F&K, W
25. Asking for repetition	Requesting repetition when not hearing or understanding something properly.	<i>Pardon? What?</i>	
26. Asking for clarification	Requesting explanation of an unfamiliar meaning structure.	<i>What do you mean?, You saw what?</i> Also 'question repeats,' that is, echoing a word or a structure with a question intonation.	W
27. Asking for confirmation	Requesting confirmation that one heard or understood something correctly.	Repeating the trigger in a 'question repeat' or asking a full question, such as <i>You said...?, You mean...?, Do you mean...?</i>	W
28. Guessing	Guessing is similar to a confirmation request but the latter implies a greater degree of certainty regarding the key word, whereas guessing involves real indecision.	E.g.: <i>Oh. It is then not the washing machine. Is it a sink?</i>	



Table 1 (continued)

*Inventory of Strategic Language Devices with Descriptions/Definitions, Examples (Based on Dörnyei & Scott, 1995a, 1995b), and Indications Whether They Were Included in Any Other Taxonomies (T=Tarone, 1977; F&K=Færch & Kasper, 1983b; B=Bialystok, 1983; P=Paribakht, 1985; W=Willems, 1987; N=Nijmegen Group)*

STRATEGY	DESCRIPTION	EXAMPLE	OTHER TAXONOMIES
29. Expressing non-understanding	Expressing that one did not understand something properly either verbally or nonverbally.	Interlocutor: <i>What is the diameter of the pipe?</i> Speaker: <i>The diameter?</i> I: <i>The diameter.</i> S: <i>I don't know this thing.</i> I: <i>How wide is the pipe?</i> Also, puzzled facial expressions, frowns and various types of mime and gestures.	
30. Interpretive summary	Extended paraphrase of the interlocutor's message to check that the speaker has understood correctly.	<i>So the pipe is broken, basically, and you don't know what to do with it, right?</i>	W
31. Comprehension check	Asking questions to check that the interlocutor can follow you.	<i>And what is the diameter of the pipe? The diameter. Do you know what the diameter is?</i>	W
32. Own-accuracy check	Checking that what you said was correct by asking a concrete question or repeating a word with a question intonation.	<i>I can see a huge snow... snowman? snowman in the garden.</i>	
33a. Response: repeat	Repeating the original trigger or the suggested corrected form (after an other-repair).	See the example of other-repair.	
33b. Response: repair	Providing other-initiated self-repair.	Speaker: <i>The water was not able to get up and I...</i> Interlocutor: <i>Get up? Where?</i> S: <i>Get down.</i>	
33c. Response: rephrase	Rephrasing the trigger.	Interlocutor: <i>And do you happen to know if you have the rubber washer?</i> Speaker: <i>Pardon?</i> I: <i>The rubber washer... it's the thing which is in the pipe.</i>	
33d. Response: expand	Putting the problem word/issue into a larger context.	Interlocutor: <i>Do you know maybe er what the diameter of the pipe is?</i> Speaker: <i>Pardon?</i> I: <i>Diameter, this is er maybe you learnt mathematics and you sign er with th this part of things.</i>	
33e. Response: confirm	Confirming what the interlocutor has said or suggested.	Interlocutor: <i>Uh, you mean under the sink, the pipe? For the...</i> Speaker: <i>Yes. Yes.</i>	
33f. Response: reject	Rejecting what the interlocutor has said or suggested without offering an alternative solution.	Interlocutor: <i>Is it plastic?</i> Speaker: <i>No.</i>	

<sup>1</sup>Dörnyei and Scott (1995a, 1995b) first discussed these three strategies; they are stop-gap devices whose use is motivated by the assumption that the over-determined, redundant nature of language normally allows the listener to guess the incomplete or missing word from the context, much as in a cloze or a C-test. For this reason, these strategies are not merely instances of message reduction or abandonment. Dörnyei and Scott found few unambiguous examples of these strategies in their corpus but, for example, mumbling is very common in languages with complex verb conjugation systems, where the speaker often swallows the conjugation suffix about which he/she is uncertain.

<sup>2</sup>Tarone and Yule (1987) first identified this strategy. They assumed that it was used with non-native listeners for whom the speaker wants to make the task easier. In Dörnyei and Scott's (1995a, 1995b) investigation, however, the listener's (that is, the interviewer's) L2 competence was superior to the speaker's; that such strategies were still used points to their more general applicability. As the retrospection extract demonstrates, self-repetition is related to over-explicitness, stemming from speakers' uncertainty about whether their L2 language use expresses their meaning closely enough.

<sup>3</sup>Tarone and Yule (1987) first identified this strategy as a CS but Blum-Kulka and Olshtain (1986) also discussed the language phenomenon; Edmondson and House (1991) call it "waffling", defining it as "excessive use of linguistic forms to fill a specific discourse 'slot' or 'move'" (p. 273); they suggested that it is caused by speakers' insecurity about their L2 ability as well as by not having access to standardized routines or phrases.

<sup>4</sup>Fillers make up a broad category, including words and phrases used to fill pauses, cover for hesitations, gain time, and provide smooth transformation in breakdowns. Rohde (1985) talked about the function of such gambits as "safe islands" (pp. 48-49) onto which the speaker can jump when experiencing problems, which very aptly describes a core feature of fillers. On the other hand, fillers also fulfill a number of subtle discourse roles (see Edmondson & House, 1981; Færch & Kasper, 1984b), some of which are definitely not problem-oriented; hence, it is difficult to tell the strategic and non-strategic uses apart.

<sup>5</sup>Tarone and Yule (1987) pointed out that research has paid little attention to a very common interlanguage phenomenon, the frequent repetitions of words or whole structures and clauses. They argue that repetitions are CSs used for two purposes: (a) to stall, and (b) to provide the listener with another chance to hear and process the information. Chen (1990) emphasized the "communication maintenance" function of repetition in Chinese students' use of English: "Only one avoidance strategy was used by one low-proficiency learner. The learners would rather carry on the communication task by repeating what they had said than avoid the communication task" (p. 174).

Table 2  
Various Taxonomies of Communication Strategies

Tarone (1977)	Færch & Kasper (1983b)	Bialystok (1983)	Paribakht (1985)	Willems (1987)
AVOIDANCE Topic avoidance Message abandonment	FORMAL REDUCTION Phonological Morphological Syntactic Lexical	L1-BASED STRATEGIES Language switch Foreignizing Transliteration	LINGUISTIC APPROACH Semantic contiguity -Superordinate -Comparison * Positive comparison Analogy Synonymy * Negative comparison Contrast & opposit. Antonymy Circumlocution -Physical description * Size * Shape * Color * Material -Constituent features * Elaborated features -Locational property -Historical property -Other features -Functional description Metalinguistic clues	REDUCTION STRATEGIES Formal reduction -Phonological -Morphological -Syntactic -Lexical Functional reduction -Message abandonment -Meaning replacement -Topic avoidance
PARAPHRASE Approximation Word coinage Circumlocution	FUNCTIONAL REDUCTION Actional red. Modal red. Reduction of propositional content -Topic avoidance -Message abandonment -Meaning replacement	L2-BASED STRATEGIES Semantic contiguity Description Word coinage		
CONSCIOUS TRANSFER Literal translation Language switch		NON-LINGUISTIC STRATEGIES		
APPEAL FOR ASSISTANCE				
MIME	ACHIEVEMENT STRATEGIES Compensatory strategies -Code switching -Interlingual transfer -Inter-/intra-lingual transfer -IL based strategies * Generalization * Paraphrase * Word coinage * Restructuring -Cooperative strategies -Non-linguistic strategies Retrieval strategies			ACHIEVEMENT STRATEGIES Paralinguistic strategies Interlingual strategies -Borrowing/code switching -Literal translation -Foreignizing Intra-lingual strategies -Approximation -Word coinage -Paraphrase * Description * Circumlocution * Exemplification -Smurfing -Self-repair -Appeals for assistance * Explicit * Implicit * Checking questions -Initiating repair

Table 2 (continued)

Various Taxonomies of Communication Strategies

Bialystok (1990)	Nijmegen Group	Poulisse (1993)	Dörnyei & Scott (1995a, 1995b)
ANALYSIS-BASED STRATEGIES CONTROL-BASED STRATEGIES	CONCEPTUAL STRATEGIES Analytic Holistic LINGUISTIC/CODE STRATEGIES Morphological creativity Transfer	SUBSTITUTION STRATEGIES SUBSTITUTION PLUS STRATEGIES RECONCEPTUALIZATION STRATEGIES	DIRECT STRATEGIES Resource deficit-related strategies * Message abandonment * Message reduction * Message replacement * Circumlocution * Approximation * Use of all-purpose words * Word-coinage * Restructuring * Literal translation * Foreignizing * Code switching * Use of similar sounding words * Mumbling * Omission * Retrieval * Mime Own-performance problem-related strategies * Self-rephrasing * Self-repair Other-performance problem-related strategies * Other-repair
			INTERACTIONAL STRATEGIES Resource deficit-related strategies * Appeals for help Own-performance problem-related strategies * Comprehension check * Own-accuracy check Other-performance problem-related strategies * Asking for repetition * Asking for clarification * Asking for confirmation * Guessing * Expressing nonunderstanding * Interpretive summary * Responses
			INDIRECT STRATEGIES Processing time pressure-related strategies * Use of fillers * Repetitions Own-performance problem-related strategies * Verbal strategy markers Other-performance problem-related strategies * Feigning understanding

### Appendix 3                      Definitions of strategies targeted in the interventionist study

#### Direct strategies targeted in the training

1. “RESOURCING”- The speaker uses words, phrases, structures, etc suggested in the reference materials such as the students’ notes to help him/her.
2. “PARAPHRASING” - The speaker uses words or phrases of similar meaning to replace those that he/she does not know or cannot think of.
3. “USING SELF-REPETITION” - The speaker repeats words or phrases which he/she has just said as a stalling tactic to gain time to plan his/her speech.
4. “USING FILLERS” - The speaker delays his/her answers or responses by using fillers such as “well”, “actually”, “um”, etc.
5. “SELF CORRECTION” - The speaker hears himself/herself making a mistake in either pronunciation, choice of words, phrases, structures, etc. and corrects them during on-line speech production.
6. “ASKING FOR REPETITION” - The speaker asks the interlocutor(s) to repeat what he/she has not heard or understood.
7. “SEEKING CLARIFICATION” - The speaker asks the interlocutor(s) to clarify words, expressions or meaning which the speaker does not understand.
8. “SEEKING CONFIRMATION” - The speaker asks the interlocutor(s) to confirm what the speaker has heard is an accurate understanding of the interlocutor(s)’ messages.

#### Indirect strategies targeted in the training

1. PROBLEM IDENTIFICATION  
The speaker thinks about and identifies the purpose of the discussion and the requirements for the completion of the task.
2. PLANNING IDEAS IN ADVANCE  
The speaker plans in advance for his response and contribution to the discussion.
3. FUNCTIONAL PLANNING  
The speaker plans for and rehearses language aspects (e.g. vocab. , grammar, structures, pronunciation, and so on) needed for the discussion.
4. POSITIVE SELF TALK  
The speaker thinks positively to encourage himself/herself to reduce anxiety for the task.
5. ASKING FOR HELP  
The speaker gets additional explanation or help from a classmate regarding ideas of and/ or language for the discussion.
6. GIVING HELP  
The speaker responds to an appeal for explanation or help regarding ideas of and/ or language for the discussion.
7. EVALUATION  
The speaker reflects on and judges how well he/she has performed.

## Tables of all classes

## Appendix 4 Statistical details of students' proficiency scores

			Mean	Maximum	Minimum
Class 2A	TOTAL		62.52	88.13	42.34
	PART1		59.95	73.60	45.60
	PART2		63.90	94.96	41.04
	PART3		63.41	96.36	28.18
2B	TOTAL		60.80	76.81	42.51
	PART1		57.74	68.60	47.60
	PART2		61.74	83.94	37.59
	PART3		62.73	85.45	38.18
2C	TOTAL		68.16	86.94	42.58
	PART1		59.12	72.20	39.00
	PART2		65.92	91.38	30.44
	PART3		79.91	96.36	55.45
2D	TOTAL		65.21	92.04	42.33
	PART1		61.35	78.40	52.00
	PART2		63.60	98.22	30.41
	PART3		71.04	98.18	44.55
2E	TOTAL		57.23	74.68	28.91
	PART1		57.00	66.60	40.00
	PART2		59.55	80.78	31.12
	PART3		54.66	84.55	14.55

The table below shows the five classes are different in the total scores.

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
TOTAL	Between Groups	2879.334	4	719.834	7.528	.000
	Within Groups	19029.318	199	95.625		
	Total	21908.652	203			

Only classes A,B,D were chosen for the main study in the one-way ANOVA.

## Oneway

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
TOTAL	Between Groups	401.592	2	200.796	2.040	.135
	Within Groups	11615.583	118	98.437		
	Total	12017.175	120			

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PART1	Between Groups	267.964	2	133.982	3.862	.024
	Within Groups	4093.312	118	34.689		
	Total	4361.276	120			

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PART2	Between Groups	110.389	2	55.195	.308	.736
	Within Groups	21152.512	118	179.259		
	Total	21262.901	120			

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PART3	Between Groups	1732.892	2	866.446	4.595	.012
	Within Groups	22251.754	118	188.574		
	Total	23984.646	120			

## Ranks

	Type	N	Mean Rank
TOTAL	Class 2a:Even and High level	8	15.63
	Class 2a:Odd and High level	12	23.08
	Class 2b:Even and High level	12	19.00
	Class 2b:Odd and High level	8	23.75
	Total	40	
PART1	Class 2a:Even and High level	8	19.63
	Class 2a:Odd and High level	12	22.88
	Class 2b:Even and High level	12	19.17
	Class 2b:Odd and High level	8	19.81
	Total	40	
PART2	Class 2a:Even and High level	8	16.00
	Class 2a:Odd and High level	12	23.92
	Class 2b:Even and High level	12	20.17
	Class 2b:Odd and High level	8	20.38
	Total	40	
PART3	Class 2a:Even and High level	8	19.06
	Class 2a:Odd and High level	12	22.13
	Class 2b:Even and High level	12	18.67
	Class 2b:Odd and High level	8	22.25
	Total	40	

Test Statistics<sup>a,b</sup>

	TOTAL	PART1	PART2	PART3
Chi-Square	2.793	.726	2.221	.830
df	3	3	3	3
Asymp. Sig.	.425	.867	.528	.842

a. Kruskal Wallis Test

b. Grouping Variable: Type

## NPar Tests

### Kruskal-Wallis Test

#### Ranks

	Type	N	Mean Rank
TOTAL	Class 2a:Even and Low level	12	23.75
	Class 2a:Odd and Low level	8	22.75
	Class 2b:Even and Low level	8	20.88
	Class 2b:Odd and Low level	12	15.50
	Total	40	
PART1	Class 2a:Even and Low level	12	23.92
	Class 2a:Odd and Low level	8	25.06
	Class 2b:Even and Low level	8	20.56
	Class 2b:Odd and Low level	12	14.00
	Total	40	
PART2	Class 2a:Even and Low level	12	24.50
	Class 2a:Odd and Low level	8	19.63
	Class 2b:Even and Low level	8	21.25
	Class 2b:Odd and Low level	12	16.58
	Total	40	
PART3	Class 2a:Even and Low level	12	22.17
	Class 2a:Odd and Low level	8	22.56
	Class 2b:Even and Low level	8	21.19
	Class 2b:Odd and Low level	12	17.00
	Total	40	

#### Test Statistics<sup>a,b</sup>

	TOTAL	PART1	PART2	PART3
Chi-Square	3.427	5.959	2.830	1.600
df	3	3	3	3
Asymp. Sig.	.330	.114	.419	.659

a. Kruskal Wallis Test

b. Grouping Variable: Type

## NPar Tests

### Kruskal-Wallis Test

**Scores of class 2A**

<b>Class</b>	<b>Number</b>	<b>Sex</b>	<b>Total</b>	<b>Paper 1</b>	<b>Paper 2</b>	<b>Paper 3</b>
2A	1	Female	61.32	57.40	63.38	62.73
2A	2	Female	68.70	59.80	67.48	79.09
2A	3	Male	42.34	48.00	49.35	28.18
2A	4	Male	63.41	57.80	65.61	66.36
2A	5	Male	67.77	56.00	68.88	78.18
2A	6	Male	59.68	60.00	56.16	63.64
2A	7	Male	59.87	56.60	66.96	54.55
2A	8	Female	74.79	63.00	77.97	82.73
2A	9	Female	77.13	73.00	76.68	81.82
2A	10	Female	59.98	59.00	59.27	61.82
2A	11	Male	60.44	65.00	48.05	70.91
2A	12	Male	53.28	58.00	55.84	45.45
2A	13	Male	67.52	54.80	70.70	76.36
2A	14	Female	59.61	61.20	54.23	64.55
2A	15	Female	68.80	57.80	77.61	69.09
2A	16	Female	57.11	59.00	56.16	56.36
2A	17	Female	74.09	60.00	74.08	88.18
2A	18	Male	58.51	58.20	65.77	50.00
2A	19	Female	88.13	71.60	94.96	96.36
2A	20	Male	80.57	73.60	80.78	87.27
2A	21	Female	63.58	59.60	75.79	52.73
2A	22	Male	63.45	58.00	62.55	70.00
2A	23	Female	56.90	58.40	50.86	62.73
2A	24	Male	54.22	53.60	57.45	50.91
2A	25	Female	59.91	59.40	62.49	57.27
2A	26	Female	61.72	62.40	64.83	57.27
2A	27	Female	65.64	69.00	66.03	61.82
2A	28	Male	56.83	69.20	52.26	50.00
2A	29	Male	53.83	66.20	52.78	42.73
2A	30	Male	64.99	54.00	66.18	74.55
2A	31	Male	55.16	57.40	52.31	56.36
2A	32	Female	44.96	45.60	41.04	49.09
2A	33	Female	75.27	63.20	79.06	82.73
2A	34	Male	47.62	49.60	57.51	33.64
2A	35	Male	77.93	69.60	83.84	79.09
2A	36	Male	57.72	54.40	59.32	59.09
2A	37	Female	52.20	56.00	46.39	55.45
2A	38	Female	59.77	62.20	56.83	60.91
2A	39	Male	64.44	62.40	67.53	62.73
2A	40	Male	61.56	57.80	71.17	53.64



**Scores of class 2B**

Number	Sex	Total	Paper 1	Paper 2	Paper 3
1	Female	48.97	56.80	49.90	40.00
2	Female	76.81	68.60	83.94	76.36
3	Female	61.06	53.40	60.00	70.00
4	Female	69.10	61.40	69.46	76.36
5	Female	67.69	56.80	72.51	72.73
6	Male	61.92	58.80	64.57	61.82
7	Female	71.44	65.40	74.60	73.64
8	Male	64.59	60.00	59.43	75.45
9	Male	55.36	56.20	61.33	47.27
10	Female	67.04	57.80	66.98	76.36
11	Male	54.81	50.00	58.98	54.55
12	Male	51.35	53.60	54.35	45.45
13	Male	47.96	50.20	44.44	50.00
14	Male	63.44	57.80	70.92	60.00
15	Female	70.54	60.40	66.60	85.45
16	Male	49.78	53.00	47.68	49.09
17	Female	42.51	52.80	37.59	38.18
18	Male	58.68	65.60	57.14	53.64
19	Male	55.66	55.40	59.05	51.82
20	Female	73.95	65.80	79.43	75.45
21	Female	69.22	66.80	75.81	63.64
22	Female	53.13	55.40	53.84	50.00
23	Female	45.67	56.80	39.68	41.82
24	Female	58.47	58.80	59.17	57.27
25	Male	46.35	47.60	44.57	47.27
26	Male	52.00	53.60	45.59	58.18
27	Male	67.27	56.40	66.48	79.09
28	Female	75.79	64.20	80.38	81.82
29	Male	57.67	52.00	58.92	61.82
30	Male	67.26	53.80	70.10	77.27
31	Male	44.37	52.00	39.43	42.73
32	Male	62.23	53.40	69.84	61.82
33	Female	68.77	59.80	69.90	76.36
34	Female	71.52	63.40	77.21	72.73
35	Male	69.67	56.00	74.67	77.27
36	Female	63.27	53.80	65.52	70.00
37	Male	68.43	63.40	70.54	70.91
38	Female	65.50	57.60	71.30	66.36
39	Male	57.41	65.40	45.71	63.64
40	Male	55.33	59.40	51.87	55.45

## Appendix 5                      Demonstration of the thinking aloud process

### Teacher's notes

For 2E Oral (Odd numbers) **ONLY**

28 Jan 2000 (Fri)

Strategy 2: Paraphrasing

### Objective:

By the end of the lesson, you will be able to understand and evaluate the use of *paraphrasing* as the second strategy to overcome the difficulty of not knowing what words to use in speaking.

### Introduction 15 min

#### Task 1:

Look at the list of 16 things that can be found on the island. The teacher is going to describe three of them. She pretends that she does not know the names of the things. Guess what strategy she is using when she does not know the words.

#### 1. Crabs

*"There are some .. erh .. what should I call them? They are some kind of little things . You know they have little legs on each side of their bodies. They also have hard shells to protect them."*  
(Purpose: think aloud when using paraphrasing so that the students may be guided to know what paraphrasing is. The above is my suggestion only; you may use your own words. The idea is to show students that they should try their best to think of words to substitute some words they don't know by using the strategy paraphrasing. Don't tell them the strategy right away. Guide them to guess. )

**What strategy is the teacher using to help you understand what she is describing?**

#### 2. Marsh

*"Well how should I describe it? Ur let me see it's a kind of wet and dangerous place. It's a like a little wet forest."* (Again you may use your own words.)

**What strategy is the teacher using to help you understand what she is describing?**

*(Continue to guide students to guess what strategy to use if they don't know a word or the name of something.)*

#### 3. Snakes

*"OK let me see. They are something which everybody is afraid of seeing. They move along the ground silently and are dangerous."*

**What strategy is the teacher using?** (same as the above)

The teacher is going to ask two classmates to describe two more things by using the same strategy. Guess what the two things are.

*(Purpose: consolidate understanding by guiding two students to paraphrase in front of the whole class.)*

## Appendix 6 Sample training material for E1 and for E2

For 2E Oral (Odd numbers) ONLY

20 Jan 2000 (day 6)

### Objectives:

By the end of the lesson, you will be able to:

- understand what strategies might be useful to help you overcome the difficulty of not knowing what words to use when doing oral activities in English.
- tell the teacher what you think about the strategy in helping you overcome the difficulty.

### Questionnaire (10-15min)

Do the questionnaire. There are no right or wrong answers. Just circle the **TRUE** answers.

<b>Introduction 15 min</b>
----------------------------

In the coming oral lessons, the teacher is going to introduce some strategies that may help you in doing oral activities.

### Guess what the teacher is doing when she cannot think of what words to use to express meaning

#### Activity 1:

- Look at the following items. The teacher is going to describe every item.
- Pay attention to the meaning and the pronunciation.

#### Suggested adjectives/phrases to use

*Square, oval, rectangular, wide, narrow, plain, striped, spotted, flowery, checked, with round handles/ leather/flowers/a ribbon, made of string/leather/straw/wool/cloth*

NOW the teacher is trying to describe each item. She is thinking aloud so that you may know what difficulties she is having.

### PICTURES A

- (1) What difficulties is she having when trying to describe the pictures?
- (2) What is she doing to overcome the difficulties?

#### Activity 2 (15 min):

Now look at the pictures on this page. The teacher will ask three students to come to the front of the class and guide them to think aloud when trying to describe the pictures.

### PICTURES B

**Introducing strategies 15 min**

- **What is a strategy ?**

*It is a special skill or method that we use to help us overcome some difficulties in learning to speak English.*

For example, if you don't know what words to use to express meaning, then you might want to use the words or phrases suggested in the teacher's notes.

Starting from this lesson, your teacher will introduce some strategies for you to try out. They aim to help you overcome different kinds of difficulties when you try to speak in English.

**Strategy 1: Resourcing**

**What is "Resourcing"?**

***Resourcing** is a strategy. In **Resourcing**, we use the teacher's notes, textbooks, dictionaries, etc. to help us overcome the difficulty of not knowing what words (e.g. nouns, adjectives, sentence structures) to use express meaning.*

For example,

If you don't know what words to use to describe the pictures, you may use the list of words given to help you. For example, you may use "with a round handle" and "made of straw" to help you describe a handbag.

The list of words given to you is a **Resource** which you may use in speaking.

So if you use the list of words given to help you know what words to use, you use the strategy "**Resourcing**" to help you speak. You may also use a dictionary to look for the words you want when it is not yet your turn to speak in group discussion. The dictionary is also a **Resource**.

**Practise "Resourcing" 15 min**

**Finding things on an island**

*Activity 3* : Describing things on the island

- Look at the map and the list of 16 things on the island.
- As a group you need to find out where the 16 things are on the map.
- Before finding out where the things are, you need to supply at least one INTERESTING adjective to describe each of the 16 things.
- Try using the strategy "**Resourcing**" i.e. using the list of suggested words below to help you.
- The teacher will explain the meaning and the pronunciation first.

List of suggested adjectives that you may use

*ruined, edible, delicious, poisonous, large, dangerous, high, running, stagnant, ripe, hidden, safe, harmless, dead, apple, dark, etc.*

- Look at the map now. The teacher is *thinking aloud* to show you how she is using the strategy “**Resourcing**” to help her overcome the difficulty of not knowing what adjectives to use.
- Now work in groups of 4 and take it in turns to describe the remaining things on the map with adjectives. You may use the list of words given or think of any other adjectives.
- Write down the suggested adjectives next to the pictures on the map.

**Activity 4: Mapping the island (25 min)**

1. Work in groups of 4.
2. Each member has a card with information about where 4 of the 16 things are and a group map of the island.
3. As a group, find out where the 16 things are on the map.

Resources you may use:

- list of things with adjectives on page 5.
- list of questions and answers as follow.

Questions you may use:

Can you tell me where the \_\_\_\_\_ is/ are please?

OR

Do you know where the \_\_\_\_\_ is/ are please?

Yes, there is/ are \_\_\_\_\_ in square A3.

4. Take it in turns to ask questions. Each member should ask one question at a time. The one who has the answer should reply until the whole group finds out all the 16 things on the map.
5. Put down all the 16 things (with adjectives) on the map.
6. Decide where to camp. The adjectives you have put down to describe the things may help you decide.

<b>Post –task discussion 10 min</b>
-------------------------------------

How far did you use the list of adjectives given to you to describe the 16 things? Why?

1	2	3	4	5
very little				a lot

How far did you use the question form (i.e. Can you tell me where the ..... is/are?) ? Why?

1	2	3	4	5
very little				a lot

The end

For 2C Oral (even numbers) **ONLY**  
Session 1

24 Jan 2000 (Day 2)

**Questionnaire (10-15 min)**

Do the questionnaire. There are no right or wrong answers. Circle the **TRUE** answers.

**Objectives:**

In the coming oral lessons, the teacher will introduce some strategies that may help you in doing oral activities.

By the end of this lesson, you will be:

- able to understand and use a strategy that might help you do better in group discussion in English.
- asked what you think about the strategy in helping you to do group discussion.

**Strategy 1: Problem identification**

**Introduction (10-15 min)**

You are given the following discussion task to do. What can help you do it better? What will you *think about* before the discussion starts? Why?

*An old student, Mr. Tam, has given your school a gift of HK\$ 35,000 to buy three things. In groups of four, discuss which three different things the school should buy and why. You should give at least two reasons for each of the things you have suggested.*

**What is the teacher trying to show you?**

Pay attention and tell what she is *thinking about* (i.e. *thinking aloud*).

**Try using “Problem Identification” as a strategy to help you do discussion better.**

**What is a strategy?**

*It is a special skill or method that we use to help us to learn.  
Sometimes we try out new strategies to try to improve our learning.  
Moreover, we may try out some new strategies to help us do oral tasks in English better.*

For example, you may want to watch *Pearl* to improve your listening skill. Or you may keep speak to an English person to improve your speaking skill.

The first strategy is “**Problem Identification**”.

- What is “**Problem identification**”?

**Problem Identification** is a learning strategy. In **Problem Identification**, we find out:

- (1) the purpose of a task or an activity;
- (2) what we need to do to complete the task.

This strategy helps us understand the purpose of the task so that we may do it better. For example, you are given the following discussion task.

**Task 1:**

*“Someone has told you that you can keep your home, your clothes and three other things that you own. You must give away everything else. Tell each other which three things you want to keep and why. Give three reasons for each of the things you have decided to keep.”*

The teacher is going to show you - by *thinking aloud* - how you may use problem identification to find out the purpose and what you need to do in the discussion task.

**Pay attention:**

What is the teacher *thinking about* when using the strategy: problem identification?

**Task 2:**

*“Imagine that you and some of your friends have agreed to arrange a birthday party for your little brother, who is only seven years old. Discuss what you can do. You can think about food, drink, games, where to go, how many friends to invite, etc. Then tell the class what you have decided.”*

Now try problem identification to help you understand the discussion task. Do what the teacher just showed you. What should you be *thinking about*?

The teacher is going to invite one student to stand in front of the class and guide him/her to *think aloud*.

- (1) What is the purpose of the discussion task?
- (2) How many things should you do in the task?

If you are *thinking about* the answers of these questions, you are using the strategy i.e. Problem Identification to help you understand the discussion topic and do the task better.

**Task 3: Mapping the island (Group work)**

You are ship-wrecked on an island. You must make a map of everything on the island, and then decide where you are going to make your camp.

The island has the following things:

snakes	coconuts	a large cave	a stream
a forest of dead tress	a marsh	Bananas	a small cave
good fishing	a wreck	mosquitoes	edible land crabs
a ruined hut	a river	mountains	a lake

Each member has a card with information about where 4 of the 16 things are and a group map of the island. As a group, find out where the 16 things are on the map. You may ask:

e.g. Can any one tell me where the snakes are?

Yes, they are in squares A3, B7 and F1.

Take it in turns to ask and answer until you find out everything on the map. Make sure that you mark on the group map where the 16 things are on the island.

**Try using Problem Identification: *Thinking aloud* (15 min)**

**Before** the discussion starts, what should you be *thinking about*?

Invite one member in your group to think aloud while he/she is trying to find out the purpose of the discussion and what you need to do. The other three members should listen. Help the one who is doing the *think aloud* if he/she misses out anything or does not understand any words. You may use a dictionary to help you.

Pay attention to how the teacher is using the strategy: “Problem identification” after you have asked one member to try it out.

**Discussion (15 min)**

Now you may start the discussion.

**Post-task discussion (15 min)**

- Do you find it useful to use the strategy: “Problem Identification” by *thinking about* the purpose of the discussion and its requirements before it starts? Will it help you do the task better? Why?
- Do you have any difficulties when trying to use the strategy? Is it hard to think about the purpose and the requirements of a discussion task? What are the difficulties?
- Will you use the strategy in future? Why?



## Appendix 7                      Group discussion tasks to assess performance

*This instruction sheet must be returned to the teacher after the recording.*

### *Whole-class task*

#### **Recording activity: *Flooding!***

##### Situation:

There are four members in your family. There is a big typhoon and water is coming into your flat. You have 12 minutes to rescue things from your flat and leave.

The whole family wants to take all the sixteen items listed below. However, you don't have enough time to take everything. So you have to discuss with your family and agree on the order of importance of the 16 items. Put the most important thing under "1", the second most important under "2", the third most important under "3"....and the least important under "16" on the card board.

##### Things to rescue:

- Some insurance papers
- A family dog with a broken leg
- Some expensive jewellery, paintings and stamps
- All family photos
- A complete set of Titanic posters
- A computer with important information
- Your teddy bears and soft toys
- An expensive TV and Hi-Fi system
- Your beloved goldfish bought in a foreign country
- All ID cards and passports
- A basketball with Michael Jordan's signature
- Pretty plants from Japan
- Some papers to prove the ownership of the flat
- A video-tape of your parents' wedding
- A complete collection of McDonald's snoopy toys
- CD/ MD discs of all your favourite songs

When deciding on the order of the 16 items, think about the following question:

Why is the item important? Give as many reasons as possible.  
You may use the suggested ideas on page 2.

##### Suggested ideas:

- Can't be bought/ found in Hong Kong
- Travel again
- Buy a different one
- Borrow from your friends
- Will take a lot of time to replace
- No way to claim money
- No money to buy it/ them again
- It's priceless
- You can live without it/them
- Important to the whole family
- You love it very much. It's your life!
- Forget it and buy another one.

***Pull out group task*****Group discussion task: *Buying Body Parts!****Nov/Dec 1999 (Phase 1)****The group discussion should last about 12 minutes. Everybody should speak for about 3 minutes.*****Situation**

You are in the year 3000. You can now buy new parts for your body. The new parts are:

- x-ray eyes
- a super nose that can smell danger
- extra-strong bones that last for ever
- extra-strong teeth
- a super-smart brain that works better than a computer
- a pretty/handsome face that lasts forever
- high-power muscles
- a powerful stomach that digests anything you eat
- extra-strong hands
- super skin that does not change
- super hair that does not fall out
- extra-strong lungs
- powerful ears that can hear what other people think
- a super strong heart that lasts for 100 years
- powerful legs that can walk as fast as a car
- a powerful liver that turns anything you eat into nutrients

But you do not have money to buy all the new parts. As a group, decide which parts are more important and which are less important. Put the 16 body parts in order from 1 to 16. "1" is the most important; "2" is the second most important; "3" is the third most important .... And "16" is the least important.

During the discussion, you may answer the following questions:

Why do you want the new parts?  
 How can they help you? How can they change your life?  
 How are you going to use them?

**Some ideas to help you:**

- ◆ Happy
- ◆ Funny
- ◆ Exciting
- ◆ Healthy
- ◆ Protect myself
- ◆ Make me strong
- ◆ Run away fast
- ◆ Live forever
- ◆ Won't be hurt easily
- ◆ Can eat anything I like
- ◆ Can swim fast
- ◆ A boy is crossing a road
- ◆ Other people will like me
- ◆ Won't be late for school
- ◆ Will be beautiful forever
- ◆ Like a robot
- ◆ Like a ghost
- ◆ Will be unhappy
- ◆ Many people will be jealous of me because I'll be too smart
- ◆ Life is too long and boring
- ◆ Will know many unhappy things
- ◆ Will see many horrible things
- ◆ Will look strange
- ◆ Other people may not like me
- ◆ Other people may be afraid of me
- ◆ Will become too strong and may hurt other people

Note to teachers:

Please have students sit in groups of 4 according to the list overleaf.  
They have to stick to the same arrangement for the rest of the year for group discussion.

When you have finished explaining the instructions, give them 8 minutes to prepare for the discussion. (No teaching is expected. Thanks.) At the end of the 8 minutes, ask them to start recording.

Please ask the students NOT to stop the recording in the middle of the discussion and start again. Could you please stop all recording after 12 minutes?  
(Students may be allowed to finish early.)

A million thanks for your kindest help.

Some technical advice:

Please kindly ensure that:

1. The tapes are labelled by the students with their names and class numbers.
2. There are batteries.
3. The students know which button to press for recording!

GOOD LUCK AND HAPPY RECORDING!

***Buying Body Parts!***

***May/June 2000***

You are in the year 3000. You can now buy new parts for your body. However, you do not have money to buy all the parts. As a group, decide which parts are more important and which are less important. Put the most important part under "1", the second most important under "2", the third under "3", ... and the least important under "11" on the card board.

New body parts:

- ♣ extra-strong teeth that are as strong as a tiger's
- ♣ powerful legs that can walk as fast as a car
- ♣ super hair that does not fall out
- ♣ extra-strong hands that can lift things up to 100 pounds
- ♣ a super nose that can smell danger
- ♣ super skin that does not change
- ♣ x-ray eyes that can see in the dark
- ♣ extra-strong bones that last forever
- ♣ powerful ears that can hear what other people think
- ♣ high-power muscles that are as strong as a lion's
- ♣ a pretty/ handsome face that attracts the opposite sex

**Important:**

To do the discussion well, you need to :

- ♣ Explain each of your suggestions with at least **two** reasons /examples/ stories. Discuss each idea well. It is OK if you cannot finish ranking all the 11 items in 12 minutes.
- ♣ Give reasons to agree or disagree with each other. Do **NOT** simply take turns to give opinions; talk to each other. Everybody should say something.
- ♣ Listen and respond to suggestions from other members. The more you speak to each other in the group, the better the discussion.

You may discuss the following questions:

- ♣ *Why do you want the new parts?*
- ♣ *What can you do with them?*
- ♣ *How can they help you?*
- ♣ *How can they change your life?*
- ♣ *How will life be different without them?*

You may use the following ideas:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>♣ <i>Protect myself</i></li> <li>♣ <i>Make me strong</i></li> <li>♣ <i>Will know what other people think of me</i></li> <li>♣ <i>Look young forever</i></li> <li>♣ <i>Won't be hurt easily</i></li> <li>♣ <i>Can eat anything I like</i></li> <li>♣ <i>Can swim fast</i></li> <li>♣ <i>Other people will like me</i></li> <li>♣ <i>Won't be late for school</i></li> <li>♣ <i>Will be beautiful forever</i></li> </ul> | <ul style="list-style-type: none"> <li>♣ <i>Like a robot</i></li> <li>♣ <i>Will know many unhappy things</i></li> <li>♣ <i>Will see many horrible things</i></li> <li>♣ <i>Will look strange</i></li> <li>♣ <i>Other people may not like you</i></li> <li>♣ <i>Other people may be afraid of you</i></li> <li>♣ <i>Will become too strong and may hurt other people</i></li> <li>♣ <i>Will be unhappy</i></li> <li>♣ <i>Like a ghost</i></li> </ul> |
|---|---|

You may use the following structures:

- ♣ *think ... is the most/least important ... because ...*
- ♣ *... Is not as important as ... because ...*
- ♣ *I really think that ...*
- ♣ *I don't really agree with you.*
- ♣ *I'm not sure about that.*
- ♣ *I really don't agree at all.*
- ♣ *Are you sure ....?*
- ♣ *I don't really know.*
- ♣ *It all depends.*

## Appendix 8 Transcripts of 'whole-class' discussion tasks (see Table 4.3 in section 4.3.4)

Total no. of transcripts: 30  
Length per transcript: 5 min

No. 1

Total number of words produced: 588

But the house (...) house Kowloon king  
we can live  
Kowloon king also have paper to  
ha  
Kowloon also haven't  
=so I don't want to be a Kowloon king  
I I know u want to be a Kowloon queen (laughing)  
But the big typhoon will broken the house  
Then u that  
=Typhoon then  
U can live in it again  
U can take the important thing inside  
So what  
So u need to prove that u are the er house owner  
So what  
So u can live it again  
So u need this thing  
So what  
U can sell it or u can er  
Do u agree  
=I don't agree  
Why  
I just say u can 't *held* also  
I agree  
Thomas do u agree  
I  
Do u agree  
U are  
Agree  
Agree agree agree  
Ok fee  
Remember I agree u forever  
Er and then  
Family dog with a broken leg  
=I think the family photo  
Photos  
But a family dog with a broken leg er it is a living thing (.....)  
I think the gold fish is is so important

1

But the (.) but the goldfish didn't *afraid* of water  
I think the goldfish man will eat them (laughing)  
But the goldfish cannot buy in Hong Kong  
But it can swim  
So what  
Just a big typhoon just have wind no water  
What is here said  
*feeding*  
Did u see water not the not the paper water  
Ha  
Goldfish is  
(Chinese)  
Er  
Do u wish they  
I will take a family dog sorry  
But it is (.) it is a *broken* leg  
=So what  
If it is a *broken* leg (.) I wont' I won't take it  
The dog will die in it  
Let it die you life is very difficult  
I think whole family photo photos is too too important because u can't take um u can't  
take without either one will die  
Why  
It is a little thing  
The dog can swim  
How how can it swim  
Dog dog  
But the goldfish can swim better (.) the goldfish can swim it better  
But the goldfish will flood in the sea  
The dog will too  
Will too what mean will too  
The dog will will er (.....)  
Er go in to the sea  
=Go into the sea  
Ok  
Ok what (.) what is the third thing  
=I think I think um I will take the family dog now  
I think I will take the dog now (.) your family er  
Doesn't matter  
Oh we have time  
Then the goldfish (...) then goldfish  
=I don't think so  
Why  
The goldfish can swim  
But er u can't find it in the water  
So what (.) I can buy it  
It will u can't find it in Hong Kong  
It will  
I can go another country to buy it too  
I I won't go  
Why don't u go  
May be it  
I won't go  
It will spend a lot of money to go to the other country to buy this

2

So what (.) I love this  
It is a very lovely goldfish u love it very much  
I can't I haven't see them  
=U haven't see them  
Yes  
Agree  
I don't agree  
(Chinese)  
So er what do u think  
=Michael Jordan  
U will  
=U only like basketball  
No it is very valuable  
Why  
Because Michael Jordan  
=so er expensive jewelry paintings and stamps is also  
=Because Michael Jordan  
But you can find the name on the basketball  
You can find your name  
No (.) Michael Jordan er (.....)  
Hey quick

No. 2

Time: 5 min  
Total number of words produced: 551

you you need to (...) I know you need to (.) know this is your house otherwise you  
have no money to pay (.....)  
the second one is  
No need no need ok the second one then it is ar some paper to prove the ownship of  
your flat  
=Then then what  
Some insurance  
Ok ok ok ok  
The oth  
stop I will do it  
The first one is some insurance paper the fourth one is (.....)  
Yes this correct er some expensive jewelry painting and stamp  
family dog  
no the family dog last no what about the family dog (...) what is the number  
the number is  
go to die let it to die ok  
no  
an expensive TV  
no alternative for it  
ok let it ok for it a family dog with a *broken* leg (...) a computer with im ok a family dog  
with a broken leg for it a computer er (laughing) with important information and no no  
this one yes family pho no  
this one

this one is better  
for your father mother  
your father and mother is here you can you can  
a video I think this is ver ok ok expensive TV  
what er never mind an expensive (...)  
which one where is this one  
ok the video tape of your  
must no (screaming)  
but  
of your parents wedding (.....)  
no not this one this one (...) is the last could the die (laughing)  
no this is the same  
ok yes no no  
no *tiddy* bear *tiddy* bear (playfully)  
here here  
then  
er eight the eight is expensive TV and Hi Fi (laughing) (long pause)  
is let someone  
not  
yes talk about this one already  
yes yes (long pause)  
the ninth one is all family photo (...) and number ten is CD and MD disc of all your  
favorite song (...) eleven one is pretty plant (laughing)  
no no no no (shouting)  
from Japan the twelve one is  
no no  
you try twelve which one is twelve  
this one this thing ok and this one a complete collect yes like this number one  
ar (laughing) (very long pause)  
(Chinese) yes yes yes  
no no no  
yes yes yes  
and the twelve one is a complete collection of McDonald snoopy toys  
no agree  
and the thirteen is your (.....) belove goldfish  
bought in  
bought in (...) (very long pause)  
how do u say this  
re *foregion* *foregion* (laughing) (playfully)  
quick say  
foreign country a basketball with the with with Michael Jordan signature is the last one  
is the last one (shouting and laughing) and your *tiddy*  
no no no  
u must say that (...) u must say something (laughing) u must say something ok u must  
say something u must say something u must  
I like teddy bear  
Ok the teddy bear nt ok the teddy bear and the soft toy is the last then (...) is the  
(laughing and playing and shouting)  
U know recording you sing not you  
Ok say say  
The ring time  
Say they don't say  
The fifteen is the complete set of Titanic poster the last one is (...) your *tendy* bear and  
soft toys

4

Miss (...) two guys don't say (*shouting*)

No. 3

Time: 5 min  
Total number of words produced: 599

What's number five  
The fifth one  
Fifth one (...)  
The fifth one must be be er (long pause) must be (.....)  
some expensive jewelry  
yes some  
=paintings and stamps  
=some expensive jew  
=this is very expensive  
and cost a lot very valuable  
not very much not very  
cost cost a lot  
cost a lot  
and the sixth one  
if you are poor u can sell it  
yes  
the sixth one is the is the basket basketball  
and a basketball with a Michael Jordan signature  
Michael Jordan signature  
=why  
be because is u  
because (long pause)  
u are poor u are poor  
=if u are poor and u sell er and get a lot of money  
and the and the young boy  
a lot of young boy  
a lot of young people  
people want to buy it the basketball  
people want to buy it an  
an ex expensive tv and hi fi system  
=no I don't think so  
=what do u think  
because is too too big  
too big  
too heavy to take it out  
yes  
so what do u think  
so I think must be a a (long pause)  
all family photos  
yes  
oh  
and one  
but but the family also can take the photos every time  
=oh so I think

5

Not too not too  
Because  
=But the but the plant is not useful  
=But it can't buy it can't buy again in Hong Kong  
Ok  
It can't buy it again in Hong Kong  
And a complete  
Snoopy snoopy  
Collection of McDonald snoopy  
Snoopy snoopy is difficult to find it again (.....)  
eleven la  
and what do u think is the eleventh one  
a com  
but but I think  
A complete set of of of

No. 4

Time: 5 min  
Number of words produced: 649

Four  
First  
I thought (.....)  
Oh oh  
Oh.  
Ah  
Um which one do u think is the most important  
Um.  
Ah I think is (I beg your pardon) your family dog with bok (.) *boken* leg  
=I think is a ID card  
Because um  
=He he will die  
He will  
He will say  
Yeah very important  
=I think is ID card  
No  
=Not ID card  
=Because life is the most important  
Then is gold fish  
Then goldfish  
Yes gold fish  
Goldfish goldfish where is goldfish  
=ID card  
Gold fish here  
=ID card  
=ID card is most important  
I don't think so  
ID card

and a computer with important information  
=but how can u bring it out  
u u can save this in the in a floppy disk floppy disk drive  
but a  
yes  
a floppy disk  
do u have (.) enough (...) time to save it u just u just have twelve minutes to save this  
ok  
all the all the all the important important (.....)  
no  
information  
*lee lee* members can  
are u sure u can save it  
because  
change change  
er twelve minutes is not very short time but it is not very long so  
=oh this  
so I think  
=buy from other country  
this  
can't buy but I  
=u can't buy another one (.) another golden fish (...) is buy from another country  
but I think er the (...) pity plant from Japan er is easier to take  
=yes yes definitely  
I think so  
Yes (.) the goldfish  
=Then it must be  
=is also important u can't get you can't wedding again (...) already  
So I think it is must be the second one  
The seventh  
=is a *vide* tape of your parents  
=Yes this is important (...) u can't yes u can't take it again (...) another is golden fish  
buy from another country (.) is also important  
=Why  
why  
What do u think it (..)  
it is a living thing  
And u can't buy it (.) u can't buy again  
U can't buy it again in in your  
In Hong Kong  
Yes  
Ok  
and  
And u can u can sell it and u can (...) u can earn a lot money  
Yes  
Then  
Then the I don't think so I think is er er snoopy  
Snoopy Yes  
Snoopy is difficult to find it again  
But this but the plants  
Oh but the *pity* plants from Japan  
Japan can't buy again  
U can also sell it and  
Yes this is number line

6

Yes ID card is number one  
No  
No  
=No  
=Passport passport  
Yes yes yes  
Passport  
Family photos  
=Oh passport passport is the most important  
No no  
=Ya ya ya family photo  
Yes  
And we  
U can't see any more  
=Your family members is very important  
=But if if no time u just take photo and no ID card (ID card) and no *insure*  
=U can  
=U can get again  
But passport  
No  
But is  
=U can get this again  
=Ya but so (*Chinese*) so (*Chinese*)  
=But family photo is very your so (*Chinese*) mother and father  
Can take again  
Photo  
=Yes photo can take again  
=And it is and it is your grandfather grandmother  
=Grandfather (no) grandmother grandmum she die or not she  
=Photo is not like yourself  
=Ok ok another  
=No no no no  
=ID card  
=Family photo  
ID card  
=I don't think the gold fish is important  
=ID card is  
Oh  
Living things  
Not important  
=U take the goldfish away and it will die too  
Oh where is tom  
=ID card ID card  
=U take u take the focusing  
Oh  
No  
U take the focusing  
ID card  
Family photo  
And  
Gold fish  
=A fish can not talk  
Chicken  
This two is

I am no make dog very important  
 No no  
 Family photo  
 Yeah  
 =Photo  
 A photo  
 =Not very important  
 =Id card  
 Photo  
 =Photo is more important  
 =And living things (..) living things is not u can't take a family photo again u know  
 No  
 =But u u u that seems to be die  
 =No  
 U see not ...can't. Like it  
 Dog  
 Is not important  
 No  
 It will die  
 =Living thing  
 =But it will die  
 U can tell  
 =It will die  
 Um and then  
 =If u something some money u die soon  
 =All family photo  
 =Um and then  
 Yes  
 ID card  
insure paper  
 =A computer with important information  
 =insure paper insure paper  
 Yeah  
 =U can get some money money  
 =No no no  
 =But could u learn to die  
 So papers is the own ownership of this of the  
 no no no  
 =is going to flooding  
 =U can go to another country  
 =Oh country insurance paper  
 =U can sell some them then u  
 =Flooding  
 U will earn some money  
 No  
 =The house full of what  
 No  
 The full of water  
 So u have that  
 Insuring  
 But insuring  
 No insure paper  
 Paper  
 =No no insure paper (.....)

9

(Then)  
 then er (...) let us take TV and MD disc of (.) all your favorite songs (.) it is very (.)  
 um important  
 (And expensive)  
 and expensive (.) we can't find that in Hong Kong  
 Oh I agree um let's we take um expensive TV and Hi Fi  
 =No it is so heavy we can't bring it  
 Yes so er  
 Ar I want to bring the goldfish  
 Um it is alive  
 Yes we can er we must bring it out (.)  
 ey how about the photo of er the family photo and the Michael Jordan signature (.) it is  
 my life  
 Um it is very ex portant in my life and (.) we  
 (Also)  
 We also take it (...)  
 Er oh no it is flooding let's get away  
 (finish)  
 Let us take er McDonald (...) snoopy toy  
 No you have er can't have any time (.) to bring (.) too many  
 But it is my life  
 Ok we  
 But it is not important  
 But I love it very much  
 Ok ok (.) take it out after we have er bring the important thing escape  
 (.....)  
 So the last thing to bring is Hi Fi it is so expensive (.) if we sell it out we can (.) sell a  
 lot money  
 But it is too heavy  
 But it is very expensive  
 (Sigh)  
 (Chinese) I have ok ok er I will I will do er I will do what I can ok  
 um (.) yes  
 (finish)  
 oh let's us go away the the house is er nearly (.) nearly flooding  
 ok (...)  
 lets go  
 The end  
 Note: few latched turns or overlapping talk; contributions sound even and well thought  
 out; generally fluent; accuracy ok.

No. 6

Total number of words produced: 963

it was because (.) the the children (...) when u are small er (.)  
 but (...)  
 young the photo you may er you you can't find it (...) u can't take it again (...)  
 but the basketball with Michael Jordan signature is more important

=I am very important u can take again  
 =DI DI DI DI DI  
 The ground the ground  
 Insurance paper  
 Oh buy it now  
 And then and then the the the  
 =And the some paper to prove the ground  
 Yeah  
 And then computer with it is  
 =And then this this this this  
 No  
 Ah  
 No u can dub a again  
 Eh  
 Jewelry is so expensive  
 A video aa  
 Of your parent wedding  
 =No no no this this this and this  
 And then Hi Fi system  
 =U can buy again  
 U can't buy  
 =But u too expensive u know  
 Has some game to win u know  
 And McDonald no pizza nothing this this  
 =The jewellery the jewellery  
 Yeah the expensive jewellery  
 =What is the poster of  
 =This is the  
 last one the poster what  
 =A plty plant or in Japan (um) um um and then your I think this will be

No. 5

Total number of words produced: 409

so then we need to take our family dog with a broke leg  
 yes it has life we must take Bobby out  
 hey I want to bring the McDonald snoopy (.) it is (.) very lovely and I love it very much  
 no you can't  
 (because)  
 because er  
 (too many)  
 too many er McDonald snoopy (.) it is too (.....) heavy  
 um (long pause)  
 and then how about the the the computer important information (.) you must take it  
 er it is very expensive (.) and we need to take it (.) out  
 I think so (long pause)  
 And you  
 And (.) and we need take some expensive jewelry  
 Yes it you er can have change some money  
 Yes maybe we can't buy it anymore

10

is more important also  
 =ha  
 but u can take another photo  
 another photo is not im not it or  
 but u haven't a typhoon is going soon  
 =yes  
 =but it is not important and not  
 another photo  
 yes  
 some some money  
 =not here  
 but u hasn't said u hasn't said  
 =it is important to the whole all family (...)  
 yes  
 read the paper (...)  
 whole family ar  
 u can't do this ar  
 so (.) I think I think it it must be this one  
 number five  
 not the fourth one  
 why fourth  
 u can sell them  
 =the family photo can't sell it (.) but jewelry and stamps can sell it (...) and get money  
 yes  
 why u think money is so (.) so important  
 =if u lost anything  
 so important  
 if u lost anything  
 louder please  
 do u think money to buy goods  
 to keep warm  
 if u don't like to eat u can die and u die and with the photo (.....) (giggling)  
 no (.....)  
 what  
 no one to say (...) sorry it is the fourth one  
 I don't think so  
 U don't think so why do  
 =I don't think so too  
 =Two disagree one agree  
 (Chinese) he no (.) we disagree one agree so go home to sleep  
 ok number five  
 number  
 ok put it  
 no number five is important family photo  
 and then number six  
 number six  
 expensive  
 I think  
 But I think a complete collection of McDonald's Snoopy.  
 =another one  
 it was because the the children when u are small  
 but but  
 young u may can't can't find it u can't take it again  
 =but but the basketball with Michael Jordan signature is more important

12

=but u can u can take a another photo  
is more important also  
ha  
=but u can take another photo  
=another photo is not im not it or  
=but u haven't a typhoon is going soon  
yes  
=but is not important and not  
=another photo  
=yes  
some some money  
not here  
but u hasn't said u hasn't said  
but  
so  
it is important to the whole all family  
yes  
read the paper  
whole family ar  
u can't do this ar  
so I think I think it it must be this one  
number five  
not the fourth one  
I think number  
why fourth one  
is is some  
it is expensive  
u can sell them  
family photo can't sell it but jewelry and this can sell it and get money  
no one buy  
yes  
why u think money is so so important  
if u lost everything and  
how about this  
do u think money to buy goods  
to keep warm  
=if u don't like to eat u can die and u die and with the photo (giggling)  
no  
what  
=no thing to say so it is the fourth one  
=I don't think so  
U don't think so why do  
=I don't think so too  
To two disagree one agree  
expensive  
(Chinese) he no (.) we disagree one agree so go home to sleep  
but  
ok number five  
number  
ok put it  
no number five is important family photos  
and then number six  
number six expensive  
I think

13

=u can don't listen into it  
=some some yes some is  
I love it very much  
=it is my life (laughing)  
but I hate it  
can't can't buy the *same* one again  
throw it I hate it very much  
no you can buy another  
No it is different ar  
I think the golden fish (..) golden fish is the last  
No no you can buy another

No. 7

Time: 5 min  
Total number of words produced: 421

(*very very long pause*)  
I think (....) I think it should be the er video tape of your parents wedding  
Wedding  
So Danny  
Danny yes  
A family photo too ya (*long pause*)  
No this is not important so many photo  
Then what  
Yes  
Then what  
I don't know  
Then then then find find the thing don't be crazy (*shouting*)  
Some paper (*long pause*)  
a a a a I had find it I had find it I had find it  
No I think this  
What  
No don't change anymore (*shouting*)  
No this is er  
No don't be crazy don't play  
Some *insure* paper (*shouting*)  
Insurance paper  
Should should be like this order  
Oh let let find find another six hurry up hurry up hurry up (*shouting*)  
Where is the six stupid (*long pause*)  
Don't play  
Don't play  
Say the third the third one first  
CD MD disk  
Yes  
Of all your favorite song  
CD MD disk  
No I think this some expensive jew paint paintings and stamp better (*very very long*  
pause)

=But I think a complete collection of McDonald Snoopy *tells*  
It is easily to er (.) bring it but it is too heavy and too thick  
=But it is expensive  
=But too too heavy  
=Too heavy but u can't bring it but snoopy  
Easy one  
Yeah  
But it is very cheap  
Is very cheap very cheap  
So I think the basketball with Michael Jordan  
No one buy this  
Also very cheap  
no  
Michael Jordan  
Ye cheaper cheap than jewelry  
No I I I don't think  
But but but  
But the basketball with Michael Jordan signature is important  
=Easy easy to bring ar  
How about the computer with important information  
=U can sell it  
May be it like a notebook but I think it is not a notebook  
U can't u can't bring it  
u can save u u can save it in the floppy disk  
in a floppy disk yeah  
Too long time  
Not too long time open a computer (....) about two minute  
But u have u just have twelve minutes  
Twelve minutes  
4 people in the home  
ok one people take it  
ok yes  
so I think it is not enough not very important (....)  
ok  
ok  
but do u agree (.) a basketball with Michael Jordan signature is (.) important  
but u can sell it  
ok yes it can sell it if u are er poor  
u can u can't buy it again  
yes yes  
ok number six  
and and the computer information (.) also u can't buy it  
again  
again  
and again  
so I think it can be the (....)  
um do u think number eight is CD or MD disk  
=oh it so cheap u can  
yes  
but it is very small u can bring it easily  
yes  
but but CD u can buy it (.) u can buy it  
is so cheap

14

So cheap (*laughing*) (*very very long pause*)  
(*Chinese*)  
(*Chinese*)  
I know  
Why don't u give me suggestion (*very long pause*)  
Ar  
Control the  
Quick stupid man (*very very very long pause*)  
Quick quick quick quick quick  
Quick quick quick  
It should be like this order  
Then what then then then then then  
Is it finish  
No not yet we have to  
Your sound is louder  
Speak louder you are louder  
Then  
Is it finish  
ya  
No  
No finish  
Finish  
Hey  
Finish  
We have to (....) order them we have to order them u know it is er the first important  
and this is the second important (*laughing, playfully*)  
Yes yes yes  
And this order should be like this (*very long pause again*)  
Um  
Like this like this  
Speak louder  
This is this is  
Remember the get it get it  
Do it from again of  
Of course not do it again  
This is already ok this is order is already ok  
No what that what that  
This this order is already ok and  
What that what  
Now where now where  
Say again say again  
No we have finished  
What that what that  
This order is not complete u know  
No time to do quick quick quick  
Its nine ten eleven and twelve then thirteen  
And prepare it  
Stupid  
She ar  
U think this is already ok ok ok (*very long pause*)  
Let me see the first is ID card then passport some insurance insu paper some paper to er



No. 8

Total number of words produced: 457

Oh I think some paper to prove the ownership of the flat  
 Why u think is important  
 I don't know  
 =U don't know ar  
 Just feeling  
 Oh u can't everything (..) by feeling  
 So  
 U can't so u u it's better for u to give me some reasons (...)  
 Um um  
 What do u think (..) Steven (...) Steven  
 I want to first listen Cynthia opinion first  
 No opinion why u thought this  
 Feeling  
 But u have some reason support u  
 I don't know (...)  
 Then u can't  
 Ok  
 I think with Cynthia because we have some paper to prove the ownership of our flat er  
 er we can get money because of the (.) because of the flat that protect us (...) ha ha it  
 quite important (..) it's really important  
 But we can we (..) what  
 Er what is the next one (..) how about your beloved gold fish bought in a fortune country  
 =It is really difficult for u to (..) go to a fortune fortune country again  
 Yes  
 =Because the when u went to this fortune country u bought a goldfish u know is very  
 (...) u know very important for the journey  
 =What do u think Steven u seem did not agree me  
 I think he is so slippy  
 Yes  
 Something wrong with Steven what's wrong with u (...)  
 Goldfish can be bought again and again and again so is not important  
 =So u went in you went to a fortune country again again again and again to bought  
 again to bought fish again again and again  
 No not the most important  
 =Then what do you think is important  
 Er (long pause)  
 some expensive paintings and stamps  
 =yes I think (..) what do u think Penny  
 agree  
 why why do u agree  
 money  
 Oh money  
 How to spell money Penny (giggling)  
 er (long pause) what's next what's next what's next  
 What's your opinion Cynthia  
 ar Maybe a basketball with Michael Jordan signature  
 ya it is worth saving  
 why is this Cynthia

17

(long pause)  
 the ten we choose CD or MD disk  
 disk of all your favorite song  
 which be because it is my (.....) famous songs  
 and u can listen to it when you are boring (.....) and eleven we choose a video tip of  
 your parents wedding because um the video tape of your parents is your memories  
 when you lost and or some accident had happen you can use it (...) for find them or the  
 other way is to remember it  
 the twelve is a compete collection of McDonald Snoopy toys  
 and the fifteen (.....)  
 because because  
 I am sorry I am sorry I am sorry  
 Be because it is different (..) difficult to buy the same one  
 =And we use a lot of time to collect it (.....)  
 The fifteen is the pity plant from Japan because it can't bought in Hong Kong (.....)  
 Fourteen  
 Fourteen  
 Fourteen er I choose a complete set of Titanic poster  
 Because it is only a posters so we don't think it is important to us so we put it to er  
 fourteen  
 And the fifteen is (...) my tidy bear and soft toys because they because (.) because I  
 can't forget it and buy another one  
 And the last we choose my belief beloved goldfish bought in a forin country we think  
 um because u know fish can swim and when there is some flooding here er the fish can  
 live itself and don't leave it yeah it will swim away it is it won't hurt him so we think it  
 is the last (...) is the most important thing is it. (.....)  
 (Long pause)

No. 10

Time: 5 min

Total number of words produced: 658

no hear me er have u have the (.) family er yes the radio type(.) video type  
 of your parents  
 of your parents  
 number 5 number 5  
 =maybe after this thing your fam your parent will die so this is very important  
 =yes yes yes  
 =and disk of all your favorite songs  
 yes er  
 family dog is boken  
 no favorite song u can (.) laugh  
 =not a sound suc suc suc u succeed and and don't do this first  
 keep the important thing  
 =I like basketball  
 =basketball  
 =computer with important information important  
 yes  
 (whisper)

no  
 what do u think Cynthia  
 It is worth saving  
 Really  
 Penny  
 Agree how about u Steven  
 of course  
 Penny  
 Agree  
 Cynthia  
 I agree  
 Um it's quite important to a fan of Michael Jordan (.....) I think is time for your  
 beloved gold fish bought in a fortune country it's time  
 Ok  
 How about a complete collection of McDonald snoopy toys (.) is very expensive (.) it's  
 money for one eight money eight money (...) eight dollar for each so so expensive so  
 expensive (laughing)  
 What's do u think  
 It is more expensive  
 But u can  
 Oh Penny u think TV is more expensive than a collection of McDonald ( yes ) snoopy  
 toys  
 Yes  
 Yes  
 =Why why

No. 9

Time: 5 min

Total number of words produced: 450

Er and and (...)  
 Some  
 and and the (...)  
 sixty  
 sixty sixty is some  
insure  
insure  
insure paper because we can get money if we have some money is die or hurt (.....)  
 and seven we we er choose some expensive jewelry and paintings and  
 stamps stamps because we can get money from this thing er and we can change it to  
 money and buy food from it so sometimes u can get money (.....)  
 eight we choose  
 the eight we er choose basketball because (..) if because this with Michael Jordan  
 signature er  
 important  
 er it is important to er (.) him (.....)  
 I love it I love it  
 I love it very much (...) its my life  
 And nine we choose (.....) we choose an expensive t v and hi fi (.....) system hi fi  
 system because we think we have spent a lot of money to buy this thing we can't lost it  
 and some when u go to other place u can get the information from TV too (.....)

18

some paper to prove the ownership of the flat  
 oh this is very important  
 yes  
 (Chinese) is er change the expensive TV  
 yes  
 number five  
 er  
 a dog a dog  
 =a dog is very important  
 =no no no no this is er er is change  
 (Chinese)  
 ok ok ok and this a complete set of Titanic  
 (Chinese)  
 no  
 poster  
 is the last one  
 =photo photo photo  
 car mon u say said carmon  
 yes  
 er  
 the song the song the song  
 =the song is not important  
 =McDonald is very important yes but but can't buy is no is no the  
 =ok ok number nine  
 no  
 =no  
 =number number 11 number 11  
 =no no no no no no no no no no ten  
 a compete compete number ten snoopy number nine  
 ten  
 ten  
 ten ten ten  
 don't move this  
 not we move  
 family photo  
 family photo  
 is very important  
 number  
 yes important and  
 u can change another one  
 =but maybe after this event your parents is die your family member is die  
 =no no no what  
 =if they die  
 =my family member are very young now  
 =how can how can photo again maybe after this er they will die  
 =no the first is goldfish  
 =goldfish goldfish  
 =goldfish  
 =number thirteen  
 why is goldfish  
 gold fish the first one  
 =but but but why  
 ok er  
 goldfish first one

20

the past  
 =watch your pet is very dear (laughing)  
 change change it  
 change  
 yes  
 and then the  
 complete  
 no no no this one  
 the Michael Jer Jordan  
 =Michael Jordan is so cheap  
 =no no cheap  
 cheap  
 =u say cheap u say cheap  
 =oh dear  
 yes  
 =has his signature signature is dear  
 a basketball  
 number 10 number 10  
 no no snoopy is not important u can go to (.) u can go to thailand to buy is so cheap  
 but is so expensive  
 what is no  
 yes yes yes  
 this town is not expensive no one to buy  
 some sp special  
 in this town  
 so cheap  
 =100 dollar  
 =hello kitty  
 =hello kitty  
 some expensive and then is number 1  
 no  
 stupid  
 so expensive  
 =this is very dear the dear thing first (.) this is so cheap only four hundred this thing is I  
 think is  
 four hundred  
 family photo why is not so  
 family photo we can we can we can photo it  
 =basketball is very dear may be sold thousand  
 oh oh something  
 =photo the photo is the photo er the photo I can we can to we can er photo it again  
 =ar may be after this event your family member is all die  
 no all die  
 all die we can't take the photo  
 =we can take another one  
 =no I have I have said will be they die  
 if die  
 die  
 in this typhoon  
 yes yes typhoon may be and then  
 =typhoon typhoon is not important (.) don't be die in typhoon typhoon only  
 not only may be they will die in this event  
 don't said die die die die  
 =CD CD dear or the basket ball is dear

21

know that  
 is that your house  
 if u get it  
 get it  
 then the government can rove that it is yours  
 u can strong (long pause)  
 how about number number six ar  
 number six ar number six  
 your belove goldfish bought in a forteen country  
 of course la u bought from the forteen country is very expensive la  
 but the goldfish can swim during the fooding oh then no need to take  
 u la (.....)  
 so what is lumber six  
lumber six ar um  
 a basketball with Michael Jordan signature  
 no need la no need la very cheap ar  
 (no need )  
 no need  
 (how cheap)  
 how cheap the basketball  
 I I ask  
 Is so expensive an  
 =I I can ask I I can ask him to give  
 And u can take the signature U take the signature so difficult and u sell so  
 =Yes is difficult and u can sell for money  
 Yeah  
 Money  
 So  
 So it is important  
 Ar Number seven  
 So is Number six  
 Number seven ar  
 Number seven  
 Yeah  
 Number seven er er let me see  
 =And expensive t v and hi fi system er  
 No no no no a complete collection of Mcdonald Snoppy  
 Toys  
 Toys  
 Why  
 Because u  
 No need ga  
 Er because u can not get it again if u lost them  
 Oh ok  
 May be u can  
 It may very expensive  
 =Er er er thinking lor thinking lor  
 How about u ar number seven what number eight  
 Ar an expensive t v and hi fi system  
 Why  
 Sell money lor  
 Sell money

I have said I have said the fact the fact is a basketball with Michael Jordan sign  
 signature is very dear dear  
 =The MD disk also dear  
 =Do u know what is dear the MD only three ok ok  
 =Number three  
 Maybe you can (....) change

No. 11

Total number of words produced: 628

I think some expensive jeller  
 Jelly? Expensive jelly  
Jeller jelly jellery painting stamps  
 stamps  
 why ar  
 Why ar  
 Because the jewelry those thing is very expensive ar u ar if u sell them you can  
 (giggling) if u sell them u can get more money and u buy new house (.)  
 What do u think is number (9.) what do u think  
 Number 4 ar computer with some important information  
 Why  
 Er no need ga because lei we can save the file in the (.) dish you know number five  
 It is not number four  
 It is no need ar ma  
 Is no need ar  
 No need ar no need la so what is number four ar  
lumber four ar  
 yes  
lumber five ar  
lumber four ar u say no need ar  
 Er a computer er  
 u say no need ar  
 A family dog with a broken leg la  
 A family a family  
 A family dog with a broken leg la  
 Yes  
 Why  
 If family dog with a broken leg  
 Because the dog is very poor it has it still living and (.) if she die during the flooding  
 then it is so poor er u know  
 so poor  
 it can't swim because of the boken leg  
lumber fle number fle  
lumber five  
 er lumber fle I think it should be (.)  
 some papers to rove ownership of the flat ar  
 good ar  
 yes ar  
 because er  
 because no people know (.) that

22

A disk la  
 How can u bing ar  
 U can U can trust this this is not so good ar  
 Cd md  
 Yes  
 Bring cd md disc  
 All all your favorite it is very cheap wor  
 No it is md is very expensive  
 =Not md disc  
 =Yes is only disc  
 Disc ar  
 If only hi fi no disc (.) how can u hear the chinese  
 Hi fi how can u  
 If you have ar a hi fi ar no use lor  
 You can listen (.) if you feel lonely you can listen (giggling) the ur (.)  
 Then I fling is  
 Then what ar  
 It is what ar  
Lumber eight if what  
Lumber eight is what ar

No. 12

Total number of words: 615

Good idea  
 Where was the idea  
 Dog  
 Er the dog is  
 How about the next  
 Why do u don't agree this Alan Pang  
 Because the dog not important er the dog can buy er many many and many (.....) are u  
 agree ray  
 No I am very not agree la  
 Me too  
 =Why  
 Why do u agree this  
 Because er (Why do u agree this) because the dog is just one in the world although the  
 dog has boken leg but he it  
 But in the world er it has many many dog  
 But u have live with it so many years and it is the son  
 =But the dog is very naughty so it is broken leg  
 =Why u know the dog is naughty  
 =It is very naughty and then book a leg  
 Ok it it was very naughty and then book a leg  
 =U are also naughty why u not book your leg (ha ha ha) so what about the fourth?  
 The Forth (..) ray  
 Thinking thinking la how about u any idea (laughing)  
 =Er I think I think basketball with Michael Jordan signature because Michael Jordan  
 (laughing)  
 Why u think Michael Jordan is the fourth Michael

24

=Because Michael is er (...) superstar  
 But but um  
 But ray don't agree Ray  
 I am agree the basketball with Michael Jordan signature not with Michael Jordan  
 (laughing)  
 Yes are u agree er (...) other or (Chinese)  
 But I think the gold fish is important  
 =But I think Michael Jordan is very good er  
 Better than u know  
 Better Gatta Oneil or Bryan  
 Basketball are bad  
 Why u think the basketball is (because we are cheap ) important  
 Because er this is very er  
 =some paper of your home prove the ownership er  
 =what do u say are u repeat  
 Some paper to prove the own ownership of the flat is important  
 Yes  
 Yes I  
 but  
 yes I (why) think it is important because your hey what is ar because (louder please )  
 your because (louder ) because your house is has some phoon typhoon to hit your house  
 and your house will destroy and then u have the pa er paper u can get the money (...)  
 for your house  
 good  
 =er are u agree some expensive stamps ( the name) and painter important  
 =how about u do after them  
 but er this this thing is not very heavy and u (ask Sam)can bring this Sam how about u  
 yes I am agree your er ideas  
 good u are very clever  
 thank you  
 how about u Ray  
 er I am thinking  
 How about your idea Ray Pang (laughing)  
 I think it er er I have repeat (.) it is painting are u agree ray  
 Yes I agree  
 Hey Alan  
 Hey Alan  
 Yes  
 Er do u think the TV and Hi Fi is important  
 No Ray what do u do (what do u think) because the TV and the Hi Fi is very heavy and  
 and er we can we have more money to buy this  
 How about the snoopy  
 Cheaper  
 Five dollar for each one (laughing)  
 Yen five yen for which one ar  
 And then have twenty eight  
 U have twelve to buy it (laughing)  
 Ray ar can can u give me more detail (laughing)  
 Alan  
 Yes  
 Do u think cd and md is important  
 CD and MD this month ok (long pause) (important) yes  
 No no  
 Hey important

25

=yes yes yes ID card  
 u can get it again  
 or  
 u can load it again  
 but it is it is important too (long pause)  
 no no no no then (long pause)  
 um a computer with important information  
 um I don't think this  
 reason  
 yes  
 reason  
 important information is very important  
 and then another reason  
 =another reason is the important information is very important  
 ha  
 =is very very very important  
 and u need the computer at the er (...) and the computer is very expensive  
 money mind  
 two still eleven  
 eleven only eleven paper only  
 is ok  
 goldfish bought in for  
 but the goldfish can swim  
 no  
 can swim  
 too dirty the water (can u swim ) (...) you die  
 u swim belong  
 =and then the (...) McDonald ( no no no) Snoopy u can't collect it  
 I hate to  
 No  
 Stupid thing  
 U can't collect it again ID card lor  
 Yes  
 Then ( this one ) some expensive jewelry  
 No ~~jewelry~~ jewelry  
 Jewelry (long pause)  
 And then I think snoopy  
 Snoopy is the last one  
 No snoopy  
 Last one  
 Snoopy  
 I like this one  
 Snoopy  
 Expensive TV and Hi Fi system  
 We like this  
 And then  
 Michael Jordan is the best I like Jordan  
 =Michael Jordan here  
 No snoopy first  
 Michael Jordan  
 No  
 Snoopy  
 ...

Ha then u repeat  
 Then MD  
 Oh this is not heavy u can bring this  
 Yes  
 How about Sam  
 Um I think ar later later (...)  
 I think the later is important  
 I think er all family photos is important

## No. 13

Total number of words produced: 501  
 No no no no u can buy  
 But have u got the money? Is very expensive u know  
 And then the second is a record er a leg of the *broken* leg dog of the office  
 Ok ok er  
 second is um yes family dog with a broken leg agree  
 agree  
 agree  
 agree  
 why agree why agree  
 very poor  
 very poor  
 broken leg  
 broken leg  
 u can buy another one  
 no  
 living thing  
 a life  
 yes living thing  
 u u can because is a life  
 because is a leg painful what painful u can painful  
 a life ok a life  
 um um  
 and then this  
 the photos  
 no  
 u cannot take again  
 no  
 no no no no (photos)  
 u u u can't find it again some is (...) u know some is  
 pass pass  
 =I think I think the photos is more better  
 the photo (.) I don't argue with u  
 =a computer with important information this this  
 ha CD MD (no no) disk u can u ( my favorite song ) u can load it again  
 =if I lose it I will very (.) unhappy u know  
 =buy it again  
 yes  
 u don't lose again u buy it again  
 and then waste again u waste your money

26

=Why why u can't  
 U can buy it from others  
 Yes  
 Someone someone buy it and someone sold it  
 Find the price  
 Yes this is the last  
 Michael Jordan would u maybe (.) maybe (.) Michael Jordan will die in the summer  
 Ya u can get the signature  
 Michael Jordan will not die  
 =No u can play the basketball but not the signature  
 Yes  
 Finish  
 That's all yeah

## No. 14

Time: 4.5 min  
 Total number of words produced: 366

er I am Amy I *flink* number one is all I D card and passport because (...) we can know  
 who are u easy for to find u  
 er number I am arrie I think number two is some we have to bring some paper to (...)  
 prove the *ownersheep* of the flat because er we can use it to *protect* our money get  
 what (long pause)  
 to pro to let people know that er (...) u we are the *fat's* ownership er (long pause)  
 number  
 number two I am I am Jane (... ) I think number 3 is some expensive jewelry paintings  
 and stamps (...) it is because to make money to protect u  
 I am Irene I think number 4 is all family photos er to find parents and good (...)  
 Yes (laughing)  
 Long long pause  
 and now  
 now  
 I am Amy I think number (...) number five is a computer with important information  
 because (...) because (...) because it is too heavy  
 =no no no yeah yeah yeah  
 Er number six is er I will take CD MD disc of all our er (...) all your favor song  
 because (.) er (...) because I have to let we (...) u may need to (...) listen it and it is  
 expensive  
 I am Jane I think number six is a basketball (laughing) with Michael Jordan signature  
 because it is important (...) it is difficult to get it  
 I am Irene I think number eight is your *belovefor* goldfish bought in a er *foulin*  
 country er because it (...) it is difficult difficult to because er it can't be bought in  
 Hong Kong  
 Hello I am Amy I think number nine is a family dog with a broken leg because I will  
 love dog very much  
 Er number ten is an expensive tv and hi fi system (.) we put it at the last because er it is  
 so heavy we can't easily to take it to er (...)  
 Number number  
 And and eleven is er a complete collection of McDonald Snoopy *talls* because it is all  
 all your favorite u collect it for long time  
 Last one

28

## No. 15

Total number of words produced: 478

Ok I know u frankie er how about this point  
 Michael Michael Michael  
 Michael  
 Michael  
 This one is also very important  
 Yeah  
 Because it is very famous and (yeah) and we can't get it again yeah  
 Not now (.) and it is outdated Michael Jordan  
 But I think many people still (.....)  
 =Maybe maybe  
 And er of course this is not important because CD of your favorite song u can bought it  
 (.) again (...)  
 Yes  
 =Yes borrow from your friend  
 From what posters of Titanic  
 Um maybe other collection  
 This two  
 Yeah (.....)  
 Pity um  
 This one when it is really can't do when u u can sell it for money (...) for life (.....)  
 is worth (....) I think this one can sell it for more money  
 Yeah (long pause)  
 And then we do it again  
 Do it yeah  
 Er do u agree at first  
 So let's have a double check (.....)  
 Ha yes double check  
 Er maybe (...) poster Titanic (.) Titanic poster does it (...) very important when u  
 Why  
 If are the actor one of the actor you may  
 The movie Titanic poster or the real Titanic poster is different (...) if er that's will  
 (.....) if it is the movie  
 =No I don't think is (.) it's I think it is cheaper than *jeweller* collection of McDonald (.)  
 TV Hi Fi (.) it just spend er I think (.....) maximum three hundred dollars (long  
 pause)  
 Aha  
 Er er er Stephen why u think er family photos is important  
 Er u can met your family (.) when some family notice that oh u are lying and then u get  
 the photo to see who she or he is and who I am (.) so it can help us to met our own  
 family  
 How about the ownership of the flat (.) is it is it more important than the family photos  
 (.) because if we sold this is in (...) already (long pause)  
 But u have this one u can do this good  
 If we if we don't have the ownership of the flat then we can't get money from the (...)  
*insuray*  
 U may be put into the computer already

29

## (Chinese)

we will take pretty plant from Japan because it is a living things  
 then we will take the video *qq* of our parents wedding because it is very er (...) important  
 (Chinese)  
 we will take an expensive tv and hi fi system (laughing) because because we can look  
 at the TV every time no electric  
 Then we will take a computer with important information because that information is  
 very (...) important and useful  
 er sixteenth er we will bring some belove goldfish bought in a *foreign*  
 country  
 country because um we must take it  
 because we can eat it a food  
 that's over

## No. 17

Total number of words produced: 820

A dog is a animal it has four leg  
 =U can buy u can buy another  
 =u can buy another  
 U can buy  
 Yes  
 =The dog is a life u short  
 =So id card is the most important  
 =U should save the dog (.) u should love the dog  
 But  
 But u don't love the dog  
 =Why u so cold blood  
 =no no no no the small number (.) should be agree with large number  
 yes  
 =so the first one is  
 a family dog with a broken leg  
 if i live a long time with a dog I I I can't live without him because I I I see him like  
 see a family member  
 =no but it only is a dog  
 I don't think  
 =if your sister broken a leg (.) do u want to do u want to she die  
 =but he can swim by two leg not hand  
 no is  
 the dog can have a one hand and no two hand and one leg also  
 yes  
 u are so stupid  
 stupid  
 =so it can swim also so it can swim also  
 =the common sense  
 =then I finish I finish number  
 Yes all

Ah maybe

er then er er

=This one is quite important

Why

Because er if can sell it for a lot a lot of money to (.....) to do a lot of things er (yeah  
 yeah I think so) especially for living living

Yeah I think so

=I agree

=Of course

Yes yes

Er how about Penny ar do u agree

Agree with what

Yeah yeah

And then er er have u got any more er any new ideas about er

Er order

Um

U may got different ideas(.) may be u think this is more important than this one that  
 u can (...) talk and we can discuss it again

## No. 16

Time: 3.5 min

Total number of words produced: 346

first er er we will take the id card and the passport (.) because they can identify ourself  
 second er we will take my family dog with a broken leg (.) because it it help our help (.)  
 it need our help  
 secondly  
 then er we will take our family pho photos because um it is very (...)  
 we can find er our people when we lost  
 um fourth  
 =I don't think so  
 Fourth we will bring some *INSUR* paper (.....) because when  
 =when we have accident  
 when we have the it accident um  
 we can take the money  
 then we will take the expensive jewelry er paintings and stamps because it is expensive  
 then (Chinese) sixth some we will take some paper to prove that the ownership of the  
 flat because after er typhoon we can er go er  
 go to  
 go er to our flat  
 then we will take our CD MDdisk of all our favorite song because we can listen to it  
 when we go  
 we will take a complete collection of McDonald snoopy toys because we wait for it for  
 a long time  
 then we will take a complete set of Titanic poster because our family is very love it  
 (Chinese)  
 tenth we will take our teddy bear and soft (toys) because er it can it can er sleep with it  
 then we will take the  
 (Chinese)  
 basketball with Michael Johnson signature because it is very special

30

=But if u only have the I D card how can u live (...)

Haven't some money

How can u a dog

Have a dog

But we can't we we can't lose I D card and passport we we must have id card and  
 passport to prove prove that we are Chinese people we are Hong Kong (.) we are Hong  
 Kong people (.) so that

=If u are (.) ok if u three people and I am very poor

Next next

=Next

some expensive jewelry

=Next is also the dog

=The next one I think

Some expensive jewelry paintings and stamps

=I think is the dog is a life

=Some some paper some paper to prove the ownership of the flat

=The next one should be the dog because

So what

So cheap

I I think is so important

=The dog is so cheap

=If u lost the dog u can buy it again

=Yes

Why why

Can u find the other father or mother

=May be may be maybe

=Can u find the other friend

=It just the dog

U can't buy any any the same

The next one

ok is the dog

=No

=The dog

=No

=No

=I disagree u can't do this

=No

=No what

=No no no no

=Why is it dog

=Why u so cold blood

=Why is a dog

=No no no no no no

=No no no no no no

=Ar ar ar ar

=No no no no no

=A computer with what important information

=No is time should be this and

Why

And the third one next next

The time is go out

Some expensive jewelry paintings and stamps

Yes Yes I agree

Yes er no

No  
 Yes  
 why  
 Yes some paper of (...) to prove your fat your fat  
 Also put it in the the number thee  
 Some paper to prove the own ownership of the flat  
 Why  
 =But but we  
 =Number fee not number two  
 =If u haven't this one u can't prove the flat is yours  
 =U u can have a lot of expensive  
 But we can  
 What  
 What are u doing  
 What have u do  
 Not me  
 So make a break  
 Some expensive jewelry  
 Hey No  
 Some expensive jew jewelry  
 =Jewelry  
 =Jewelry paintings and stamps  
 =Paintings and stamps  
 Yes  
 Stop  
 Yes we  
 I think the flat  
 Why  
 Because is higher than  
 =A lot of expense  
 Yes a lot of  
 Ok ok  
 The third  
 The fourth  
 Fourth  
 The fourth  
 All family photos  
 =I think is the flat  
 =I think is hi fi hi fi  
 =Family  
 =The flat  
 The flat  
 =No I think is er the the some paper to prove the ownership of the flat  
 =No family photos family photos because it is priceless priceless photo is priceless  
 =Ok one by one one by one u first  
 can't buy  
 can't buy what  
 photo  
 =but but we can we can can  
 =we can take it again  
 =someone in this flood is die and how it it  
 ok I agree with john  
 huh  
 just think er after this typhoon your father and mother will die

33

But it is smaller ar  
 Golden fish golden fish  
 =Yes golden fish golden fish in my life  
 Michael Jordan  
 Snoopy is so difficult no this u will die  
 And let him  
 Er blue and yellow again and then green  
 No they will die no no no (yes)  
 No  
 I don't think so this is important  
 Who agree golden fish  
 Typhoon and water is coming  
 =Yes golden fish  
 U can find another  
 And for another country  
 Yes oversea and then very expensive we can't buy the same one  
 Yes  
 But it is also important to me  
 No we can (we can find it again) go to the old shop to buy another compete one  
 Ok ok and then  
 No I think this is  
 Michael Jor  
 Yes  
 Snoopy is happy  
 Very happy  
 Oh I take this  
 why  
 yes  
 why  
 is very expensive Michael Jordan is a famous what  
 =this is also ex expensive jewelry but it is dearest than this  
 =if your home has expensive TV and Hi Fi u can buy another one  
 but this is cheaper (not enough money)  
 no this is not cheaper  
 u ask every one everyone will like this  
 no no (no is in your ) I don't like I don't like cheap cheap cheap I don't like I don't  
 like (u ask season ) cheap cheap  
 um  
 um ok may be this is important than TV oh  
 um  
 and then the second one is Michael Jordan basketball with is the basketball with (no  
 said already ) Michael Jordan signature

No.19

Total number of words: 597

Ok  
 Ok  
 ... must be must be must be

so I don't think  
 =but I think I think the I D card is have your family member photo  
 =yes and then cut cut cut and paste paste paste and then finish is it name  
 and the flood and the fifth  
 the six  
 and the  
 let said t v and hi fi  
 and some paper to rove rove the ownership of the flat  
 =some paper to prove the ownership of the flat yes la  
 =yes  
 here  
 =u are so fast  
 of course  
 number 7 number 7  
 let me put the order  
 number five  
 =number six  
 =no no

No. 18

Total number of words produced: 494

All all family photos because it (...) very im important er so er (long pause)  
 May be the photos  
 May be the family can't er take again (yes) or the er brother and the sister er go out to  
 another place to  
 =Maybe die  
 They are die  
 =May be die  
 No  
 =No your or grandmother and grandfather  
 Um may be (no I think) some photos give us a lot of (...) happy time (yes) so er we  
 take down er er and (have a) have a happy memorize  
 M#morize  
 =So I think it is important  
 I think it is important too (than jewelry) than or paintings  
 Yes  
 The next one is (...) er cassette TV and Hi Fi  
 This  
 But but but but  
 If we there have we there have a lot of songs u lost  
 =But a big typhoon and bomb is coming  
 =Um I do very expensive if TV is too heavy um  
 =So I ask er TV is not we we can't take (yes) we we can take the CD or MD disk up  
 my favorite song  
 =Yes yes um this one (long pause)  
 It is better because it is very big  
 And then I think this is important (no) than than than Mic Michael because don't know  
 (I think is I think) snoopy toys is just small u can take it (compete but many many  
 snoopy)

34

=ID card ID card and passport  
 All ID card and passport  
 =Yes (because) because it is very important because (and) u can borrow money from  
 the (...) bank  
 =And can travel every where  
 yeah  
 And second one is er  
 Er the second one  
 The the some in (...)  
 =Some insurance paper  
 =No no no no la the one the one  
 =Some papers to prove the ownership of the flat  
 Yes yes  
 =Because u can save the er (... ) (save the flat) house to live  
 =And show the (...) the the the flat is yours  
 =Yep after the telephone you can er (...) swimming  
 And the third one is the third one is  
 Is  
 Some insurance paper  
 Yes  
 =Because u er it can protect to (protect your healthy too yeah) can take take some  
 money when u are hurt no u are er hurt or so on u can ah get some money from it  
 =And then the fourth one is would be is er (...)  
 =Is a family dog with a broken leg (broken dog)  
 Broken leg because  
 It is alive  
 =No be because it is very very um (important) (too old broken because it is broken)  
 =Yeah your family yeah yeah very lonely so (lonely ) and then  
 And then  
 Family members  
 =A computer with a may be may be  
 =And then and then  
 Er or or or (laughing)  
 And then is the is the a computer with important information (ah) (...) because it has  
 information so (...) so we must take it (.) and then some expensive jeweler  
 Jewelry  
 Or Jewellery  
 Painting and stamps it is expensive (...) it is very good I like money (laughing)  
 Ok next  
 What  
 Number number  
 Then what then what  
 Which number (...)  
 er number number which number  
 I don't know I don't know don't ask me  
 The five  
 And then  
 All family photos because er after we are we are after we are old we can er we can  
 remember (remember your family member) our family daily life (giggling)  
 =And then may be the a radeo tag of your family wedding because (...) just because  
 and then  
 And then  
 =Which one

And (.....) and u can bring some um the plants of (no) the the the some plants from Japan pity plant from Japan because the plant can't find from Hong Kong so like this  
 =Ok take it take it take it take it  
 And then the  
 =And then where is the goldfish goldfish  
 Golden fish  
 Gold fish gold fish (laughing)  
 Where  
 Ah we must bring your below beloved goldfish bought it *forun* country because it is very ex  
 No no no  
 Not expensive  
 Sepec  
 Yes special to us (.....) faster faster the water is coming  
 Yeah  
 I don't want to die *lau*  
 Connie saying  
 Connie  
 Connie Connie no point  
 Is number eight  
 Take your own things Connie (make use of kind)  
 Number ten  
 Number ten  
 Connie faster faster Connie  
 Faster  
 Next ten here here  
 Is what is the pity plant from Japan  
 =No no no no  
 Japan  
 This this is th e plant  
 A basketball from Michael Jordan signature (long pause)  
 Hey and then and then must be a complete er a complete collection of of um McDonald *Sizz* toys  
 And then the gold  
 And then the CD and MD disc of all your favorite songs because I love it  
 =And then is Kelly your teddy bear and soft toy

No. 20

Total number of words produced: 677

But some paper to prove the ownership of the flat yes because u can (.) because the people know er the flat is yours  
 yeah and then u may be u can u can have get back the money  
 yes get back to your get back the flat to me  
 ya  
 at least  
 ya  
 ok the  
 third one  
 I think is dog

37

Yeah  
 And be because  
 =No In the here in the flooding  
 Are  
 A a a happy memory the memory (...) but  
 But memories in your mind but not in the photo (giggling)  
 Oh  
 We will we will the family photos we can put it in the third (...) so now which one  
 may can we put the so expensive jewelry paintings and stamps can we  
 no  
 no  
 need something expensive  
 who (.) who think who think stamps is more important  
 me  
 me  
 (Chinese)  
 Sorry Andy  
 And the reason ar  
 The reason is because it can sell it for money  
 (Chinese)  
 only money  
 money what is that what is the fourth who think  
 yes some expensive jewelry  
 dog  
 yes  
 no dog  
 dog  
 the fifth  
 yes the fifth one  
 no dog  
 u can eat it ar ma  
 dog dog dog dog dog ar my dog don't make my dog alone la (Chinese)  
 u have a dog ar Ma I haven't dog ar  
 the fifth one  
 I can  
 dog dog dog dog dog dog dog  
 how about u ar the fifth one  
 fifth one I am family photos  
 some paper to  
 dog dog dog dog  
 dog have already la  
 dog dog dog dog ar  
 the fifth one  
 the same  
 so many dogs  
 don't be so kind to the animals  
 three dogs  
 why  
 dog  
 dog  
 three dogs  
 u need to be kind to the animals

All family photos  
 =Family photos Is not that good  
 Dog ar dog ar  
 A computer with  
 Not important ar  
 The computer  
 Ya me too um the computer with important information (...)  
 Ha always dog  
 Dog  
 A compu is it a computer computer one why  
 =just because er the computer with important information u can (...) yes the information is important because  
 Chinese  
 Is important  
 Ya  
 Chinese  
 Yes the information is important  
 People can't find it again is it  
 Yeah  
 And the fourth one  
 Fourth  
 Dog  
 Dog  
 Dog la  
 Photo  
 An expensive t v and hi fi system  
 What what's that  
 What about u  
 An expensive hi fi and t v system  
 Expensive t v and hi fi system  
 Not u the same  
 No  
 No  
 I am is  
 Not he not u  
 The the t v and hi fi system  
 yes u  
 I am some expensive jewelry paintings and stamps  
 Oh I think is some family photo  
 The photo  
 Is  
 I think dog  
 any other suggestion except the dog with a broken leg  
 No then a then jew paintings and stamps lor it can touch touch water and then touch water it it it will hurt  
 Neve r mind la  
 Pardon pardon  
 It no if if if the stamps and paintings match some water it it it will melt  
 No melt  
 No  
 You know what I mean  
 I know I know  
 =Yes yes  
 =No but I think the family photo is more important

38

no the dog can't help himself itself (...) so must help them  
 the most is the most important point is u can eat it  
 =no Hong Kong Hong Kong government not allow us to eat it  
 =never mind la flooding la  
 =but u can't say eat in Hong Kong but so  
 so u will die ar no food  
 but my family but my family live in Hong Kong  
 ok ok  
 (Chinese)  
 My family I am not live in Hong Kong  
 Number six number six  
 The family photo la  
 Family photo  
 yup the sixth one is family photos but why  
 But why family photos  
 Memories lar  
 yup u have a lot of joy and happy *memeries*  
 you can't happy every day  
 goldfish goldfish  
 seven  
 no  
 goldfish can swim  
 no  
 what about the dog (laughing)

No. 21

Total number of words produced: 488

How about you? Abbie?  
 Um I don't agreed I think (.) er the group project is more important because (.) we may not have each time to get the information back and then (.) the the project is the group if you haven't hand you can't hand it on time may be your teacher will punish (.) you do you agree?  
 Alex  
 No I don't agrees Abbie but (.) because (...) (giggling) because in the world nothing is important than the (.) than the life life (giggling) so I think (.) (giggling) the second important is still (.) a family dock  
 Ok um I agreed (.) ok what do you think is the sec is the third important Eric?  
 (pause)  
 I think (.) I think (.....) I think is computer with important informations (...) because (...) it (.) it is (.) difficult to find the information and buy the computer again it is the (.) ex it is very expensive and (.) a (.) very (...) very (.) good model how er do you agree Abbie?  
 Um I (.) I don't agreed um because um computer you can buy it again but something you can't buy it again just like the photo with a a lot of happy (...) (memories)  
 Memories because er when er it its I I may can't fold it again and it give me a lot of joy and happy (.) Do you agree James?  
 Yes I agrees so (.) how about you what do you think the fought im fought im important (giggling) important (giggling) fink Abbie? (giggling)

40

Ok I think the fourth important fink is (.) the lovely goldfish because er it can't save it itself (*giggling*) whereas the cat broken leg may be she it can (.....) Oh sorry sorry sorry (.....) yes I think the golden fish yes yes I think the goldfish (*giggling*) goldfish is more important because it can't save it itself (*giggling*) it can't walk so I will save it first and (.) yes it is a life too. (.) Oh do you agree Eric? And what do you think about it?  
I think er the I I agree with (.) Abbie Abbie points because the goldfish is (.) important and (.) it is difficult to buy it again because (.) it is (.....) er in a (.....) another country.  
How about you James?  
Yes I agrees (.) and I think the sixth important thing tis a computer (.) with important information (.) becaust (.) er maybe it has some impor rea really important information so (.) if you haven't any money you may (.) use the (.) information (.) to (.) change (.) a lot of money (.) Do you agrees? Abbie?  
Oh I agreed because a computer may be er very important it have many information and it is very expensive so I agree James point and what do you think about it Eric?

No. 22

Total number of words produced:

Ok last last last  
Last  
Don't want to die  
McDonald  
McDonald  
Is  
Ok who is agree  
McDonald Michael Jordan McDonald  
McDonald (laughing)  
CD Rom Michael Jordan (a complete) (McDonald) where McDonald  
No not sleep  
A complete of collection of McDonald  
McDonald yes is McDonald because u are long time to (.....) eat don't buy yet  
It is very expensive  
I hate u  
Yeah it is very expensive  
Go  
And  
And then the  
-And the third one what is the third one  
CD and MD  
No  
-Or your parents  
No  
Parents  
No u can *borrow* from your fen  
-Borrow from your friend no my fan very very (.....) very small air very small air  
What is small air?  
-Small air u try to live  
-Little air  
Small air  
-For good it buy another one (yeah)(ok buy another one)  
Ok ok

41

=Yes the computer  
Ok u can  
-Too heavy  
Ban computer (...)  
-Ban computer very small notebook  
like a book

No. 23

Total number of words produced: 582

Er what do u think important one what do u think Kelly  
Oh I think all id cards and passports is most the most important one  
Why  
Because um it can know er er it is very important  
Why why it is important  
um  
Improve  
improve  
ya no no no confirm  
identify  
identify  
ok how about the second one  
second one  
what do u think Connie  
Connie  
Connie  
some paper (what what's it) to prove the ownership of the flat  
why  
because identify this flat is me  
mine  
so what can u do  
mine  
mine ya  
so what can u do  
so  
I can get the house  
Get money  
Other house  
Identify the house is mine  
Yes  
So how about the third one u think Aaron  
I think is the dog with a broken leg  
Why  
-Because it is a life we need to protect the dog  
Oh  
I think u love him  
He love it  
-U u think is a human  
Love him her love her

Ok  
I think is  
No  
I think is  
From Japan pity pan from Japan  
=U can buy other one too  
No  
=it is from Japan too  
Use your hand  
= can go to Japan to buy one  
=No money no money no talk  
No if u if u if u if u if (laughing)  
=u u u what what what  
I can't find it  
Say first say first  
Hahaha  
If u have some expensive what (.....) some expensive *painting* u can (.....) sell it and get the money to buy one  
(Chinese)  
So I think is (.)  
Yes this one  
Expensive TV and Hi Fi  
Yes  
Why why why  
Because go down u know (.) too heavy  
Yeah too heavy  
Too heavy  
=I am stronger I am stronger  
= U can buy no but u cannot buy buy  
*expensive expensive*  
*Expensive* u can buy  
=U sell it and get the money  
=The dog u can buy a different one no *broken* leg  
=But the first  
First is it get a long time you buy another also get a long time also *expensite*  
Yeah it want to die (...) don't want to  
Chinese u  
Bëcause we don't like dog we like cat so we can buy a cat  
=Cat  
And if no suggestion  
No time no time  
*Foul language*  
*Foul language*  
Wor  
Ok and number *fee* what is the number *fee*  
Oh change one  
Number *fly* what is number *fly*  
Basketball with Michael Jordan signature  
Yes yes  
Expensive  
Very expensive  
=U can sell it and have the money  
Yes (pause)  
And money is more most important yes (....)

42

Ya ya ya  
And the next Carrie  
The dog seem  
I think (*Chinese*) a computer with important information is important  
=Why  
=Because I don't know I don't know what is the important information (I don't know I don't know) but but ( im very important important) Important (so u think ) but so u want to say is  
=Important is important  
yeah  
=How about u Connie ya  
Which one ar  
Some some expen expensive painting and stamps because it is expensive  
Why  
Because it is expensive and u I think u can buy things or some needs after the typhoon  
er do u agree  
=Er ya may be  
Then Aaron  
=Um I think is all the family photos because may be my grandma or grandpa is dead so (oh so) maybe (maybe ok) so I can remember them (remember them) do if remember (that )  
what what what what  
Um this means if there is no photos u can't memory the  
=a ya ya ya  
Ok next  
Do u agree  
Ar agree agree  
=gree  
=k next one how about u Kelly  
=m Next one is er CD and MD disk for of all all my favorite songs  
=why why don't u choose the basketball  
Um because I like singing and I and I love listening that to listen the CD  
O I see  
=Yes and then I think the next one is um a basketball with Michael Jordan signature  
=Why why don't u choose the goldfish  
=The goldfish er because it can swim away during the flooding  
Yeah and it can  
Yes it can safe er itself  
Ok  
Yeah then  
Polly  
No Aaron  
Connie Connie  
Connie  
Next is um expensive TV and Hi Fi system  
=Why they are so heavy  
But it is expensive  
What mean expensive I don't know the word  
But u but (a lot money)  
I don't know  
Yes I don't know the word can u explain  
Carry can u  
Um it means a lot of money u can't pay  
I am asking u

44

Valuable  
I help  
I see I see  
=So next  
Next  
Next  
Carrie  
um eleven  
=what's the fast room  
my beloved gold fish ball in a ( foreign country ) *foregine* county  
yes why  
u don't know why  
I think because the fish in an life also it is from buy from the *foregine* country

## No. 24

Total number of words produced: 430

I think all our ID cards and the passport is important (.) because it let people to know who I am (.) er easy to find my (.) family  
Oh  
Second I think (.) some papers to prove the ownership (.) of the flat is important  
Why?  
Um because er it is to protect (.) you (.) to protect your money and you can get it back (.) after the (.) flooding  
And the third I think a family dog with a broken leg is important because (.) the dog has life um I love the dog very much and keep it for many time so (.) I can't (.) lose it  
Fourth (.) I think (.) all family photos is the (.) is important  
Why do you think that?  
(Long pause)  
Because it can find parents and (.....) good (.....) and happy (.) memories  
And the fifth I think is (.) some expensive jewelry paintings and some stamps because um I can use them (.) to (.) make some money and protect my life (.....)  
Since I think (.) a basketball with Mickle Jordan's signature is important (.) because it is (.) you can't buy the *sgm* one again and (.) it will be difficult to (.) find it (.....)  
And I think the basketball with Michael Jordan *sig*  
=No It is the sixth how about the seventh?  
I think the computer (.) computer with important information (.) is important because because I (.) think that (.) to find the information on Internet is hard (.....)  
And (.) the eighth I think a complete (.) collection of McDonald snoopy toys is important  
Why?  
Because um I have to take a long time to collect it and (.) and I love snoopy very much  
Then I think CD and MD disc (.) diskette (.) of all your favorite song is also important  
Why do you think that?  
Um because (.....) because er is it has all your favorite song and (.) er I collect it for a long time  
(Long pause)  
Then I think we should bring (.) er an *expansive* TV and Hi Fi system (.....) because it is too healthy (.....) to (.....) bring it anywhere

45

=What so outdate?  
I think (Titanic so outdate) the I think we should bring the hyper because it is expensive  
=Expensive  
Yes  
Yes I think we can buy another one  
But u haven't any enough money to buy the TV and  
But we have the *insuray*  
Insurance paper *insuray* must wait some time (...) to get the money  
Some time (laughing)  
Yeah  
Yeah (long pause)  
Ok  
Ok  
Next  
Next  
Well  
Well the next is  
Hey your your family photo  
=How about u (yes family photo) how about u Sam  
=How about u Sam (.) do u think (...) family (.) photo is important  
=Yes because it is important to the *wild* family  
=But the computer is important (.....) but the computer have some important information (.) u need to  
=Bring it  
U need to bring  
Bring  
Notebook  
=Note book  
So expensive  
=I can't buy it  
=Ok the next  
How about the family photo  
Family photos  
U can u can  
=We can show again  
=Show again yeah  
Some photo is very (if he die)  
=So what so what  
Yes I don't think the  
I think the ok yes some *expensay* disk and paintings (yes) that (.....)  
no  
How about *expensay* paint painting  
Painters important  
Very Important  
=Yeah  
Because u can (...) buy brought (ten thousands dollars) it in Hong Kong (ten thousands dollars)  
=Yeah Ok the next what what  
Donald's snoopy  
Donald's snoopy but (.) it is so cheap outdate  
Outdate  
=Outdate

(Long pause)

And then (.....)

Um

The

*The last the last*

And the last I think (.) um the pro belove goldfish bought in a (.) fortune country is important because um it is flooding er so there is many water but fish can swim so they can life themselves

Note: few latched turns or overlapping talk; generally good contributions; quite fluent and accurate; not much development of reasons or interactions, though

## No. 25

Total number of words produced: 563

He is so cheap now  
=Why  
Just because  
But but  
=I think the heavy rain for Japan  
What u mean what u mean  
Ok  
U speak louder Ray  
=MD MD  
Speak louder Ben  
Speak louder Ray  
M MD  
=MD is  
MD  
MD  
=Why  
Very important  
=Why  
What mean MD?  
U haven't  
Very expensive  
U haven't u haven't the Hi Fi  
Oh yes but but but MD is not heavy  
Yeah  
But u can borrow it from your friend  
But  
Yeah  
U can hire it by  
Yes MD er is not heavy so we can (.....) bring it (.....) ok the next  
How about the Titanic poster  
Titanic  
So outdate  
=No we can fine it  
=So outdate  
Yeah so outdate

46

(long pause)

Do u think

Ray don't speak in Cantonese (laughing)

Do u do u bring the basketball (basketball) with Michael Jordan signature (...) here

Ok

Ok why we bring it

So expensive

Don't say \* Cantonese Alan

I haven't speak (...) ok (.) don't play don't play

Oh no

Don't play don't play

Don't play

and and next

ID card ID card

ID card we put we we put (.) on to and

I think passport and ID card is not important than (.....) import

=What

I think ID card is not important than the (...) TV

Why

Why why tell me why

=Because when u were u were (...) die u can't use the id card but when u are own u can see the TV u are not borrowing

(Chinese) stupid

Stupid low

Stupid Alan

Oh *tidy* bear no *tidy* bear is so (.....) is so low b so low b

Haha low b (laughing)

And goldfish

Goldfish no so happy like u Alan

Like u look like u

Haha (laughing)

ok ok ok all families photos is so important

=Why

Er (...) just think about it

## No. 26

Total number of words produced: 327

..... so but er (...) but it is very expensive and we can't get it alwaysly so it is important

Next

And expensive TV and Hi Fi system um because u it is expensive er u didn't alway can buy it so is ten how about u

Another I think is CD MD disc of all your favorite song because (...) I love this very much I can't live this

Oh yeah

A complete cool \*collection (.) with McDonalds story snoopy (.) *tdlls* (.) because it is very (.) interest

The next one is a complete set of titanic (.) posters because (.) it buy a because (.....) um can't buy because (.....) can't buy buy from hk (long pause)

48



And then  
Last one  
He he  
Your (...) golden fish buy in a for forun country because (...)  
(...) can't buy a different type  
Jenny (long pause)  
Petty pants from Japan because (...) this (...) pant is is (...) my friend give me (pause)  
Um teddy bear and soft toys um this is fourteen because u can yes because er it is not  
important u can buy another one (...) but (...) some is (...) some is so expensive  
What (long pause)  
Er  
This  
Something is (...) important (...) but (...)  
something is important  
What what why why important  
Someone u can buy another one (Chinese) But something (yes yes) u can't buy  
different like a like Michael like a basketball with Michael Jordan signature or some  
expensive or some (...) computer with important information because er in computer u  
can't buy it because computer u need to type into the computer (...) so (...) so  
something is not important something is important (long pause)  
Um  
Um McDonald snoopy toys u should use many many toys to correct it (collect) uses too  
much money to buy (...) to er how about u Joan Joan Juane  
I (speak louder please) I feel er

No. 27

Time: 3.7 min only (unable to sustain any longer)  
Total number of words produced: 240

the the about Michelle ideas  
no you  
about Amy's ideas I think all ID card and passport is to is thing we show and the  
second thing is some insuretion paper (long pause)  
and the fourth is er some expensive jelery paintings and stamps  
number 5 number 5 number 5  
number 5  
number 5  
we think the most important (...) thing we need to get is er all ID card and passport  
er number 2 is some papers to prove the ownership to of the flat  
number 3 is some insurance paper  
number 4 is a family dog with a boken (...) with a boken leg (laughing)  
yes  
er I number 5 er a video tape of our of your parents wedding  
number six is some expensive jenny jen  
jewelry  
jewelry paintings and stamps  
number 7 I think is CD er MD disk of all your favorite song  
number 8 is all family photos  
er number 9 is a bask a basketball with Michael Jordan signature (laughing)  
number 10 is your tidy bear and soft toys

49

number 11 is an expensive TV and Hi Fi system  
and number 12 is your  
belove  
belove goldfish bought in a  
foane  
forane country  
country  
er er thirteen I is a computer with important information  
number 14 is pretty plant form Japan  
number 15 is a complete collection of  
McDonald 's  
McDonald snoopy toys  
the last is a complete set of Titanic poster (laughing)

No. 28

Total time: 4 min  
Total number of words produced: 5454  
In this group, only ONE student spoke and completed the whole task.

First we er I think we need er we need to put all the ID cards and passport to go away  
and then we will because it is very important to improve u are the dead people at that  
time and at the second time we will have some er issue paper because we have er  
because we can have money after the typhoon to and go to the company and get money  
er third we need to get the pa paper to prove the ownership of of the the flat (...) because  
if if er the company can't don't give u money u can er u can u can (...) u can u can get  
money from er to this paper (...) fourth we need to take the er computer with important  
information because if u lost this information it will be very serious er five we will take  
take some expensive jewelry er paintings and stamps because u this is expensive thing  
so er if u can have money if u sell it all and and (...)  
dog  
sixly u need to take the dog because if u don't take because the dog have life and the  
dog is (...) is other if u lost it how can u er say to other family er eighthly er seventhly we  
we need to take all the family photo because if some one has been die er u can't  
improve that that people is dead so u need to use the photo to improve (...) nine we  
need to take nine we need to take er the goldfish er because er it also has life also and  
then and then er ten we take take MD disk er because u can also sell it although it has  
not er er have enough money u need to take it also and the and the eleven is the er is the  
er ex video type of your parents wedding because er it is some im important thing to  
your father and twelvly is the pet er pet plants plants from Japan because it is from  
Japan u can't have Hong Kong is also important and er and er thirdly this is er the  
expensive tv hi fi system although u can't bring er it in 12 minutes it is also expensive  
and er fourteenthly is the set of titanical po poster because titanic poster is not value to  
bring and fiftiteenly is the er McDoanld snow toys of collection because co it is also  
important but but if and lastly is all telly teddy bears and soft toys because it is not  
important so er we put in at the back  
stop it  
stop  
stop it

50

No. 29

Total number of words produced: 776

Memorer  
Memorer the memorer is in your mind no need to take it  
=but u can been get it back and see it and flink about it and u will happy  
er u is but but u is bigger than u er  
(Chinese)  
group  
ar I don't know  
u is G R O W  
I only think I only think I think lot of  
Don't think  
U is bigger than before ar ma  
no  
u say something  
Gary u can say something  
yes  
er I think passport and ID card is more important  
what  
=ID card and passport is more important  
yes  
=Because u can put er u can go to another place and go  
=How can u go to other place the police station they (no) help u and get u to the police  
station and u need to er talk with the police and write down what did u do at this time  
(passport) u alway need to (...) write down all of your information um of course is no  
=Is very trouble u lost u lost the passport and I ID card u know know first first can  
go away u go to police station and take in and fill fill in the info  
=But u there he say u have help and go go away u alway need to go to police station  
and write down what did u in that time  
=U must have an ID card u and ID card and passport (not me photo) photo not use u  
have photo u can take it again  
=but it do not memorize (.) ok u think  
ID card  
Ok la  
the ID card  
the second I think the  
I think the dog  
yes u have  
I think the second one is the basketball with Michael Jordan signature because it can  
sell many money and u can (...) buy food and er  
I think is think about money um u have the house (...)  
=Where is the house  
Many things is more expensive than this  
=Jordan is an very important man (yes) u u like basketball  
And and a basketball can play  
=One u can buy how many money  
One  
Many money  
U think this  
=But u say is money

Yes u can sell money but don't said how much im important it it can signature  
Michael Jordan  
Michael Jordan u can buy (yeah) it u have money u can er go to USA and then and then  
give the money of they of  
Difficult to see  
Difficult to see difficult to buy oh  
Ok  
I think the dog with a boken leg  
=Ya ya I agree I think is about thing this is life  
I think the dog with a boken leg  
What  
Fee  
Number two  
Fee number fee  
Number two  
Number two because the dog is our fan (...)  
Life it has his life  
The boken leg  
no no leg only boken leg he don't want to die  
=U want to u want to die  
=It will it will (...) (Chinese) get u many many trouble  
But do u know he has his live (...) his his (...) life (...) u know and and he is friendly u  
can't see it and the water go up and go up and he will be die (...) U  
U can buy  
=U can buy a new one  
How can u get a friendly dog I think is ten years ago  
=Hand is not handsome is not handsome u also want to die  
=hasn't write down is the dog handsome or not handsome haven't write down die u  
also u also u also no leg is not handsome u know no hand is no also no handsome  
=Not about the face u know  
Oh  
=Handsome is all the thing  
=All the body u see all the body lost the lost one of course (handsome) handsome like  
me  
Oh use  
Not the handsome u know  
Most handsome u know  
Ok  
I do I think the dog because it is your fan if your fan has boken leg u will kill him?  
This kill but kill (kill no kill) but friend er is boken leg he will kill too  
=This not not kill is is is no use is no use u know  
yes no use  
=Rubbish rubbish  
is  
no use  
yes yes  
your friend boken leg no use  
u buy a new little dog u can buy people no your friend  
your friend can buy it your friend can buy it  
many many rainfall when the basketball he will be raining and the Michael signature  
will be go awhile (...) raining

51

52

Time: 5 min  
Total number of words produced: 519

the second important be because er (..) because (....) because er we can't buy a different one it is er very important then er  
James what do u do what do u think  
I think the next important is all family photos because we have a lot of remembers in there (...) and we can (....) remember this from this photos  
=And I think the important to me is the expensive TV and Hi Fi because we can we I haven't each money to buy it again and then Eric  
Er I think the er next important is the er the goldfish because er the goldfish er has a life (..) er if we er don't don't take it er  
Take care of it  
Take care of it er it will die then James your turn  
I think the next important is a computer with important information (..) because maybe some important information we can er copy it and sell sell it and we can earn money Catherine  
And then I think er the important thing is the goldfish because (..) oh no is not a goldfish I think the important thing is it may the er some important paper because er we may have some er important information in it so we need to *bring* it  
Then er we now we discuss why er we we er discuss mis don't er we discuss why why do u think er the ID card is most important another reason do u have  
I think an another reason um an id card (...) er any one said one reason u first Eric  
And er er er  
Ok I me first then I think er we have ID card and passport can tra tra trav Hong Kong easily because er if we haven't the id card we have any many problems (.....)  
Ask me er  
And then Eric what do u think  
Er Er I think the the (.....) (Chinese) I think er the I think I I I think the basketball because because a another eason is er er er (long pause)  
U don't know  
I don't know yes James give me fire  
I think the next important is your *umby* bear and soft toys because er may be the toys have follow me for a long time we er we have some feels for this toy  
I think but I think the toy is not important because er the toy u can't buy it again but many things u can't buy it (..) er like the dog and goldfish because it die u can't buy the exactly the same ones  
And another is the er family photo er the the photo er the photo er we can't pho er we can photo it er again but er but the person in it is different the the *page* and James  
I think the next important is CD or MD disc of all your *facerous* songs because maybe we are spend a lot of money to buy them (...) and it is also our favour songs

The end

Transcripts of 'pull-out' group discussion tasks (see Table 4.3 in section 4.3.1)

Total no. of transcripts: 12  
Length per transcript: 5 min

No. 1 Total number of words produced: 500

\*Ng I think er super er super smile (brain) bain because (.....)  
\*Chais important  
\*Ng is important (because) because (we think) jwe we think  
\*Chaanything use brain  
\*Ng any anything  
\*Chause brain  
\*Ng choose brain  
\*ChaAnd the fourth the five one (...) (er is) is *stomage* (..) ar super powerful stomach  
\* -Ahah yes yes  
\*Kwo U can choose u choose  
\*Cha=No no no  
\*Cha *Stomage* (..) yes a powerful *stomage* if in the world (..) er in the life u can't eat (..) u er u will have er u will have no any fund because *flng* cat *flng* er *flng* is very *dellicies* and (..) food is very *dellicies* (..) if u if u er (.....) can't to eat (.....) er it is so so so unhappy  
\*Kwo And then me first (..) Ye and then extra strong (..) (rub) *rung* because there *rung* let us to stand up (..) it need to move and (.....) do exercise (.....) and keep fit  
Haha (laughing)  
\*LucMe super skin if u have not skin u can't *protect* er your body er (..)  
\*ChaMuscle u  
\*Ng I think I think the high (..) I think the high (....) pow power muscles (..) is important because (.....) it it can (.....)  
\*ChaBecause it is to er (..) to to give us power?  
\*Kwo =Yes we can move (..) and we we don't have sick  
\*ChaBut power (..) u can (....) not easy be hurt  
Um  
\*ChaAnd how about the ninth (.....) the ninth I think the ears  
\*Kwo =Ears  
Yes  
\*Kwo =Where where (..) This is this  
\*ChaNo yes  
\*Kwo Eyes  
\*ChaEyes yes (eyes yes) because if u have no eye u can't see anything  
Um  
\*Iajcum (..) Yes (..) Powerful lings if u have lings, er (yes) u can't er walk and how about u Jenny (.....)  
\*Kwo Um I think is (....) I think is hands er extra strong hands because we need hands to *ride* (..) to *peak* something (.....)  
\*Chato hold something  
\*Kwo yes to hold something the important thing is to write. (..) We need to write thing  
Um  
\*Kwo Yes how about u Duane  
\*Ng I I think the powerful (....) I think the powerful ear (...) becau becau if (we can) we can (we cannot) we cannot (hear) hear hear  
\*Kwo =anything  
\*Ng =anything (listen) listen to listen anything  
\*Kwo Yes um how about u  
\*Cha Um I think the next is the extra strong (I think is the nose) nose er (..) (we can breathe yes) but if we have no nose u u can breathe (..) u can breathe also also u can breathe so the teeth is the first  
Haha  
\*ChaBecause if u no no stronger (..) teeth u (..) u can't eat anything

Um  
Um nose  
\*Chanose

No. 2 Number of words produced: 781

\*Gar Um um number *egg* I think is a super nose that can smell danger (..) because u know the danger and u can (..) and keep your (..) (\*Kwa run away) keep yourself (..) safe and (..) u won't die easy  
\*Dal But (.....)  
\*Kwa Yes (..) agree  
\*Dal But er when u can hear other people think (..) u can feel danger too  
\*Gar =I like the nose (..) but not the ear  
\*Dal But the ear can  
\*Gar =More ugly the the ears (..) the the nose is more ugly ok  
\*Dal But er (..) u can hear hear other people think and u can hear danger but and u can hear (..) other thing too  
\*Gar =But I don't want to hear people thing (..) because it is er  
\*Dal =But nose just (..) can smell (..) danger  
\*Gar It is no use.  
\*Dal =What?  
\*Gar =No use  
\*Dal =No use? How can it no use?  
\*Yeu =Dale Dale I think the (..) high (giggling)  
\*Kwa =What matter  
\*Yeu High power muscle (..) (giggling) er high power muscles and the (..) extra strong hand is equal  
\*Kwa Yes  
\*Gar Yes ok  
\*Kwa Yes equal (..)  
\*Kwa Equal  
\*Gar Two is the one ok (reshuffling the paper strip)  
\*Dal U can't u can't  
\*Dal Then  
\*Gar I can I can  
\*Yeu =The muscle (..) your hand is only your hand (..) the muscle is the leg  
Ya  
\*Gar =Yes  
\*Dal I think muscles is more er more er (...) important yes I think so (..) but I (..) haven't (..) I forget it ya  
\*Gar =two reason  
\*Dal and ear the nose and ear this (pointing at Yeu)  
\*Yeu Ok  
\*Dal Ear and nose  
\*Kwa =I think the (...)  
\*Dal Ear and nose  
\*Kwa Number four is er er x x  
\*Dal =Haven't got say number *thex* is ear or *no*  
\*Kwa Ear  
\*Yeu I think ear is beautiful than *no* (looking at Gar)  
\*Kwa Yes  
Ycp  
\*Kwa ear  
\*Dal Ear ear car.  
=because the nose is the *middle* of your face  
\*Yeu Yes yes

\*Kwa I think the four is x *ride*  
\*Yeu x ray  
\*Kwa =X Ray  
=Ray  
\*Dal =X Ray  
\*Kwa =X ray eye that can see in the er (...) dark because when u when u go go um  
But it  
\*Kwa When u like a cat (..) u can (..) u can (..) u don't need to *fighten* the some (..) some something in the road u can't see it (...) (um) and the second reason is (...)  
\*Yeu =Something (..) somebody afraid ghost u but you has the what eye u can't see ghost too (..)  
\*Kwa =Ghost go die ghost ghost is not (..) is not easy to see it  
\*Yeu =Haven't got (..) Haven't got (..)  
\*Kwa =A thing not a thing. Is some pollution u know  
\*Dal Prove it the world have ghost u know  
may be no  
\*Kwa Let me see let me say. The second reason is um (...) if u um (.....) if u get er (.....)  
\*Gar If u get (..) get what  
\*Kwa =U can see people in the (..) in the dark road he want to to (\*Gar kill) kick u (..) kill u (..) u can go away  
\*Gar =I agree  
\*Dal =Yes I agree  
\*Yeu The super nose can (..)  
\*Dal =But U can see other thing too  
\*Gar =Only smell  
\*Dal =Only danger (..) but other thing u cannot (..) ya (..) I think x ray eyes  
\*Gar =*Lumber* four because u can smell the danger and u can keep yourself be safe and and do other thing and other things yes ok ok number *llg* number six (speaking quite fast)  
\*Dal Ya may be may be  
\*Yeu May be lor  
\*Dal =Ya and I think this one is the  
\*Kwa =Do not this one the super hair  
\*Dal Hair  
\*Gwa =No need  
\*Yeu =No need  
No need  
\*Kwa =But if u old u u no hair very (..) ugly (..) like like Leung Kwok Chong Kelvin  
=But sometime u can is u can  
=Is Kelvin  
Need not a short  
\*Kwa No no Don't no hair is short hair  
\*Dal =But sometime u haven't got any hair  
\*Kwa =If u old and no hair u u see like a (...) like er (.....)  
Mark  
Mak la  
What is Mark?  
Mark  
what's that  
um  
\*Dal =but never mind (..) I think Mark not very ugly  
\*Gar =ok sixteen  
\*Dal ok  
\*Gar sixteen  
\*Gar =ok because u u have the handsome face  
\*Dal we still only eleven  
\*Kwa only handsome face no hair

\*Kwa =eleven  
 \*Gar =eleven ok  
 \*Yeu =I think this (.) number ten  
 \*Gar =why  
 \*Dal why

No. 3 Number of words produced: 305

\*BenUm I think powerful cars  
 \*RayNo  
 \*BenWe we (just to) can hear the exam  
 ha ha exam (laughing)  
 No  
 \*Sam No (.) u can't  
 So excite  
 \*Sam U can't (power legs) u can't listen extra (powerful legs) something answer of the  
 Powerful legs  
 -But u can't do it  
 -Hey this is running faster than cars  
 \*RayMaybe (.) maybe (.) hit  
 \*Ala U have (said) powerful legs u can walk  
 \*Ben-As fast as a car  
 -Yes  
 -As fast as  
 -Then  
 \*Ala -It is very important (then u) it is very important ar  
 then u u ar it can  
 Yes  
 Important  
 \*Sam Very important ar agree (.) how about number six  
 \*Raycar skin  
 \*Ala Strong hair  
 \*Sam Strong hair strong  
 \*Ben=no no no (....)  
 \*RayOh the bone which bones strong bones  
 \*Sam Strong bones  
 \*BenHm hm yeah if a car hit u  
 \*Ben[U won't die  
 \*Sam (U won't die  
 \*RayU may need the car because  
 The car broken the car broken  
 \*BenHow about (Chinese) oh I think this is the er (.) the most important this  
 \*RayWhy  
 Something  
 U can  
 \*Ala =Super nose because it can smell danger (.) if it is danger it can cur urr  
 \*BenWait (.) what mean your  
 Yeah  
 \*Ala Then er it can (.....) something er like superman  
 Why?  
 \*Ray I think this is change ( this too yes yes) because u have a strong er heart (....) your life  
 will be matter but u have (.) the u super *smile*  
*smile bald*  
 \*Ala =No super strong heart  
 \*Ray=But u are so old (.) u are 100 years old  
 \*Sam =100 year old

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\*Ray=U are too er (.) u are very very er old (.) your hair er your skin is very bad only if u have  
 this  
 \*Ben=Then what is this?  
 \*Ray=I think this (.)  
 \*Ala =Super what ?  
 Super  
 \*BenStrong. How about strong lung strong lungs?  
 May be u can  
 \*Sam Strong lungs  
 er  
 \*Benyes we can we can  
 strong lung (....)  
 \*Ray =no I think I have storm er I think the *stomage* because we are bad *stomage* u have we  
 also have the bad *stomage*  
 \*Benu have bad *stomach*?  
 bad bad bad no  
 \*Raywe also eat the .... good oil  
 \*Ala =I think the important (.) the same  
 =Why  
 \*Ala The same  
 The same  
 Yes  
 \*Ben=This is not (.) Not (.) not useful  
 yeah  
 \*BenWhat is the last what is the last?  
 \*Ala =What is the last (.) is about ( the ) the (....)  
 \*Ben=hair  
 \*Ray=Hair  
 \*Ben=why why hair is the (.) not important  
 Yes  
 why  
 \*Ray=just because your hair can ( can cut) is cut cut er but wait wait wait ..  
 \*Ben =But Mr. Lam say our hair short do not fall out (stupid) does not fall out u u can don't  
 go to cut your hair u can save our money (save our money) (yes money important)  
 but ( but) I don't think the car is important  
 \*Ala but we are get more money (.) I love more money  
 \*Benwhy  
 why  
 \*Ala a lot of money  
 how to get  
 \*Raywhere u can say u don't need to cut your hair  
 how to get  
 \*Benbut I think high power muscles is very important too  
 \*Raymuscles  
 why  
 muscles  
 may be but I think  
 \*Raythe high power strong hand you can take some (.) heavy things (.)  
 muscles you can take nothing  
 \*Raybut we can take what in the exam the what exam  
 \*Ben=exam  
 =exercise  
 =exercise  
 \*RayI think the power muscle (.) high power (.) too big it is too big (laughing)  
 =No ar no beautiful  
 Low  
 muscles  
 =Good good word

58

=Here  
 =no  
 =Here  
 =no  
 =No no  
 =Here  
 =no  
 \*Ray=I think the hand is better than muscles because your hand  
 \*Ala =Yes hand  
 \*Ray=Because your hand ( u can take ) can take something look like a car  
 \*Sam Yes aeroplane  
 \*Ala And u have the liver  
 liver  
 What's liver  
 =Like er like  
 \*Ray=I know I know and  
 About the  
 \*RayIf U don't don't drink the beer  
 \*Ala =But we must drink the beer  
 \*Ray=Don't drink er beer don't drink many beer  
 \*Ala But we can say  
 \*BenYes it can er (....) it can protect ourselves  
 The health ar ourselves  
 \*Ray=I think if u said u protect yourself I think the lung is more important  
 \*Ben=No this is not very important because it can (.) it can  
 \*Ray=Because the air the air the air is too bad now  
 \*Sam =Yes the air  
 Yes world was the (....) life business  
 Chinese  
 What was the liver  
 =Livers  
 Here

No. 4 Number of words produced: 741

\*Ste Powerful cars that can hear what other people think  
 \*Ann =No I don't like these actually  
 \*Ste But it is useful  
 \*Ann I don't think so (.) what you think is useful because you can (because you can)  
 \*Ste =Someone in their mind want to (.) hurt you or want to hit you or do something bad to  
 you you may know (.) you may know that and then you can (....) avoid those things  
 happen  
 \*Ann =But everyone (.) er everyone have their own feeling they want they don't want others  
 know about what they think (.) they (.) they have something deep in their heart and  
 they won't (.) let other know but if you have a strong ears powerful ears you can hear  
 what people what other people think and this means they can also hear what you think  
 do you want you're (.) your secret (.) um your secret be out (.) other one about what  
 your secret do you want it?  
 \*Ste Quite?  
 \*Ann Quite what is your secret?  
 \*Ste Lots of secret (.) because we can (.) communicate with others (.) know any differences  
 that means er you know all the things of me and you I know all the things of you  
 \*Ann =No  
 \*Ste =There won't there with friends or a couple something  
 \*Ann =no  
 \*Ste so they may know each other deeper and deeper

59

\*Ann no  
 \*Ste what no  
 \*Ann because we are extra my  
 \*Ste excuse me  
 \*Ann no because it is very important that (.) one person will not know other very well  
 because (.) all of us have some secret in our be because all of us will have some secret  
 so we won't know each other (.) and I I think is quite important because we all have  
 secrets (giggling)  
 \*Ste =no if they were real friends they will share all the things with others (.) they will share  
 with all the things with others and the friends will help help her or him to slow off the  
 difficulties they face  
 \*Cyn=yes if your friend is er unhappy then you know so you can (....) con *confirm* her  
 \*Ann =but if they want to er share their er sadness to you they will tell you and they will (.)  
 talk to you (.) you you don't need to listen their feelings  
 \*Cyn=some friends may  
 \*Ste =may be shy (.) may be shy  
 \*Ann =yes because because they won't they don't want to talk to you  
 \*Cyn=no they don't  
 =they don't know how to say it or um  
 \*Ste They don't want you to worry (.) they don't want you to worry about them  
 \*CynYes  
 \*Ste So you can do something that they don't (.) know and to let her feel better  
 \*Ann Oh oh help Penny help. What do you think (giggling)?  
 \*Pen Ar (.) but I don't want other to know my secret actually  
 \*Ann Yes all of us have (.) feelings (.) so sometimes we we don't want other to know (.) yes  
 \*Ste but if you are really really real friends they this could help (.) this could help  
 \*Ann but if we we we (.) we good friends then we can talk to each other and we don't need  
 they don't need  
 \*Ste they don't know how to express  
 \*Ann but  
 \*Ste Something like our classmate they don't don't like to talk (.) in fact they don't like to  
 talk (....) they just something (.) bad to him and he just hide or she just hide it in his her  
 heart and don't share with others and always unhappy and unhappy (.) we can't help (....)  
 so it is better to know what they think (....) of course we know that er you have secret  
 but if I don't tell her that so I won't they you won't know I hear but if you want  
 someone to share I can know it (.) right away  
 \*Ann But if we know (.) our friends er feeling they they (haha) it doesn't mean that we can  
 help them although we know what they have think  
 \*Cynbut you can realize  
 \*Ste but we would try our best  
 \*Ann Really? Hey I want you  
 Help (laughing)  
 Yes  
 \*Ann I want to I want to know your secret (giggling)

No. 5 Number of words produced: 602

Ear  
 Ears  
 Why  
 Why  
 Can hear many  
 \*Jaz But can not (no no no no) affect people thinking (.) No is not good I think u u u  
 =but u need your nose  
 =painful  
 \*Vic =I think the skin is the important skin (.) (giggling) Super skin super skin  
 Do u love it

60

Um  
 \*Step Can protect ar (.) Protect ourselves  
 \*Vic Won't be hurt easily  
 -body the bone  
 -yes  
 then u can hit the car (giggling)  
 -Your turn  
 \*Step Then I think (.) the lungs  
 Yes always (the same)  
 \*Vic U like lungs  
 \*Jaz Where's the ear  
 Yes  
 Where's the ear  
 \*Vic Last (.) U can u can er (hear other people think) ar ya and what other u will feel *boil*  
 (.) -Painful u know other people how how to how to think ar  
 -Super hair  
 \*Jaz -Super hair no (Chinese) never mind  
 Muscle  
 Muscle  
 -Muscle is no er  
 Liver  
 \*Vic Yes I think liver.  
 \*Jaz No (why)  
 \*Vic No can turn every ( No No ) can turn any anything (.) u eat (...) into this (.)  
 \*Jaz No u will become very very very very fat  
 \*Vic Fat keeping fit  
 Um (....)  
 Nose ( Legs)  
 Nose(legs)  
 Hands  
 \*Vic -Legs  
 \*Jaz -Hands  
 \*Vic -Legs  
 \*Jaz -Hands  
 \*Vic Powerful legs (.) er can walk as fast as a car  
 \*Step -Walk around the road  
 \*Jaz u can't write (so) and u can't hold the book  
 \*Vic so so u no need no need to buy a car er less money will use (.)  
 \*Jaz u are very rich now  
 no  
 um.  
 \*Vic Don't don't talk about this point (....) (giggling)  
 How about is  
 And hands  
 \*Vic Sun your turn  
 Yes  
 \*Ric My turn (....) er er er er (.....)  
 Chinese  
 \*Ric This one la  
 \*Step Why  
 \*Vic -Why  
 -Why  
 \*Jaz -Why why tell me why (giggling) I don't agree  
 \*Ric Because I think (Chinese)  
 \*Jaz -because I think what  
 \*Ric -the bone is  
 \*Vic yeah yeah why  
 \*Ric Um Don't ask (....)

Fall out  
 \*Vic The Mediterranean Sea  
 you see.  
 Finish  
 Nothing  
 So flat  
 um um um

No. 6 Total number of words produced: 615

\*Ala Most important?  
 \*Sam Why u don't think it is (.) most important  
 \*Ala I think it is most important now  
 \*Sam Now  
 \*BenBut I don't sure  
 \*Ala Ok u said  
 \*Sam How about u Ben Lo?  
 \*BenI don't agree that  
 Ben Lo how about u  
 Why why  
 \*Ben Um because the nose is (....) Because the noses (.) Because the the nose is more  
 important than the eyes  
 \*Sam Why u think this?  
 \*BenUm (....)  
 Um  
 \*BenNow u can see the everything but now u can't smell everything  
 \*Sam I can't smell (....) u also can smell (....) but (.) no (.) very (.....) good so (....)  
 \*BenI am not sure what you think  
 \*Sam I also (laughing)  
 \*BenHow about u Ray?  
 \*RayHa (.) I am (.) my idea (.) the same to u  
 \*BenDo u think the handsome face is important?  
 \*RayNo  
 \*BenI think yes  
 \*RayWhy  
 \*Ala -Face  
 \*Sam U *think* it is important (.) (why why) more important ( because somebody ) than x ray  
 \*RayWho?  
 \*Sam Just like Alan (.) not Alan Pang  
 \*Ala Alan Chan his face is very beautiful (.) no (.) handsome  
 \*Ben And when u see other er (....) people (like him him) if u have a have a handsome face  
 (....) and then (...) u will some (...) something (.....) good (.....) for u (like him)  
 What good ar (....)  
 \*BenHow about the er (....) strong teeth? Hey Ray  
 \*RayEr I no comment how about u Sam (giggling)  
 \*Sam But now where have  
 But our  
 \*Sam Where can (.) er which one is most important?  
 \*BenEr the eyes (.) and the nose (.) are the most important  
 \*Ala Nose yes  
 is the most important one  
 \*RayBut choose one U must choose one most most important  
 \*Benyes yes I will choose I will choose the handsome face  
 oh  
 oh  
 \*Ala but u have a  
 thief

\*Vic Say something  
 \*Jaz U have no reason and choose the bones  
 Because can't move can't move  
 Can't move?  
 Can't move  
 \*Vic Bone is important also  
 \*Jaz Remember Renaissance time people use reasons to (wa wa) (giggling) the then you  
 solve solve it  
 I listen to u  
 (Chinese) bones (then) bones bones (this)  
 \*Jaz The dog will eat all your bone  
 A powerful storm  
 A powerful *stomage*  
 \*Jaz How about ears? (.)  
 Ears.  
 \*Vic Last.  
 \*Step -The nose.  
 Yes.  
 \*Jaz You can't breathe. You can't breathe (.) And then you can't do respiration and then you  
 will die.  
 \*Vic Respiration (.) Crazy (.) Science and History (.) Can smell danger and I think this is  
 important (yes)  
 Um  
 And  
 And then  
 Handsome face  
 No need  
 High power muscles a powerful  
 -This one  
 -Hands  
 Hands (.)  
 I think (.)  
 And then the teeth  
 Why  
 \*Step -Why  
 \*Jaz -Because u just er (it is more in that Power) (and then u have power)  
 Don't u have er the powerful *stomage*  
*Stomage*  
 er er  
 A *stomage*  
 \*Ric I think this one  
 super hair?  
*leaver* (....)  
 like this  
 Agreed?  
 Um  
 Yes  
 \*Ric U think muscle is more important than  
 \*Vic -No  
 -Liver is important than muscle  
 \*Vic -But I think I think a *gity* hand hand er  
 Go with u  
 um um um um um  
 \*Vic And muscle is not good for (.) for girl  
 Oh the ear can  
 Falling down  
 \*Jaz What what can the hair help u  
 Do not fall out?

\*Benbut thin because I have so I want more  
 more things more handsome put it in your (giggling)  
 \*Sam but now have three people (.) agree x ray eyes (.) so the most important is x ray x  
 ray (...) eyes (...) and the second important (....)  
 oh give u u are  
 \*Benhow about (....) the powerful ears  
 \*Ala powerful ears  
 \*Benhey Alan what do u think  
 \*Ala ears can  
 \*BenCan u speak loudly  
 louder  
 I beg your pardon  
 \*Ala Loudly loudly  
 Ok  
 \*Ala Louder loudly  
 \*BenSo so  
 Loudly  
 Chinese  
 \*Sam Help me help me (.) this  
 \*BenWhich is the most er important they know  
 \*Sam The second one  
 \*BenThe second one? Powerful legs?  
 \*RayI think the high muscle (.) high power muscle  
 \*Ben -No I think the legs (but) is more important (\*Ala when but we  
 can do it more) the important things is save your life  
 \*Ray u can put the muscle (.) on your leg (.) You can put your muscle (.) on your leg so your  
 leg is high power  
 \*Sam but only muscle is no  
 \*Ray high power high power (.) Your leg has (.) big (.) very power (.) so u can run very fast  
 \*Sam power is no fast  
 \*Ala -can powerful leg walk as fast as er  
 \*Benhow about the super skin?  
 Chinese  
 super skin  
 \*Ala stop change  
 \*RayChange what ar  
 \*Benhandsome face (.) second one  
 \*Sam no (.) go away  
 \*Ala Go away  
 \*Sam Why u think handsome face is (.) second important  
 \*RayHaven't a beauty face  
 \*BenI I no I am handsome  
 I am  
 Beauty handsome face

No. 7 Number of words produced: 694

\*Kel Then then to learn er to life in this (.) world and um if we have this er part of body (.)  
 we we c an I earn the things easily and better than the (.) computer and just like my  
 memory is very very (.) (\*Aar low) yes um so I need this very (.) very very (\*Aar  
 ok) I think it is very useful  
 \*Aar -I will support your idea  
 \*Car Ok two people support this  
 \*Aar -How about u two  
 \*Car I am (.) (haha) I I haven't say anything (.) so it is the important (.)  
 \*Kel So this ar this point pass  
 \*Aar Yes the first one

Just the second one  
 \*Kel And the second one  
 Car Second one (.) *piiy* face  
 \*Kel Yea I think so I think so (.) because um (.)  
 \*Aar Me too me too  
 (giggling)  
 Because um very (\*Car because u are very ugly) very (.) (Chinese)  
 Chinese (giggling)  
 Nothing nothing  
 \*Kel All nothing  
 \*Car Pass pass pass  
 \*Kel Yes pass this  
 Number  
 \*Kel Ee go on go on go on  
 \*Aar Go ahead  
 \*Car Go on go on  
 \*Aar What's this (beautiful) pretty and hand some  
 \*Kel Go on go on go on  
 \*Aar Speak speak  
 Speak  
 \*Aar Ok  
 Here  
 \*Aar Connie your turn  
 \*Car We we pass two points  
 \*Aar =Yeah and then  
 \*Car =How about the third  
 \*Aar Connie u first  
 \*Car =Connie  
 \*ConEr the last one a powerful *lifer* that (....)  
 \*Aar Speak up speak up  
 \*ConA powerful *lifer* that turn anything u eat into er (.)  
 \*Car =Why  
 Leg  
 \*Car Because u like it  
 (giggling)  
 \*ConEat more and er (.) eat more er (.)  
 That  
 \*ConAnd then it turn to good (.) thing  
 \*Aar Oh may be  
 \*ConOr healthy  
 \*Kel No it means er u eat ar  
 =U don't need to eat  
 \*Kel =Anything u can turn in this so u eat no (.) u have only something careless or u er just  
 like air (air) u can have so u can save many many money and this u u  
 \*Aar =And u can have energy  
 =Energy  
 Energy  
 \*Car =A very strong man and woman (ar)  
 No one die turn to a muscle people  
 \*Kel But but a woman need not (.) this (.) muscles muscles  
 \*Car I I think so  
 \*Aar But woman is (.) too weak  
 \*Kel Weak  
 \*Aar =Yes  
 \*Kel =I don't think so (.) many many (man is too weak) woman is a very  
 Good fighter (laughing)  
 Good fighter (laughing)  
 \*Kel And (.) then so so (.)

65

\*Ste Skin why? I think eyes (.) can see everything (.) eyes  
 \*Cyn=But I think is not no important any more  
 \*Ann =But I think more as we have eyes  
 \*Ste X ray eyes means see something right?  
 \*Ann Yes we can see other (.) people what they are thinking about  
 \*Ste So it is no secret (.) yes right  
 \*Ann No secret  
 \*Ste So if we (.) speak in the low voice the super ears what er powerful ears may heard (.) so  
 \*Ann =But that that means we can (.) talking to others (.) in a low voice during the class (yes  
 oh)  
 \*Ste =Haha but a teacher teacher still (.)  
 \*Ann =hear what u are  
 \*Ste =right right right they also have the powerful ears so both of them are (....) good er  
 for a teacher (.) eye see (.) what (.) we are doing during (.) she he or she writing at the  
 blackboard blackboard (....) and ears can hear who are speaking  
 \*Ann =so many have to choose this three  
 \*Ste =yes but we must choose one  
 \*Ann =oh eyes  
 \*Ste =Legs  
 Legs  
 \*Ste I think technology can (....) use another thing instead of legs  
 \*Ann We can make a leg (laughing)  
 \*Ste Yes which one U choose?  
 \*Pen Um  
 \*Ste Penny  
 \*Pen Um I think eyes  
 \*Cyn=I don't know in order  
 \*Ste No we just choose (.) because all of them is outside is not (.) as important as inside  
 \*Ann Yes  
 \*Ste Yes right but still still still er I think (.) these three is (.) quite important quite important  
 these three  
 \*Ann But muscles (.) is is not  
 \*Ste Yes no I mean these (.) these three (.) nose cars and (x ray) eyes (ah ha) are quite  
 important (ah ha)  
 \*Ann Eyes eyes  
 \*Ste So eyes first  
 Choose one  
 Yes  
 \*Ste Do u agree with us (.) how about (.) what is another one is in important (....) which one  
 do u think is more important (.) between (handsome boy again) nose or cars? Nose or  
 cars or  
 \*Cyn =ear  
 \*Ste =or anything  
 \*Cyn=I think is ear  
 \*Ste =Ear why  
 \*Pen Hear  
 \*Ste So hear  
 er  
 \*Ste Yeah right right  
 \*Ann So how about we (.) we have a super nose we can smell something  
 \*Ste But is not as useful (.) as ears (.) I think (yeah) maybe but still important  
 \*Ann Ah if u say this I don't think it's important anymore  
 \*Ste So u try to cut down your nose  
 \*Ann Ok ha ha (laughing)  
 \*Ste Ok so so cars first or nose first  
 \*Ann Ear ears of course  
 \*Ste So er here how about teeth (.) skin  
 \*Ann =teeth (.)

67

\*Aar Ok this one (laughing)  
 What  
 Muscles  
 The muscles (laughing)  
 \*Kel A powerful liver that turn anything u eat into (.)  
 \*Aar Ok ok  
 yes  
 I think  
 How about  
 \*Aar Kelly your turn Kelly your turn  
 \*Car My turn  
 \*Aar Yes  
 \*Car =I I no Aaron your turn  
 Ok ok ok  
 \*Car U just said x ray eyes (giggling)  
 \*Aar May be er (.) extra strong bones that last forever (.) because if u have the strong bones  
 u can do many things  
 \*Car =When you die (.) the bones er (.) *dell dell* also  
 \*Aar =Yes that's good  
 \*Kel =But why u don't choose um (.) u don't choose a super strong heart that last for 100 years  
 \*Aar =The earth will er (giggling) the earth is very small (laughing)  
 \*Kel =But same as er (.) same just like  
 \*Aar Every one live for 100 years (.) no (.) no *pla* can human live  
 \*Kel U can er but  
 \*Car =Go to the moon  
 \*Kel =But more people more er (.) haha (.) more things they er they (.) er  
 \*Car =Invent  
 \*Aar Invent what  
 \*Kel um just like go um can er invent the er  
 \*Aar =spaceship  
 \*Kel =Yeah, yeah and travel to the (.) space.  
 \*Aar OK.  
 \*Kel Carrie.  
 Car I think I think er I think (....) (\*Aar where where?) I think a super nose that can  
 smell danger  
 \*Kel Agree. (Raising her hand)  
 \*Car Because when when (.) now we are don't danger where is the danger (.) so when we  
 have the super nose (.) then er (.)

No. 8 Number of words produced: 774

\*Ste Ah Yes if we smoke, liver will go bad and have cancer (yes), liver (.) cancer (.) liver  
 cancer (....)  
 \*Ann Ha ha, ha (laughing)  
 \*Ste So what's the fifth one?  
 \*Ann Right or wrong  
 \*Ste No I think not (.) is this one (.) *lunch lunch* lungs  
 \*Ann Lungs  
 \*CynLungs  
 \*Ste Lungs (.) is (.) I think is help us the carbon dioxide out and oxygen in (....) to let us  
 breathe (.) (\*Ann breathe?) yes that's right and also the stomach (.) stomach also will  
 breathe (breathe) yeah yes right and (.) for food because we when we take in oxygen  
 lungs give to break down the food in the stomach (.) in the cell (ah ha um um) yes so  
 it's quite important (um um) so what is this (.) second one?  
 \*Ann Um (....)  
 \*Ste All here is (.) outside not the inside (.) so teeth nose  
 \*Ann Skin

66

=teeth is important  
 \*Ann =If we haven't any teeth we can't eat anything  
 No  
 \*Ste We can *good* (drinking sound)  
 \*Ann Is difficulty only *good* (drinking sound)  
 \*Ste No but I mean but we can have congee (.) and I know that maybe (.) something can (.)  
 instead of (....) (teeth) no no no instead food I mean some liquid (or Or) some some er  
 patients in (.) hospital they can't eat they still use salt water salt water they can't eat salt  
 water  
 Um um  
 \*Ste So hands hands  
 \*CynUm those (laughing)  
 \*Ste Hands  
 \*Cyn I think also important because we (.) we need to (....) do activity by hands (\*Ste  
 yes) or legs  
 \*Ste I I I think com (.) computer arm (.) can't  
 \*Ann Computer arm (laughing)  
 Yeah yeah yeah  
 \*Ann Computer  
 \*Ste So um (.) extra hands is more than extra (.) strong teeth (.) I think (.) then how about  
 Penny?

No. 9 Total number of words produced: 790

\*Vic Because bone ar (.) after you die will you keep the bone? (....) But the (.) but the use  
 of this bone  
 =is  
 =then power muscles lor (*inaudible*)  
 muscle?  
 \*Jaz a super nose that can smell danger  
 \*Step =super skin (.) skin can protect yourself?  
 Yeah  
 Yeah  
 Yeah super skin  
 (*inaudible*)  
 um  
 \*Step the second one (....) Long pause.  
 \*Jaz super-nose  
 \*Step no  
 \*Jaz Really?  
 \*Step can smell the bad smell  
 \*Jaz =danger not bad smell  
 =can smell the danger  
 \*Vic yes I think this is important  
 yes  
 \*Step why ar?  
 Then  
 \*Jaz It protect you  
 Maybe you can  
 \*Vic =Er if you know the danger you can (.)  
 \*Jaz =run away as fast as  
 \*Vic =you can protect yourselves  
 \*Step Run away you use your powerful legs  
 \*Vic Yes no need to use so many money  
 =But (....)  
 Is it important?  
 Um  
 \*Vic =no need to buy car

68

- \*Ric =but you will feel very tired  
 \*Vic no need to buy cars (.....)  
 \*Step then strong bone la  
 \*Jaz x ray eyes that can see in the (dark)  
 \*Step only can see in the dark  
 um  
 \*Step no use  
 \*Jaz no use?  
 \*Vic Extra strong teeth that can eat extras strong (as tiger)  
 \*Jaz =How very ugly you know  
 \*Step =Bite people?  
 (.....) when you when you are (bite people)  
 =danger  
 \*Vic no need to (.....)  
 \*Ric What (.) what is the meaning?  
 \*Vic Quiet. I don't know how to say it.  
 \*Step Then bones lor bone lor  
 Bones  
 Um um  
 \*Vic Then er (.) x ray eyes  
 =that can see in the dark  
 =but only can see in the dark  
 You can see ..  
 \*Vic =If you can see in the dark then you will be very (.....)  
 =What?  
 \*Step =Use this (.) strong hand you can fight with other people (.....) fight with other people  
 fight with other people  
 \*Jaz =can be more care care and more careful  
 \*Vic You crazy (.) X-ray eyes that can see in the dark  
 \*Step =Super hair (.) does not fall out (.....)  
 \*Vic =No (.....) We are not (.) we are not many so not very to fall out (.) our hair you know  
 \*Step Powerful cars  
 \*Jaz =No  
 \*Vic No no no no  
 \*Step Hands  
 \*Vic Yes fight with other people  
 \*Jaz Is more helpful  
 \*Vic =Why?  
 Um (.) I think [it protect yourself  
 =It is more important  
 =??? Bites to you  
 \*Jaz =when you (.) when you in the supermarket, hey you can take as many things as you  
 want  
 \*Ric =I think this one is more important than the teeth  
 \*Step =Why ar?  
 \*Jaz =Yes the teeth is so ugly  
 \*Vic =When when you (.) when you are old and ur teeth will (.....)  
 \*Step =Fall out (giggling) Fall down  
 \*Vic Then so painful you know (.) my mother is like this (.) so I  
 \*Ric =Painful?  
 \*Vic Yes (.) painful very painful and no teeth to (.....)  
 \*Ric =But do you mean the teeth is (.) healthy (.....) healthy all the time?  
 \*Vic =And no teeth is healthy all the time and no teeth to eat things only strong only eat  
 things  
 \*Step 'Strong' is not meaning 'don't fall down'  
 \*Ric =Then what is (.) what does it mean?  
 \*Vic =Strong that means (.) that means  
 \*Step =Only can fight people

69

- \*Luc If you have not muscle (.) u can't (.) have energy (.) to hold the things just like this  
 dictionary (.) is too heavy  
 \*Kwo =yes because u are so strong and (.) may be (.) the animal  
 agree u  
 \*Cha =u said that as strong as (yes) u said that as strong as a lion's (yes) so and u can  
 \*Kwo =u can frightened with him (.....)  
 \*Ng pow powerful legs that can (.) walk walk last last last (as fast as a car) as fast as a car  
 be because u be late for school (...)  
 \*Lucum then  
 \*Chabut er but no need fast as er er but not need to walk as far as a car  
 \*Luc good (..) if u  
 \*Chano need to drive the car?  
 \*Luc =yes (.....) and if u live er (.)  
 \*Chau walk to far  
 \*Kwo and with the car so fast (.) u can not need the car what (giggling) but its very tire  
 \*Luc er extra strong hands that can lift thing up to er 100 pounds (100 pounds) um  
 but  
 \*Chahow can it change your life (.....) er can can it hell u to hold the thing  
 \*Luc yes  
 er  
 but not not important  
 \*Chano um  
 \*Kwo I don't think so I think tis is important too (.) extra strong hands  
 Um  
 \*Kwo Because we use teeth to eat  
 Eat eat  
 \*Luc Are very it ah  
 \*Kwo very hungry u haven't teeth u are old men u haven't teeth eat (.....)  
 \*ChaU can't eat  
 Um  
 \*Kwo And u will be hungry  
 um  
 \*Luc have no important (.....) plty handsome face um if u have a plty or handsome face er  
 someone will like u (um) um er er u look like young  
 \*Cha =the opposite  
 \*Kwo =other people all like u (.....)  
 um  
 =opposite  
 \*Luc look young ar (.....)  
 \*Chaoh (.....) the (.....)  
 \*Kwo extra strong  
 \*Chalast important one  
 \*Kwo =no this this extra hand (looking at L)  
 \*Cha =no it said it said already (.) er the last important one is soap per hair  
 yes  
 no important  
 \*Chabecause hair is not important  
 \*Kwo =but it it can also make us  
 \*Cha =than than this not important than this (yes) because hair is er (.)  
 \*Luc just er people look u  
 \*Chayes  
 \*Kwo for example u haven't hair there is white (.) may be like ghost in the in the dark  
 yes  
 \*Chano need to tidy your er your hair  
 \*Luc er may be it  
 \*Cha if u if u no hair (.) do u angry?  
 \*Ng er it can (.) er it can pro problem the hair  
 um? (.....)

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- \*Vic That that extra strong hand  
 Ooh oh  
 Um  
 \*Vic Um super hair that does not fall down (.....) (giggling)  
 \*Step Like a glue. (touching J's head)  
 Um this (.....)  
 I agree (.....)  
 \*Ric =cause the other things  
 =is not good  
 \*Step =no need to swept the hair on the floor  
 Wow  
 \*Ric May be in the sink  
 \*Vic Um a pretty handsome face that attract the opposite (.) sex  
 Ha?  
 \*Step The opposite sex attract (.) No need no need  
 \*Vic But would you like to (.) (giggling) have high power muscle muscle  
 No  
 =High power muscle  
 =There would you like to fight with tiger (.) something that  
 \*Vic =But would you (.) would you like to buy powerful cars that can hear what other  
 people think?  
 \*Step =No no the last one  
 Yes  
 \*Jaz So the pretty handsome face  
 \*Step Attract the opposite sex  
 \*Jaz Yeah  
 \*Ric And then (.) The high power muscle  
 Yeah  
 \*Ric The last one  
 \*Vic =With . with a pretty (.) with a pretty face would you like to have a high power muscle  
 \*Step =Yes muscles (.) Oh not every people have handsome face or pretty face  
 \*Vic =Powerful cars that can hear what other people think  
 \*Jaz Um (.) but nose are too ugly  
 \*Vic Yeah I agree like this. Why so quick?  
 Um  
 \*Step Finish  
 \*Vic Finish  
 Yeah.

---

No. 10 Number of words produced: 554

- \*Luc Next is  
 \*Cha =Muscle  
 \*Luc Muscle  
 \*Kwo =Your turn  
 \*Cha Er muscle is  
 \*Kwo Say something  
 \*Luc =But I think super skin is good  
 Ah may be change the  
 \*Luc Um because  
 \*Cha Because skin can protect (.) er your muscle  
 Er  
 \*Cha Your muscle is easy be hurt (.) so the (.) skin is important (.....)  
 \*Luc Um um high power muscles that are as strong as a lion er (.....)  
 \*Cha That's good  
 \*Luc Yes  
 \*Cha Why

70

- \*Cha Are u angry (.....) if u no hair (.)  
 \*Ng No  
 \*Kwo =What's your feeling no hair

---

No. 11 Number of words produced: 639

- \*Aar =By tax by car by aeroplane um ectera  
 \*Car Is that in the year three thousand? (.)  
 \*Aar So what?  
 [Save money.  
 \*Car [You can disagree.  
 So (.) so disagree  
 \*Aar Disagree  
 The nose  
 \*Kel But what?  
 \*Aar =Yes the nose is important (.) because em  
 Ok  
 \*Aar Because em in year three thousand er (.) there may be many E T. Oh  
 \*Kel E T?  
 \*Aar You you may smell the danger (giggling)  
 \*Car =They will catch you um (giggling)  
 \*Aar =Yeah.  
 Play you (giggling)  
 \*Aar (Chinese)  
 \*Aar Do you agree?  
 \*Kel Yeah yeah  
 \*Aar Next next one Kelly?  
 \*Kel My turn? Er I think I think (.....) the leg (.....) can walk as fast as a car.  
 \*Aar Yes  
 \*Kel Because um (.) like Carrie said (.) at that time (.) many thing is fast as possible so we  
 can save time and um we can have a better life.  
 \*Aar Yes  
 \*Car Because (.)  
 \*Kel Yes  
 \*Aar Ok your turn Connie?  
 Ya  
 \*Con Um powerful cars that can hear what other people think. (reading from the notes)  
 \*Car Why?  
 \*Con Because you can hear many many things ar something like that (giggling)  
 \*Aar Something like that?  
 \*Con No.  
 \*Car How other people think of you (.) you can know  
 \*Con Then there is no secret.  
 \*Car No secret is good  
 \*Aar Doesn't matter Ok agree? Agree.  
 Ya  
 \*Aar Then next one.  
 Er er (.....)  
 \*Aar Super hair does not (.) fall out  
 \*Kel =Why?  
 \*Aar Because we are alive we can er make some change in our body so (.) no need to have  
 super air it is impossible  
 \*Car [Yes someone need the old  
 \*Kel [Why? But why but why ar don't you put um some more important than this one (.) in  
 front of this  
 \*Aar No thing is important than this (.) is is er (.)  
 \*Kel How about (.....) yeah maybe the (.) strong hands

72

\*Car -Strong hand?  
 =But you must live.  
 =(Must live.)

\*Car -It is unuseful

\*Kel Next.

\*Car Um (.....) Muscle?

\*Aar Why?

\*Car Muscle is also (.) unuseful too (.) er it just like er strong hands you can use ur machine.

\*Aar Yeah

\*Kel But you can use it to protect yourself may be someone hit you (.) you can (.) hit him

\*Aar No need (.) high technology (.) policemen

\*Car We can

\*Kel =But everywhere

\*Aar Appear appear (giggling)

\*Car Disappear

Er

\*Aar Appear at once and disappear at once.

\*Kel Oh oh good (giggling) (.....)

\*Aar Colourless

Colourless

\*Car Strong teeth (.) and

\*Aar Strong teeth?

\*Car Why?

Um um (.....)

\*Car Strong teeth (.....) (giggling)

\*Aar Eat many things.

\*Kel So you need to protect your teeth

\*Aar Yeah. (.....)

\*Kel And then next Connie.

\*ConNext? Um (.) last one is it the last one?

Um

\*Aar Really? Finish

\*Kel =Is it?

Really?

\*Aar Ah X ray eyes.

Ya ya ya

[x ray eyes

[x ray eyes

\*ConThen the last one

\*Aar Why why? One minute in the last one

Hand

It yes

\*Aar Sold already

This (.) I don't

\*Kel You only said this (.) and no hand

\*Aar Or hand in the last one. Why you think x ray (.) x ray eye?

\*ConEm because is not important er (.)

\*Car we can use ar

\*Conmaybe we can see some dirty things (giggling)

\*Car =[Dirty things?

\*Kel =[Dirty things?

\*ConYa

\*Car You mean ghost

\*Kel Ghost.

\*ConSomething like that

\*Aar I see ok the last one must be (.....)

\*Car Strong hand.

\*Aar Yes

73

\*Dal Or. What did we need to (.) in the seven?

\*Kwa Eye

Eye

Our Eye

Yeah

Yeah

Oh Sorry eye

\*Dal Can hear other people what did they think

\*Kwa =Because (.) it also (.)

\*Yeu-I like it

\*Kwa =Like the like it

\*YeuI like see it other people what he think

\*Kwa Like us like ar

Chinese

\*Dal U like to see other people

\*Kwa No

\*Dal What he think

this

\*Dal Extra um

\*Kwa Extra er super ( ar if) nose because u ar u if people know what ar think to to (.) danger ( danger) something danger ( danger)

\*Dal =Want to kill u and ( yes) hit u u also can (.) But u can ear

\*Yeu=Hear hear people thinking if the people think to

\*Kwa =Is super nose like a dog but u hear no people er (yes ) know u can can hear er will danger u

\*Dal =But many many thing u can bear

yes

\*Dal =Oh something like that something like that

\*Kwa Yes big (Chinese)

\* =U will be very

\*Yeu Your nose is also (busy very busy busy) the America is danger they are in the Indian is danger yes all is danger

\*GarOk u must need the power powerful

\*Dal U need to say why

\*Gar Because u

U very

Once

\*Gar U know the danger u can (slowly) run very fast to er to far away the danger

Oh

\*Kwa Oh run away like a dog

\*Dal Yes is important too because

He think the he run away

Um

\*Gar And number ling

\*Dal I think (.) what did we

\*Kwa =No super skin

=yes

=No not this

No

Why

\*Dal Why

\*Kwa =Because if if or

=I think why

\*Kwa =No because if if ar the fire fire hit u (um) u u don't afraid it because u can u can er er use your hand (.) to make it down

oh

\*Dal =But u know the (.) danger u can (.)

\*Kwa =go er but I am I am the (.)

75

\*Car Haha

\*Aar Because we have machine. Oh finish.

That's all

\*Aar That's all for today!

Morning assembly. (giggling)

No. 12 Number of words produced: 908

\*Dal =er if the eye not (.) say u can see very (.) far (yeah far away) if u the eye just can (.) see something like (using gestures) that u can't (no)

\*Kwa Er If I can ar he or she use hand to to cover the answer but I can I can see (.) see over this (.) (giggling)

\*Dal =But u have this u (.) u have remember all the thing u can't don't need to (.) use this in the exam (.)

=I think

OK

smart

\*Kwa Do u remember this have but the people (.) but you you remember thing the things is not all the all the same as the (exam) exam

\*Dal =All the things is the exam

\*Kwa =U can see the people

=Ok

\*Kwa =U can see the people but why if the if the other people won't clever

oh

\*Yeu=Other people if (.....) not clever than u

\*Kwa =Oh Then my god I only can say my god

\*Dal =Other things others (.) to use it

\*Kwa Agree

\*Gar Ok

Yeah strong

U have say something

\*Kwa =Eat cat

Number sic

\*Kwa cat animal

yes

\*Gar Handsome face

Handsome face

Yes then number sic

Yes

No

No

\*Kwa No I have

Choose

No

Ok number 6

\*Yeu=If u die u have handsome face

\*Dal =is no u

\*Kwa =No Er u can u can? Other people u can u can

=No

=the handsome face is

\*Dal =he will be old 18 years old did the handsome face also handsome?

\*Kwa Also handsome but I am the most handsome most

\*Yeu=If u no money u have handsome face

\*Kwa =No handsome face I can (.) do duck

Do duck

\*Kwa U know

\*Gar And then

Um

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\*Dal =u can make the fire first

\*Kwa =I am like superman

\*Yeu=If the fire burn your eye (every one I want to help) what about

\*Gar If your eye know the danger (yes) and u can run away

\*Kwa =I I can help

\*Dal =u can help u can help very fast too

\*Gar U can faster than the fire

\*Kwa =No I don't go away I help other people

\*Dal =U help very far and u can go and help very very fast

\*Kwa =But if I want many people u u can help who

\*Yeu=Then I think we need

\*Dal =I think we need

\*Yeu=have a super (.) hand

\*Yeu=No

\*Kwa =No if fire hand

\*Dal =u can help many many people if one time

\*Kwa in one time (.) only one and one er

no er u can

\*Kwa =the other one will die one and one and one

no one and one and one (giggling)

\*Kwa =ten figure u want ten figure

\*Yeu=I think I think is (.) extra super lung

\*Kwa Lung

What

Lung

What is lung?

What time is this

Yes

\*YeuBecause in see dousand years (.) (yes) I think there are no oxygen

\*Kwa =no oxygen yes

yes may be

\*Yeuif u if we haven't (lung) then oxygen (but) we will die

\*Dal Because is very (.) dirty

Yes

\*Dal Is very dirty then I think this is most important

\*Kwa Oh

Then

\*Kwa I agree lor

Chinese

The End

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## Appendix 9                      Rating instructions to 4 judges

Dear teacher,

Please find in the enclosed transcripts of audio recordings. Each transcript contains a 5-minute extract of students at Secondary Two doing a group discussion task that lasted 12 minutes. Please assess each transcript based on (1) the group's general level of English proficiency; and (2) the group's ability to handle the discussion task on the following 6-point scale:

### *General level of English*

1	2	3	4	5	6
Very poor	quite weak	ok	quite good	very good	outstanding

### *General ability to handle the discussion task*

1	2	3	4	5	6
Very poor	quite weak	ok	quite good	very good	outstanding

Note:

When rating the students' general level of English proficiency, you are asked to give a single rating roughly reflecting the students' pronunciation, content vocabulary, and grammar. When rating the students' general ability to handle the discussion task, please consider the students' general effectiveness, confidence and cooperation/ mutual help in completing the task. The task instructions are also enclosed. Please refer to them to see what students were expected to accomplish in the task.

Please finish rating all transcripts in one go as far as possible. Try to rate the transcripts using the full range of scores from 1 – 6. In other words, the worst group(s) should be rated 1 while the best 6 as far as possible.

Important:

'English' and 'Task effectiveness' should be independently assessed. For example, it is possible to give '1' for English and '6' for task effectiveness for the same group.



## Appendix 10 Contents of questionnaires (1) and (2)

The Chinese version of the following questions was administered to the students.

### *An Overview of Questions on Direct Strategies in Questionnaire (1) \**

Target strategies	Non-target strategies
Q5. Strategy: Resourcing When I have difficulty in expressing myself, I refer to the notes given by the teacher for suggestions of words and structures to help me in the discussion.	Q.14 When I have difficulty in expressing myself, I try to think of my own words rather than refer to the notes given by the teacher for suggestions of words or phrases to use to help me in the discussion.
Q.8 Strategy: Paraphrasing When I have difficulty in thinking of the right word(s), I use words or phrases with similar meaning to express myself.	Q.3 When I have difficulty in thinking of the right word(s), I let others say something first rather than use similar words or phrases to express myself.
Q2. Strategy: Using fillers When I need to think of what to say, I use um, urh, well, you know, etc. to gain time to think.	Q.12 When I need to think of what to say, I pause to let myself have time to think and then continue the utterance from where I left off.
Q.10 Strategy: using self-repetition When I need to think of what to say, I repeat words or phrases I have just said to gain time to think.	
Q.4 Strategy: Self correction When I realise that I have used the wrong words, phrases or pronunciation, I immediately correct them by myself.	Q1 I pay more attention to the content of what I say than to the words I use or to my pronunciation.
Q.13 Strategy: Seeking clarification When I don't understand others, I ask them to clarify what they mean.	Q.7 When I don't understand others, I continue to express my meaning rather than ask them to clarify themselves.
Q.6 Strategy: Asking for repetition When I don't understand others, I ask them to repeat the words or phrases they have just said to help me understand their meaning.	Q.9 When I don't understand others, I listen quietly and hope that I can understand without having had to ask them to clarify themselves.
Q.11 Strategy: Seeking confirmation When I don't understand what others mean, I ask them to confirm what they mean so as to help me clarify their meaning.	

### FORMAT

**Q5** When I have difficulty in expressing myself, I refer to the notes given by the teacher for suggestions of words and structures to help me in the discussion.

(a) In general, the **frequency** of my own use of the above strategy in English group discussions is

1	2	3	4	5	6
---	---	---	---	---	---

Very low

Very high

(b) In general, I think that the **degree of effectiveness** of the above strategy to English group discussions is

1	2	3	4	5	6
---	---	---	---	---	---

Very low

Very high

*An Overview of Questions on Indirect Strategies in Questionnaire (2)*

Target strategies	Non-target strategies
Q.8 Strategy: Problem identification Before group discussions, I try to understand the purpose and requirements of the discussion topic rather than the content of the discussion.	Q.12 During group discussions, I focus my attention on the content of the discussion rather than the purpose and requirements of the discussion topic.
Q.11 Strategy: Planning ideas in advance Before it is my turn to speak, I plan in advance in my mind of what to say.	Q.3 I say whatever I can think of during group discussions rather than plan for the key ideas in advance.
Q.5 Strategy: Functional planning Before I speak, I plan for and rehearse words or pronunciation needed for the group discussion.	Q.7 I say whatever I can think of during group discussions rather than rehearse the words or pronunciation in my mind in advance.
Q.6 Strategy: Asking for help During group discussions, I ask my group-mates for help with the language or content of the discussion.	Q.9 During group discussions, I rely on myself rather than ask my group-mates for help with the language or content of the discussion.
Q.1 Strategy: Offering help During group discussions, I help my group-mates with the language or content of the discussion.	Q.14 During group discussions, I encourage my group-mates to use the dictionary or notes given by the teacher for help with the language or content of the discussion rather than help them directly.
Q.10 Strategy: Evaluation After group discussions, I reflect on my performance during the discussion and think of areas that need improvement."	Q.2 After group discussions, I let the gone be bygones rather than reflect on words I have used or ideas I have expressed.
Q.13 Strategy: Using positive self talk Before I speak, I let myself relax and remind myself not to be nervous.	Q.4 I let people say more to help myself relax and to reduce my pressure.

FORMAT

**Q.8** Before group discussions, I try to understand the purpose and requirements of the discussion topic rather than the content of the discussion.

(a) In general, the **frequency** of my own use of the above strategy in English group discussions is

1	2	3	4	5	6
---	---	---	---	---	---

Very low

Very high

(b) In general, I think that the **degree of effectiveness** of the above strategy to English group discussions is

1	2	3	4	5	6
---	---	---	---	---	---

Very low

Very high

學號：( )

請注意：答案沒有對或錯，請圈真實答案。請小心閱讀題目。

## 策略(1)

我會留意自己說話內容多於留意自己的發音或用字。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略(2)

當我需要思考說些甚麼時，我會用 "um", "urh", "well", "I know", "I see what you mean" 等字或句子來充塞時間。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略(3)

當我在用字表達意思上遇到困難時，我會讓他人發言，而不會冒險嘗試用類似的字或詞來表達意思。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (4)

我會小心聆聽自己的發音或用字，當發現有錯誤時，我會即時作出修正。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (5)

當我在用字表達意思上遇到困難時，我會根據老師在課堂中筆記內所提供的生字、詞或句子，來幫助討論。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (6)

當我感到難以明白他人的意思時，我會要求他們重複剛剛所說過的字或句，以幫助我明白。例如，我會說：「Sorry, can you repeat that?」或「Pardon?」

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (7)

當我感到難以明白他人的意思時，我會繼續發表自己的意見，而不會要求他人澄清那些令我不明白的地方。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (8)

當我在用寫字表達意思上遇到困難時，我會思考一些類似的字或詞來表達。例如，我會用「chair」，「desk」來代替「furniture」。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (9)

當我感到難以明白他人的意思時，我會靜心聆聽，希望能夠明白，而不會要求他人澄清。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

策略 (10)

當我需要思考說些甚麼時，我會重複一遍自己剛才所說過的一些字或詞語，以充塞時間。例如，我會說：「I think it is because because the teacher is is kind.」

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

策略 (11)

當我感到難以明白他人的意思時，我會要求他們確定其意思，使我能夠清楚明白。例如，我會問：「Are you saying that……?」或「Do you mean that……?」

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

策略 (12)

當我需要思考說些甚麼時，我會停下來，給自己充足時間去思考，然後才繼續那未完成的句子。例如，我會說：「It is because( 停頓 ) the teacher is kind.」

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (13)

當我感到難以明白他人的意思時，我會要求他們澄清。例如，我會問：「What do you mean?」

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

## 策略 (14)

當我在用字表達意思上遇到困難時，我會自己思考，即時發揮，而不會倚靠老師在課堂中筆記內所提供的生字、詞或句子，來幫助討論。

(A) 我在英語討論時運用以上策略的次數是：

1	2	3	4	5	6
很少					很多

(B) 我認為以上策略對幫助英語討論的有效程度是：

1	2	3	4	5	6
很低					很高

謝謝你回答問卷(一)

## Appendix // Transcripts of 'pull-out' group tasks for coding observed strategy use (see Table 4.6 in section 4.5.2)

Total no. of transcripts: 18

Length per transcript: 6-min preparatory talks + 12-min English discussions

### No. 1 \*Phase 1 Control (H)

Pre-discussion planning in Cantonese (6 min)

- \*Aar Which is most important?  
 \*Car Handsome face, of course.  
 \*Kel No, this world is too superficial. No good.  
 \*Aar Others may be jealous of you.  
 \*Car I've a question here. How should we express all these in English in the upcoming discussion?  
 \*Kel What do you mean by 'how to express'?  
 \*Con You mean how we could express our ideas in English?  
 \*Car Yeah, like 'outlook' is very important.  
 \*Aar Um I think the second one is 'a super strong heart that lasts for a hundred years'.  
 \*Kel Well, there are already many people on earth. If you didn't die, well then the world would be overcrowded.  
 \*Car OK then, what about this one (pointing). "Ears that can hear what other people think".  
 \*Con But then we'll have no secrets.  
 \*Car But not everyone has the money to buy secret ears. So that's not a problem.  
 \*Aar I think that x-ray eyes are good. You can find things that you've lost.  
 \*Kel Well that's difficult to know.  
 \*Aar I always lose things. (laughing)  
 \*Kel What does this word mean?  
 \*Car 'muscles'.  
 \*Kel Yeah, ok.  
 \*Car What about this? We now decide what the most important body part is. Then we ask a person to say that item first.  
 \*Aar That must be you. (laughing)  
 \*Kel Do you mean taking turns?  
 \*Car Um what about this? When a person is suggesting an item, the others respond and give opinions.  
 \*Kel I think it's better to do it like this. First when a person suggests an item, he or she should also give a reason. The rest of us will then either agree or disagree to your reasoning. We'll also need to say why we agree or disagree. Is that OK?  
 \*Car But will we have enough time?  
 \*Aar Yes, don't worry.  
 \*Kel OK, let's finish the ranking first. (reading the notes)

1

- \*Aar Oh x ray eyes  
 \*Car Why  
 \*Aar Because (.) u know Hong Kong is a small space but there is many people (.) so (.)  
 Yeah u u  
 \*Kel U can see through the people (laughing)  
 \*Car See through the people  
 No  
 \*Kel See through (laughing)  
 See through  
 \*Aar No Hong Kong is too small so um (.) a home is small too so (.) we may lost things so  
 \*Car =U can fine it easily <givehelp>  
 \*Aar =Yes easily  
 \*Kel But just this (.) er do u think (x ray eyes) the other (.) points um um um more more (important) important er than this (.) this body this  
 \*Aar No  
 \*Kel =Why  
 \*Aar Just  
 Just  
 \*Kel =Just because just because (.) U always need this thing to (.) find the lost (.) thing  
 \*Aar =Yes  
 \*Kel Only this  
 \*Aar Yes  
 To  
 \*Car =It is just a little  
 \*Kel =Yes  
 \*Aar =It is impossible if everyone is (.) simple so (.) u don't need to live  
 \*Kel But (....) um um um just like er if u have a nose can smell the danger u can find the rubber and so on  
 \*Aar Oh u are shock now  
 \*Kel And it is important  
 U are (Chinese)  
 \*Kel And it is important more more important than x ray x ray eye er  
 \*Aar =Oh may be may be  
 Chinese  
 \*Kel But u said u said not more Connie and Kelly  
 Kelly  
 \*Con U first u first  
 \*Kel The same point u first I am last  
 Kelly  
 Last chance  
 \*Car Why why why u why u want to have a petty face (to Kelly)  
 Ok  
 No  
 \*Con May be many people love (laughing)  
 Aha  
 \*Kel U said here U said this or this u will said this ok (pointing at the body parts for Connie; strategic-planning)  
 Oh why

3

- \*Car What's the first one?  
 \*Aar Pretty handsome face.  
 \*Con Is this brain? (pointing at the notes)  
 \*Aar Yes, you're right.  
 \*Kel A pretty handsome face with a dumb mind. (ha ha)  
 \*Car What about this one? I think it should be the first.  
 \*Aar What's it?  
 \*Car Super ears that can hear what other people think.  
 \*Aar But I like x ray eyes.  
 \*Car So what should we do? Every one has a different choice.  
 \*Kel Let's vote.  
 \*Aar No, I think we should suggest some reasons first and see whose choice is most convincing.  
 \*Car Let's get it straight. Should we each rank the sixteen items individually or as a group?  
 \*Kel As a group after we've some consensus and conclusion.  
 \*Car OK, let's do so later in the upcoming task.  
 \*Aar I think this should be the third. We won't die whatever we eat. We'll have a super strong stomach.  
 \*Kel No good, you'll be full to death.  
 \*Car Should we vote now or later?  
 \*Kel Later. Let's pool all ideas together first.  
 \*Aar Checking dictionary.  
 \*Kel I think 'strong teeth' is the third.  
 \*Car Hang on. Do you mean that in the upcoming discussion one person should suggest an important item, then the three of us either agree or disagree with the person with reasons. Right?  
 \*Con What if two people speak at the same time??  
 \*Car We'll sort it out later.  
 \*Kel Yeah, ok. "Extra strong lungs".  
 \*Aar I got it from the dictionary. It means 'nutrients'.  
 \*Kel Yeah, the liver changes food into nutrients.  
 \*Aar OK, I got it too. What about extra strong bones here?  
 \*Car I think you should consider your own reasons for support now so that we could use them in the discussion.  
 (Time was up.)

English discussion in progress (12min)

- \*Car Important is um is the powerful ear that can hear what other people think because er when u (.) when u work or do something (.) u can (.) u can know the the mind of the other people and u can do (.) the the work easily easily er  
 \*Con Impossible  
 Yes but  
 \*Car Objection (if) or  
 \*Kel Objection because um if um u um everyone can know other people thinking so um (.) that the world have no the (....) \*profile er  
 I  
 \*Car But I (.) is I I think it is good for myself (haha) and I like I like (ah ah) so (so) how about (.) Aaron

2

- \*Con Many people love  
 Love  
 Yeah  
 \*Car Just other love u u like it  
 \*Con =And happy?  
 \*Aar But every one is the same (laughing)  
 Haha  
 \*Car Every one is beautiful and (.) u may u may not very special  
 \*Aar Ya  
 Chinese  
 Hahaha  
 I I  
 Objection  
 \*Kel Ar ar I think (.) a petty or handsome hand some face that la la last forever er (.) important um (.) but if u have the pretty face and then er and then the other one will buy this and pretty than u (.) and then the at the last at at the result that have the compare also u not the most pretty and doesn't forever (....)  
 \*Car There is no most beauty in the world <Givehelp>  
 Yes yes yes yes so I think  
 \*Aar But u need a lot of money  
 \*Kel Ar I know I know ar  
 \*Car So what is the important in our group  
 \*Kel I I think  
 \*Car Which point  
 \*Kel I think the (\*Aar beauty) a small no no no a no no no a super mask brain that work better than a computer because er in this world er all people need (.) a (.) (\*Aar brain) a clever or something like that um  
 \*Aar Something like that  
 \*Kel Than than to learn life in this world and um if we have this er part of body (.) we we can learn the things easily and better than the computer and just like my memory is very very (\*Aar low) yes um so I need this very very very (\*Aar ok) I think it is very useful  
 \*Aar =I will support your idea  
 \*Car Ok two people support this  
 \*Aar How about u two  
 \*Car I am (haha) I I haven't say anything (.) so it is the important  
 \*Kel So this ar this point pass  
 post  
 \*Aar Yes the first one  
 Just the second one  
 \*Kel And the second one  
 \*Car Second one (.) pretty face  
 \*Kel Yes I think so I think so (.) because um (.)  
 \*Aar Me too me too  
 Different um very (\*Car because u are very ugly) very (Chinese)  
 Chinese  
 Nothing nothing  
 \*Kel Oh nothing  
 \*Car Pass pass pass  
 \*Kel Yes pass this

4



Number  
 \*Kel ER go on go on go on  
 \*Aar Go ahead  
 \*Car Go on go on  
 \*Aar What's this (beautiful) pretty and hand some  
 \*Kel Go on go on go on  
 \*Aar Speak speak  
 Speak  
 \*Aar Ok  
 Here  
 \*Aar Connie your turn  
 \*Car We we pass two points  
 \*Aar Yes and then  
 \*Car =How about the third  
 \*Aar Connie u first  
 \*Car Connie  
 \*Con Er the last one a powerful \*liver that (...)  
 \*Aar Speak up speak up  
 \*Con A powerful liver that turns anything u eat into <resourcing, reading from notes>  
 \*Car Why  
 Leg  
 \*Car Because u like it <givehelp>  
 \*Con Eat more and (.) eat more that  
 That  
 \*Con And then it turn to good is that  
 \*Aar Oh may be  
 \*Con Or healthy  
 \*Kel No it mean er u eat ar  
 U don't need to eat  
 \*Kel Anything u can turn in this so u eat no u have only something careless or u er such  
 like air (air) u can have so u can save many many money and this u u <givehelp>  
 \*Aar =And u can have energy  
 Energy  
 Energy  
 Change  
 \*Car A very strong man and woman (ar)  
 No one die turn to a muscle people  
 \*Kel But but a woman need not (.) this (.) muscles muscles  
 \*Car I I think so  
 \*Aar But woman is too weak  
 \*Kel Weak  
 \*Aar Yes  
 \*Kel =I don't think so many many (man is too weak) woman is a very  
 Good fighter (laughing)  
 Good fighter  
 \*Kel And then so  
 \*Aar So ok this one  
 What  
 Muscles  
 The muscles (laughing)

3

\*Kel Er I have my idea.  
 \*Aar Me too me too.  
 \*Kel Ok you first.  
 \*Aar No you first. Lady first.  
 \*Kel No gentleman first.  
 \*Aar No.  
 \*Kel Please.  
 \*Aar Ok Ok extra strong teeth.  
 \*Kel =ah, same same (high ptich)  
 \*Car Hey, don't be so excited.  
 \*Aar Because if you are (.) older, your teeth will (.) fall out.  
 \*Kel Er some some (.) some students or or the (.) child eat many many  
 \*Aar =chocolate  
 \*Kel =sweets or (.) or or something (.) hurt the teeth so er (.) they don't want to (.) vi  
 visit the this dentist so er (.) (laughing) they think they would think er (.) they need strong  
 teeth.  
 \*Aar I support.  
 \*Car Is this the sixth or the seventh? (busy reshuffling paper strips)  
 \*Aar How about you? You or you (pointing at Connie and Carrie)  
 \*Con When you die, only a teeth (laughing) <gesturing to express meaning>  
 \*Kel But er we put the super strong heart (er) (.) in the five  
 \*Con Super nose. x ray eyes.

The End

## No. 2 \*Phase 2 Control (H)

\*Pre-discussion planning in Cantonese (5 min)

\* I think we should start ranking the items first.  
 \*Aar I think that er items described as 'whatever' or 'one hundred years' aren't very useful.  
 \* Yes I agree.  
 \*Aar Yeah it's useless living on earth for such a long time. No friend.  
 \*Car OK let's roughly rank the first five items.  
 \*Kel (er um giggling) I think we should continue the practical aspect first. I mean  
 whatever is of utmost practical use should be ranked first.  
 \*Aar em then extra strong lung.  
 \*Kel or brain  
 \*Aar brain or lung is OK because in the year 3000, air will be very polluted.  
 \*Kel yeah right.  
 \*Car But how do we rank? Each one of us has different opinions. (looking at A)  
 \*Kel We should vote then.  
 \*Aar No, no.  
 \*Kel Ok let's just rank. Brain.  
 \*Aar OK the first is brain.  
 \*Kel What about next?  
 \*Aar Lung, quite useful.  
 \*Kel But lungs are not strong enough.

7

\*Kel A powerful liver that turn anything u eat into (reading from notes)  
 Ok ok  
 yes  
 I think  
 How about  
 \*Aar Kelly your turn Connie your turn  
 \*Car My turn  
 \*Aar Yes  
 \*Car I I no Aaron your turn  
 Ok ok  
 \*Car u just say x ray eyes  
 \*Aar May be (.) extra strong bones that last forever (.) because if u have the strong bones  
 (.) u can do many things  
 \*Car Maybe you die (.) the bones will dead also  
 \*Aar =That's good  
 \*Kel But why u don't choose um (.) u don't choose a super strong heart that last for 100  
 years (reading from notes)  
 \*Aar =The earth will er the earth is very small (laughing)  
 \*Kel But same as it just like  
 \*Aar Every one live for 100 years (.) no (.) no place can you live  
 \*Kel U can er but  
 \*Car Go to the moon  
 \*Kel =Yes the more people more er haha more things they they (.) er invent  
 \*Car Invent  
 \*Aar Invert what  
 \*Kel um just like go um can invent the er  
 \*Aar =spaceship <givehelp>  
 \*Kel =Yeah, yeah and travel to the space.  
 \*Aar OK.  
 \*Kel Carrie.  
 \*Car I think (....) <reading from notes> er em I think a super nose that can smell danger.  
 \*Kel Agree. (raising her hand)  
 \*Car Because when when (.) now we are no longer where is the danger (.) so when we  
 have the super nose (.) then er (.)  
 \*Aar But if you know all the things (.) you won't live happily. You don't have any fun.  
 \*Kel No (.) not just can smell danger (.) not always smell (.) ever .. everything.  
 \*Aar Ok Ok  
 \*Car Connie, your turn (laughing)  
 \*Cgn I don't know em (.) super hair (laughing)  
 \*Aar Why? This is one hundred years. (shuffling paper strips on desk)  
 \*Con Super hair that does not er fall down. Super hair.  
 \*Aar Why?  
 \*Con Because many man has (.) (laughing)  
 \*Car has no hair (givehelp)  
 \*Con Yeah (laughing). Tend to use the (.) er (laughing)  
 \*Aar It's terrible.  
 \*Kel No, er just not fall out  
 \*Aar But if your hair is hurt, er er (you can't) (laughing) your hair will become very (.)  
 very terrible. I don't support it.  
 \*Car I support it er

6

\*Car They are all body parts.  
 \*Kel Yeah.  
 \*Car Then what about ranking the least important items first? I mean we start with the  
 least useful body parts.  
 \*Aar The last one should be a 'super strong heart that lasts a hundred year'.  
 \*Car Right.  
 \*Aar Then 'a pretty handsome face that last forever.'  
 \*Car No, it should be in the middle.  
 \*Kel em maybe.  
 \*Aar Well I doubt it. Pretty face isn't of much use after you die.  
 \*Car Then good.  
 \*Kel It's OK to be ugly. The second one is ...  
 \*Aar No second last one.  
 \*Kel No, better not to say second last. I mean as long as the items are not of much  
 practical use, we put them near the bottom.  
 \*Aar What do you mean by 'not of practical use'? How do you define it?  
 \*Kel Like extra strong bone, forever er something like that. Other not so important  
 things are high power muscle. Then the more useful things are er a super nose that can  
 smell danger.  
 \*Car Then what about the first one? What is it?  
 \*Kel Brain, of course.  
 \*Aar Then the second one is super nose. Right?  
 \*Car Yeah.  
 \*Aar Remember, we need to explain the reasons in English in the upcoming task. You  
 know.  
 \*Kel Well we'll think about it when we're in the English discussion. Don't worry.  
 \*Aar Connie, remember you should say something? OK?  
 \*Car Aaron, you should remember to say more things. OK?  
 \*Aar OK don't worry.  
 \*Kel What's next? Something external or internal?  
 \*Aar Internal beauty is more important.  
 \*Con But you can't see the internal.  
 \*Kel What about the super hair that doesn't fall out?  
 \*Car =This should be ranked near the bottom because it's about one's look. What about  
 putting it after 'look'?  
 \*Kel Maybe even lower than that.  
 \*Aar I think we should provisionally rank the items first.  
 \*Car Let's write down the order.  
 \*Aar No, we are not supposed to do so.  
 \*Car Right then, let's try to remember the order.  
 \*Aar Memorise it? Difficult to do so for all the items.  
 \*Kel OK 'extra strong hands' doesn't sound very useful. Are we ranking from the top one  
 first?  
 \*Aar Yeah. Brain first then nose.  
 \*Kel Right.  
 \*Aar What about the third one? Next is ears or legs. The two are similar. So it doesn't  
 really mater.  
 \*Kel OK then er pretty handsome face.  
 \*Aar Pretty handsome face? (Then signalling to CO to speak. CO doesn't respond.)  
 \*Car Yeah should be the fifth or sixth now.

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- \*Aar Er extra strong teeth. Strong teeth is quite good.
- \*Car We should continue to rank.
- \*Kel That's quite good, actually.
- \*Aar Then lung.
- \*Kel What about x ray eyes?
- \*Aar Should be the next em seventh or eighth. Just follow the order, you know.
- \*Car What about pretty face?
- \*Aar We've already dealt with that em about fifth or sixth.
- \*Kel Yeah.
- \*Car Muscle is useless. It should be put in one of the last few items.
- \*Kel Then the last one er..

(Time is up)

\*English discussion (8 min) No shuffling of the paper strips on the desk; simply reading the notes when ranking

- \*Aar OK well the first one (.) extra (.) no no no (.) is super smart brain that works better than a computer? (seems to be reading from the notes)
- \*Car Yeah
- \*Kel Yes
- \*Car [Why do you think that?]  
(Chinese Um um)
- \*Aar Why? Why? (nudging K to answer) <askhelp>
- \*Kel Um because we er
- \*Car [we can think more idea] <givehelp>
- \*Kel em er em er and and we need in 3000 years we need a
- \*Car [good memory] <GIVEHELP>
- \*Aar [good memory] <GIVEHELP>
- \*Kel ya ya and first we need er very er (.) good memo er er and we need er um remember things more better
- \*Car =[useful useful just useful] <GIVEHELP>
- \*Aar yes useful ok (.) ok second?
- \*Car um second one is (.)
- \*Con =nose? <GIVEHELP>
- \*Car nose
- \*Aar ya why?
- \*Car =why?
- \*Aar OK I answer <OFFERHELP>
- \* ok ok
- \*Aar because um when we have a (.) some danger we can (.) know that so we can protect our life
- \*Con yes the third one also <COOPENEGO>
- \*Aar third one
- \*Car but um may be
- \*Aar leg or car?
- \*Kel may be um car ya
- \*Aar powerful cars why? Connie
- \*Con ya er (.) we can well (giggling) hear more hear many many things so so um er em er em

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- \*Aar You mean that hear some comment or you from others?
- \*Car ya so um also useful
- \*Con many useful
- \*Aar =OK (many) fourth one
- \*Kel um I think is er powerful legs er that can walk as fast as a car because er in (.) 3000 year we need (.) to do things er more as fast as possible so we need er er instrument to make us er do things many more faster
- \*Aar ok then
- \*Car what do you think?
- \*Aar er
- \*Car pretty and handsome face <GIVEHELP>
- \*Aar that lasts forever why?
- \*Kel [last forever]
- \*Aar why?
- \*Kel outlook
- \*Con [because] is important
- \*Car ya
- \*Kel just the look
- \*Car yes your look is important
- \*Aar not too important
- \*Kel but you know er if you are so ugly
- \*Car =[no one talk to you]
- \*Kel during that years er may be only said that er we need to er see about the beautiful so if you ugly er
- \*Aar if you are ugly
- \*Kel ok ok if you are ugly and you will er (.)
- \*Aar =[no one love]
- \*Kel no no not this mean er er I don't know the words (Chinese)
- \*Aar so what do you mean? (giggling) I don't know too wor
- \*Kel ok just leave it
- \*Aar outdate lor
- \*Kel outdateno outdate
- \*Aar and next one la
- \*Car next one
- \*Con um extra strong teeth may be
- \*Aar ya because we always eat sweets then (.) we don't want have (so) toothache so we need extra strong teeth
- \*Kel someone may afraid of pain very pain
- \*Aar ya
- \*Car um um next one no one disagree
- \*Aar ya because we have prepare well
- \*Kel yes so next one don't think very strong hand
- \*Car um
- \*Con powerful stomach
- \*Kel but if you have extra strong teeth (.) and not eat anything
- \*Car a powerful stomage that
- \*Con we can eat many many (giggling) <GIVEHELP>
- \*Aar yeah I see I agree
- \*Car because um
- \*Aar because what?

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- \*Kel ya because what
- \*Car healthy
- \*Kel healthy?
- \*Car ya
- \*Kel may be fat
- \*Aar um next one
- \*Car ha ha number what number
- \*Aar forgot (.) extra strong lung (.) extra strong lung
- \*Car why?
- \*Aar because in year 3000 um the air pollution may be very bad er very bad so we need a extra strong lung to protect ourselves
- \*Kel protect ( ya )
- \*Car also protect
- \*Aar yeah protect myself (using gestures)
- \*Kel you you you mean
- \*Car =[many people hurt you]
- \*Aar yes
- \*Kel just like to to you
- \*Aar do you agree?
- \*Car I er agree
- \*Aar How about you? (speaking to CO)
- \*Con Agree agree
- \*Kel Agree
- \*Aar Suggestion Connie?
- \*Car I think the last one
- \* Last one (.) you think the last one
- \*Car The last one er (.) heart strong heart
- \*Aar Why?
- \*Con Super hair
- \*Kel Oh yes
- \*Aar Why?
- \* Ya
- \*Car Why?
- \*Con Because I am I have many many hair I don't need
- \*Kel I agree to
- \*Car yes
- \*Aar ok that's mean super hair is the last one
- \* ha
- \*Kel no
- \*Aar no or yes
- \*Kel have this this many many left and u (pointing at the instruction sheet)
- \*Aar ok ok
- \* don't
- \*Aar ok next one next one
- \*Car many ( may be) things are useless I think
- \*Kel ya
- \*Aar ya me two me two
- \*Kel ya just pow (next one) high power muscles
- \*Car ya
- \*Kel so next next next may be pow ( x ray ) x ray eyes

- \*Aar x ray? But I don't agree
- \*Kel oh why why what's your suggestion
- \*Aar er because x ray eyes er is used to do some bad things may be may be someone
- \*Kel =may be only
- \*Aar may be
- \*Kel may be only you ya just er some some just er not not not gentlemen u are not gentlemen
- \* ya ya ya no no no no bad bad man
- \*Aar um I think is extra strong hand (.) because um (.) we may (.) need
- \*Car =I think I think in this year (.) we work (.) most computer (.) not by hand
- \*Aar Oh I see (.) so doesn't matter
- \*Car So ok I agree
- \*Kel But u use computer also use robot (.) Er robot is it
- \*Aar Robot robot
- \* Robot ya
- \*Aar but not computer is robot
- \*Car robot
- \*Aar ya robot not computer (.) because u need to type
- \*Car type
- \*Aar ya
- \*Con u mean keyboard
- \*Aar ya type the keyboard (.) next one next one
- \*Car next one is (.) um (....)
- \*Kel may be super skin <GIVEHELP>
- \*Car super skin
- \*Kel outlook also
- \*Car umum I think (....) ok
- \*Aar ok
- \*Kel so super skin that doesn't er doesn't change
- \* just like look
- \*Aar we have discuss all la wor
- \*Car yes
- \* please
- \* finish is it
- \* or ya
- \*Aar no no the last one a powerful liver that turn anything u eat into nutrients
- \*Kel =wh how about x ray eyes
- \* x ray
- \*Aar talk already
- \*Kel =no u disagree
- \*Aar ok ok the
- \*Kel so after extra strong hand may be
- \*Aar x ray eyes
- \*Kel so um extra strong hand x ray eyes and super skin that doesn't change and then the at last one is the
- \*Aar a powerful liver
- \*Kel ok
- \*ya

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- \* Um um
- \*Kel so finish
- \*Aar finish
- \*Con finish
- \*Car finish

The End

No. 3 \*Phase 3 Control (H)

Pre-discussion planning conducted in Cantonese (4.5 mins)

- \*Aar What do you think Carrie? Which should be the first item?
- \*Car Super skin er. Super skin
- \*Aar Do you agree? (Looking at Connie)
- \*Con Em well, yes I agree.
- \*Aar Em I don't care.
- \*Kel They are all similar.
- \*Aar Yeah. Very important. Em. Then the next one is bones .. extra strong bones.
- \*Car Mainly for protecting us, right.
- \*Aar Yeah, do so eternally and make us ever green.
- \*Car Kelly?
- \*Aar If you have bones, then you need skin to complement them.
- \*Car Um, to complement right. By the way, it's difficult. It'll be easier to rank it the other way round. I mean, it's easier to start ranking from the bottom. /
- \*Aar Ear then?
- \*Kel The last.
- \*Aar Do you agree?
- \*Car I don't care. Extra strong hand. Not important. Why will we need to lift such heavy things?!
- \*Aar yeah, we'll have machines.
- \*Con Ok. That'll be the last one then.
- \*Aar Then x-ray eyes. We'll have electricity and lights.
- \*Kel Maybe at that time we have no lights. We have light bugs!
- \*Car Em pretty handsome face.
- \*Aar No it's the first. We've already ranked it. We have skin and then bone.
- \*Kel Nose is good. We can smell danger. You see at that time it might be very chaotic.
- \*Car Then er ears. Should they be put at the end?
- \*Aar But you said you wanted them.
- \*Kel No we said hands not ears.
- \*Aar Ok Ok. Second last then.
- \*Kel What about muscles?
- \*Aar Muscles should be second last or third last.
- \*Con Not very useful to be so powerful, actually.
- \*Aar yeah, we'll have machines. Fourth from the bottom. What about strong hands?
- \*Car No they should be ranked the last.
- \*Kel Hair then, useless.
- \*Aar What about fifth from the bottom?

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- \*Aar =because you won't (.) die (....) you can live forever.
- \*Car But you wish to live forever.
- \*Aar =Ya
- \*Car Just bone.
- \*Kel But you just have a bone (.) not your [your  
[your body
- \*Car =your bone can live forever you cannot
- \*Aar =doesn't matter (.) after I dead er everyone can remember me (giggling)
- \*Car your bone (giggling)
- \*Kel =to see your bone (giggling)
- \*Car yes just remember your bone (giggling)
- \*Kel then Carrie
- \*Aar fourth one (....)
- \*Car Er (....) powerful legs (turning to K)
- \*Kel Is it nose?
- \*Aar Ya ya
- \*Car Is it?
- \*Aar Why?
- \*Car That's ok that's ok
- \*Aar Ok Why why?
- \*Car Because er I think (say more) in the year (.) three thousand um em all the things are fast work fast er walk fast (.) many things are go fast (.)
- \*Aar =But you can (.) But you can er (.) but you can go by the other things
- \*Car What?
- \*Aar =By tax by car by aeroplane um ecctera
- \*Car Is that in the year three thousand?
- \*Aar So what?
- [Save money.
- \*Car [You can disagree.  
So (.) so disagree
- \*Aar Disagree
- The nose
- \*Kel But what?
- \*Aar Yes the nose is important (.) because em  
Ok
- \*Aar Because em in year three thousand er (.) there may be many E T. Oh
- \*Kel E T?
- \*Aar You you may smell the danger (giggling)
- \*Car They will catch you um (giggling)
- \*Aar =Yeah.  
Play you (giggling)
- (Chinese)
- \*Aar Do you agree?
- \*Kel Yeah yeah
- \*Aar Next next one Kelly?
- \*Kel My tum? Er I think I think (....) the leg (.) can walk as fast as a car.
- \*Aar Yes.
- \*Kel Because um (.) like Carrie said (.) at that time many thing is fast as possible so we can save time and (.) we can have a better life.
- \*Aar Yes.

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- \*Car Strong teeth is fifth from the bottom.
- \*Aar OK sixth from the bottom
- \*Car Some times you can think of the reason.
- \*Aar It seems that we've finished ranking all the items already.
- \*Car What's the second most important?
- \*Aar The second should be legs.
- \*Kel Second?
- \*Aar Should be OK.
- \*Kel No, not good, of course.
- \*Aar Then, legs should be the fourth important.
- \*Kel Again, the first is pretty handsome face.
- \*Aar Second is skin, third is bones, fourth is legs.
- \*Kel Nose, er about danger.
- \*Car Then cars.
- \*Aar Ears is already in place.
- \*Kel Then legs.
- \*Aar Then Muscles. Strong hands. Yeah not much use.
- \*Car Then ears then what? Hair. Muscles. Strong hands.  
No more.
- \*Car X ray eyes. What about them?
- \*Aar OK they're the last. It's settled. These are quite useless.
- \*Kel Yes, yes OK already. Ready to start.

English Discussion in progress (8 min)

- \*Aar Ok the first one (.) what do you think about? Kelly?
- \*Kel Me? (.) ar the first one I think (....) the first one is er (....) a a pretty and handsome face that attract the opp po [sit  
[opposite yes Why you think that?
- \*Car Because I think (.) in that century we need it
- \*Aar Why why you need it?
- \*Kel Um may be there um at that time (.) um all thing er is (....)
- \*Car What (.) all thing is (....) beautiful.
- \*Kel =Yeah. No beauty er? no no places to live here yeah (giggling)
- \*Car Then second point
- \*Aar Um
- \*Car What do you think about the second, Connie?
- \*Con Super skin.
- \*Aar Why?
- \*Con Coz em .. er (....)
- \*Car It can protect ourselves (.) <GIVEHELP>
- \*Con Won't hurt easily.
- \*Car Everyone agree?
- \*Aar [Agree
- \*Car =agree
- \*Aar And then?
- \*Car Aaron?
- \*Kel Ya. Aaron.
- \*Aar um maybe I think is extra strong bone that last forever (reading from the notes).  
Why?
- \*Car Because (.)
- \*Kel Yes.
- \*Aar Ok your turn Connie?  
Ya
- \*Con Um powerful ears that can hear what other people think. (reading from the notes)
- \*Car Why?
- \*Con Because you can hear many many things ar something like that (giggling)
- \*Aar Something like that?
- \*Con No.
- \*Car How other people think of you (.) you can know
- \*Con Then there is no secret.
- \*Car No secret is good
- \*Aar Doesn't matter Ok agree? Agree.  
Ya
- \*Aar Then next one.  
Er er (....)
- \*Aar Superhair does not (.) fall out
- \*Kel Why?
- \*Aar Because we are alive we can er make some change in our body so (.) no need to have super hair it is impossible
- \*Car [Yes someone need the old
- \*Kel [Why? But why but why ar don't you put um some more important than this one (.) in front of this
- \*Aar No thing is important than this (.) is is er (.)
- \*Kel How about (....) yeah maybe the (.) strong hands
- \*Car =Strong hand?  
=But you must live.  
=[Must live.
- \*Car =It is unuseful
- \*Kel Next.
- \*Car Um (....) Muscle?
- \*Aar Why?
- \*Car Muscle is also (.) unuseful too (.) er it just like er strong hands you can use ur machine.
- \*Aar Yeah
- \*Kel But you can use it to protect yourself may be someone hit you (.) you can (.) hit him (USING GESTURES)
- \*Aar No need (.) high technology (....) policemen
- \*Car We can
- \*Kel =But everywhere
- \*Aar Appear appear (giggling)
- \*Car Disappear  
Er
- \*Aar Appear at once and disappear at once.
- \*Kel Oh oh good (giggling)
- \*Aar Colourless  
Colourless
- \*Car Strong teeth (.) and
- \*Aar Strong teeth?
- \*Car Why?

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Um um (...)  
 \*Car Strong teeth (...) giggling.  
 \*Aar Eat many things.  
 \*Kel So you need to protect your teeth  
 \*Aar Yeah. (...)  
 \*Kel And then next Connie.  
 \*Con Next? Um last one is it the last one?  
 Um  
 \*Aar Really? Finish  
 \*Kel =Is it?  
 Really?  
 \*Aar Ah X ray eyes.  
 Ya ya ya  
 [x ray eyes  
 [x ray eyes  
 \*Con Then the last one  
 \*Aar Why why? One minute in the last one  
 Hand  
 It yes  
 \*Aar Sold already  
 This (.) I don't  
 \*Kel You only said this (.) and no hand (Pointing at something on the sheet and showing it to C)  
 \*Aar Or hand in the last one. Why you think x ray (.) x ray eye?  
 \*Con Em because is not important er (.)  
 \*Car we can use ar <GIVEHELP>  
 \*Con maybe we can see some dirty things (giggling)  
 \*Car =[Dirty things?  
 \*Kel =[Dirty things?  
 \*Con Ya  
 \*Car You mean ghost  
 \*Kel Ghost.  
 \*Con Something like that.  
 \*Aar I see ok the last one must be (...)  
 \*Car Strong hand.  
 \*Aar Yes  
 \*Car Haha  
 \*Aar Because we have machine.Oh finish.  
 That's all  
 \*Aar That's all for today!  
 Morning assembly. (giggling)

The End

No. 4 \*Phase 1 Control (L)

Pre-discussion planning in Cantonese (3 min 40 sec)

\*Ala Yeah  
 Yeah  
 Yes  
 \*Ray I think the (.) <trying to put forward a paper strip>  
 \*Ben How about the strong lung?  
 \*Ala Ha?  
 \*Ben Ex strong lung  
 \*Sam Strong lungs  
 Er no  
 No  
 \*Ray I think (no need or no) the strong lung is important because the strong lung is  
 \*Ben Is what? <signalling members to speak up>  
 \*Ala Is er my life is stronger (.) the life is stronger  
 \*Ben Strong heart <putting forward the paper strip>  
 \*Ray Yes  
 \*Sam Yes  
 \*Ray Strong heart is number one  
 \*Ben How about the  
 \*Ray Do Do u agree? Do u agree? Do u agree <pressing Ben to respond>  
 \*Ala Yes I think is (yes) number 1 er (yes yes) they into  
 Number  
 \*Ben How about the strong teeth? <showing the paper strip>  
 \*Ala No  
 \*Ray No  
 \*Ben No we can eat something we want to eat  
 Yes now  
 Yes  
 Now I can  
 \*Sam U can  
 \*Ben I can  
 \*Sam U can but  
 \*Ben But when we when we (u) 90 or 80 we can't eat we want to eat  
 \*Ray No u can use the er (...)  
 \*Ala You can u choose er  
 Chinese  
 \*Ray How about the um this  
 \*Ben Super skin? <quickly referring to the notes for detail>  
 er er  
 \*Sam Check it check it what <pointing at a paper strip>  
 \*Ala Er Liver  
 Liver  
 \*Ray Er I think the this is number three  
 \*Ben I think high high power muscles is very important  
 \*Ray =No no I don't think so.  
 \*Ben Yes, yes.  
 \*Ray I don't think so (yeah yeah yeah yeah) I don't think so. This one <pointing at his brain>. Bain.  
 \*Ala Oh  
 \*Ray Is this clever?  
 \*Ala Is clever (u can) I know

\*Ben I think x ray eyes should be ranked the first. We want to see what we need to see, yeah.  
 \*Sam Like what?  
 \*Ben Such as where the malignant tumours are, ha ha ha ...  
 \*Ala Malignant tumours? What's x-ray eyes?  
 \*Sam Check the dictionary.  
 \*Ray Now I think we should look up all the difficult words first.  
 \*Ben No, we don't need to check all the words.  
 \*Sam Just words we don't understand then.  
 \*Ala yeah. What's liver? (grabbing the dictionary and checking it together with Ray)  
 \*Ben What should we do now?  
 \*Sam To discuss how we should conduct the upcoming English task.  
 \*Ben At the beginning, we should say what we feel is most important first.  
 \*Ala No we should make sure that we know the meanings of all the words.  
 \*Ben No I disagree. I think we should consider which item is the most important first. Eyes are the most important.  
 \*Sam No we are not supposed to start the discussion now.  
 \*Ben No, let's rank the items first. There are 16 body parts. Then we need to give reasons. We don't have to explain all the items. We should rank and just explain reasons for the first few items and for the last few items.  
 \*Ray I think we should now look up all the unfamiliar words from the dictionary.  
 \*Ben No. Let's discuss why we need the new body parts. OK? Why?  
 \*Ray Yeah, in what ways can the body parts change your life style? How can they help you? How will you use them?  
 \*Sam Then what should we say first?  
 \*Ben We should discuss the first few most important body items first.  
 \*Sam x ray eyes.  
 \*Ala I don't think we really need x ray eyes. With the advance in science and technology, we could have x ray eyes.  
 \*Ray Let's discuss the most important items first.  
 \*Ala I think appearance is the most important.  
 \*Sam No (.) what about er...  
 \*Ala I think in ... this one handsome face  
 \*Sam No, appearance is not important of course.  
 \*Ala Why?  
 \*Ben A matter of face.

English discussion (8 min 20 sec)

\*Ray Why u think handsome face is the  
 \*Ala Because because er  
 \*Ray Because what  
 Because  
 Because  
 Why u think the (handsome face) handsome face is facial express  
 \*Ala Because er I think is important  
 \*Sam Why important  
 \*Ray Why important  
 \*Ala Er To  
 \*Ben =Because you are so ugly now <givehelp>

\*Ben Clever  
 \*Ala Is clever than computer  
 \*Ray I think it is the most important (.) Yes (.) Clever than computer (.) Change number three number  
 \*Sam Change number three yes change  
 Change  
 Change change  
 \*Ray How about number four?  
 \*Ben This one. <Pointing at the strip>  
 \*Ray Why?  
 \*Ala Why?  
 \*Sam Why?  
 \*Ben Because (what) we can see the thing (.) we want to see  
 \*Ala What mean that?  
 Er  
 er  
 \*Ray Stomage <touching Alan's tummy> How about \*next?  
 \*Ben How about the super hair  
 Super hair  
 No  
 U  
 \*Ray U u (u need to cut) u can cut  
 \*Ben Um I think powerful ears  
 \*Ray No  
 \*Ben We we (just to) can hear the exam  
 ha ha exam  
 No  
 \*Sam No u can't  
 So excite  
 \*Sam U can't (power legs) u can't listen extra (powerful legs) something answer of the  
 Powerful legs  
 But u can't do it  
 Hey this is running faster than cars  
 \*Ray May be may be hit  
 \*Ala U don't have (said) powerful legs u can walk  
 \*Ben As fast as a car  
 Yes  
 As fast as  
 Then  
 \*Ala It is very important (then u) it is very important er  
 then u u ar it can  
 Yes  
 Important  
 \*Sam Very important ar agree how about number six  
 \*Ray ear skin  
 \*Ala Strong hair  
 \*Sam Strong hair strong  
 \*Ben no no no  
 \*Ray Oh the bone we bones strong bones  
 \*Sam Strong bones

\*Ben Hm hm yeah if a car hit u  
 \*Ben [U won't die  
 \*Sam [U won't die  
 \*Ray U may need the car because  
 The car broken the car broken  
 \*Ben About (Chinese) oh I think this is the the most important this (putting forth a paper strip)  
 \*Ray Why  
 Something  
 U can  
 \*Ala =Super nose because it can smell danger if it can it is danger (squeezing his nose)  
 \*Ben Wait what mean your  
 Yeah  
 \*Ala Then er it can something bad smell er like superman  
 Why?  
 \*Ray I think this is change ( this too yes yes) because u have strong your life will be matter but u have the u different smile  
 \*Ala No supers strong heart (smart from)  
 \*Ray But u are so old (.) u are 100 years old  
 \*Sam 100 year old  
 \*Ray U are too u are very very er old (.) your hair your skin is very bad only if u have this  
 \*Ben Then what is this?  
 \*Ray I think this (.) super what ?  
 Super  
 \*Ben Strong. How about strong lungs strong lung?  
 May be u can  
 \*Sam Strong lungs  
 If  
 er  
 \*Ben yes we can we can strong lung  
 \*Ray no I because I have storm er I think the \*stomach because we are bad \*stomach u have we have the bad \* stomach  
 \*Ben u have bad \*stomach ?  
 bad bad bad no  
 \*Ray we also eat the .... good oil  
 \*Ala I think the important (.) the same  
 Why  
 \*Ala The same  
 The same  
 Yes  
 \*Ben It is not (.) Not (.) not useful  
 yeah  
 \*Ben What is the last what is the last?  
 \*Ala What is the last is about( the ) the  
 \*Ben hair  
 \*Ray =Hair  
 Hair not important  
 Yes  
 About  
 \*Ala And the key?

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why why  
 \*Ray just because your hair can ( can cut) be cut and wait <checking the notes> but mr . lam said our hair short do we stupid does not borrow ar out do not borrow money do not borrow your hair no does not borrow out u u can go to cut your hair u can save your money save our money yes money important but ( but )I don't think the car is important but we are get more money  
 \*Ala why  
 \*Ben why  
 why  
 \*Ala a lot of money  
 how to get  
 \*Ray where u can say u don't need to cut your hair  
 how to get  
 \*Ben but I think high power muscles is very important too  
 \*Ray muscles  
 why  
 muscles  
 may be but I base  
 but  
 \*Ray the high power strong hand you can take some heavy things (.) muscles but we can take nothing  
 \*Ray but we can take what in the exam the what exam  
 \*Ben exam exercise  
 Chinese  
 \*Ray I think the power muscles high power too big it is too big (gesturing)  
 No ar too much related  
 Low  
 muscles  
 Good good  
 Here  
 no  
 Here  
 no  
 No no  
 Here  
 no  
 \*Ray I think the hand is better than muscles  
 \*Ala Yes hand  
 \*Ray Because your hand ( u can take )can take something look like a car  
 \*Sam Yes aeroplane  
 \*Ala And u have the liver  
 liver  
 What liver  
 Like er like  
 \*Ray I know I know and  
 About the  
 \*Ray If U don't drink the beer  
 \*Ala But we must drink the beer  
 \*Ray Don't drink er beer don't drink beer from there  
 \*Ala But we can said

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\*Ben Yes it can protect ourselves  
 The health ar ourselves  
 \*Ray I think if u said u protect ourselves I think the lung is more important  
 \*Ben No this is not very important because it can it can (taking up and showing a paper strip)  
 \*Ray Because the air the air the air is too bad now  
 \*Sam Yes the air  
 Yes world was the life business  
 Chinese  
 What was the liver  
 Liver  
 Here  
 No No super skin ( super skin) livers because I think liver is quite important (a strong lung may be) no no  
 Lungs lungs liver  
 \*Ray The air the car  
 \*Ben Liver can absorb some some some (.) bad things in in Ur food in in your drink and u can save your life  
 \*Ray Yes yes  
 \*Sam But I think is um lung because it help u about  
 Lung only help u to to er to what  
 \*Ray But u need air too  
 To to to what  
 To to Absorb these atmosphere  
 Absorb  
 May be may be  
 No absorb but  
 \*Ray Number ten number ten ar How about (\*Ben/ super skin ) super skin  
 \*Ben Just skin what use?  
 Super skin (all reading the notes)  
 Skin that does not change (reading from the notes)  
 \*Ray Look like a Baby  
 Kiki  
 kiki  
 No  
 Kiki kiki  
 Er the  
 \*Ala We can use SK Two  
 SK Two  
 \*Ray U are very from the SK two  
 \*Ben How about powerful ears because I am u can hear the answer in the examination  
 \*Ala So important  
 yes  
 ok finish  
 \*Ray how about the power bones?  
 stomach  
 \*Ben er here here (pointing at the notes)  
 to  
 does  
 anything u eat

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u eat  
 \*Ray u eat the iron  
 iron  
 why why u keep your  
 \*Ben yes yes yes u can  
 yes  
 \*Ben why u want to eat some poison we can stop him  
 may be this two change or  
 or this two change ( lung)  
 no no no no  
 yes yes yes changes changes changes  
 agree  
 yes yes  
 agree  
 yes  
 finish  
 finish  
 no comment  
 yes finish ok  
 oh I forgot to do this  
 Chinese.

The End

No. 5 \*Phase 2 Control (L)

Preparation in Cantonese (6 min)

\*Ben Well I think that right at the beginning we should separate the paper strips you know. Er for example, we could separate the important from the not important body parts. Then we prioritize them.  
 \*Sam But I would have thought that this is what we should do during the discussion and not now.  
 \*Ben Yeah but we should classify the body items so that we could save our discussion time during the upcoming task.  
 \*Ray But then it seems that we're already restricted by our ranking now.  
 \*Ben Precisely so we could then save our time since we already fix the ranking now.  
 \*Ala What's the third one?  
 \*Ben It's super-bone that lasts forever.  
 \*Sam Don't we need to discuss how we should contribute so that everyone has the chance to say something during the English discussion?  
 \*Ray Do we understand all the words? Any words we don't understand?  
 \*Ben After we have segregated the important from the less important ones, we won't then miss out any items later in the English discussion. So let's talk about what are important and we are not. I think our face is very important.  
 \*Sam Useless to have a good appearance after you die.  
 \*Ben Then what do you think is important, Sam?  
 \*Sam Me er.

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- \*Ala And handsome face.  
 \*Sam I don't think so. I think 'super heart' is more important.  
 \*Ben OK. Let's say that whatever is related to the functions of our body are important.  
 Next come our face or appearance.  
 \*Ala Well x ray eyes is important. For example if a person falls sick, we can see what's wrong by using the x ray eyes. Right?  
 \*Sam No we now have x ray. No need to have x ray eyes.  
 \*Ben I think 'a super strong heart' should be ranked the first. Agree?  
 \*Sam Yes yes. Agree.  
 \*Ben Then we should move to 'brain' after 'heart'.  
 \*Sam Why not body?  
 \*Ben Of course not. Our brain is very important.  
 \*Ala Yes agree.  
 \*Sam The next is related to functions of our body part.  
 \*Ben Why don't we listen to Alan's views?  
 \*Ala Oh sure I think 'powerful legs'.  
 \*Sam No we haven't talked about our internal organs yet.  
 \*Ben Well apart from our heart, which is an internal organ, the next most important is our lungs.  
 \*Sam Why?  
 \*Ben Um I don't know.  
 \*Sam Something about air, right. The respiratory system affects our health.  
 \*Ben Yes, air goes directly into our body through our lungs.  
 \*Ray But what about stomach? Food goes into our stomach too.  
 \*Sam But there is no stomach.  
 \*Ray No there is.  
 \*Ben No according to experts' views, an environment with fresh air can make you live longer.  
 \*Ray No if your lungs break you won't die yet.  
 \*Ben No, if you heart breaks you die.  
 \*Ray But you already have a heart that is one hundred years old.  
 \*Ben But you won't be able to know if the air is poisonous. With food, you can be more careful.  
 \*Sam What do you think then, Ray?  
 \*Ray I think stomach is more important. We won't get poisoned.  
 \*Ala Hey, everydoby, don't you think that the fifth one in the notes is important?  
 \*Ben It's brain and we've already talked about it.  
 \*Ala Then what have we ranked so far?  
 \*Ben The first is heart second is brain and the third is breathing lung.  
 \*Sam OK let's decide on number four now/  
 \*Ben I think liver is important.  
 \*Ray The six minutes will soon be over. Hurry.  
 \*Ben Well liver can filter toxins from our body. That way, liver can lengthen our lives.  
 \*Sam You've already ranked everything.  
 \*Ala "A super nose" is very important. Even if you have a strong heart or liver, you can't avoid danger.  
 \*Ben Then why don't you choose 'x ray eyes' then? You can avoid danger too.

(The preparation didn't finish but time was up.)

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- \*Ben Yeah and er I think lung is more important than liver because I think so because (.) er u er the poisonous in the air u cannot (.) u can u cannot (R/put in put in the comfortable air) to er not to ( breathe ) to breathe but the poisonous in the food or in the wire u can drink (carefully) less less (...) um what is Alan Pang er what u think  
 \*Ray =How about u Ben Lo =How about u (no what no what) how about number 4 (number 4 er) how about u  
 \*Sam later  
 \*Ala Powerful legs er (S/um the liver) yes yes once u because er if we er go to school late u can use er our legs (R/only go to school) yes er and go go to (.) (B/we can keep money) where yes  
 \*Ben But we can  
 \*Ala We can what  
 \*Ben We can  
 =We can  
 \*Ben How about er do u think the liver is quite important  
 =Liver  
 =Liver  
 Ya it can make (R/take out <GIVHELP>) the (poisonous) absorb the (no absorb) (R/absorb the poisonous? <SEEKCONFIRM>) poisonous  
 No  
 =Why  
 No we agree  
 No u don't go  
 \*Ray Only u or we  
 \*Sam Hey what only u quick quick  
 Yes  
 Ok ok u (u u)agree  
 Yes  
 Why u agree  
 \*Ben =I think next important is stomach (.) ( stomach stomach )because (.) when u when u are old your stomach cannot (.....) cannot make the food to be energy  
 Yes  
 \*Ben Because u are old  
 \*Ray Oh  
 \*Ben But But u when u have the power stomach u can make the food to be energy  
 Forever  
 Forever  
 \*Ben Do u agree alan pang or sam  
 \*Ala =Yes  
 \*Sam Yes  
 \*Ben What's next sam (.)I think the body is ( I think the nose )  
 \*Ray =I think the nose  
 \*Ala It smells danger  
 \*Ray =Danger or x ray eyes  
 \*Sam Um But not all the dan leg  
 =Danger can smell  
 =X rays eyes lei  
 \*Ala =I think it is smell or the danger  
 =I think the x ray eyes people can sleep  
 =But when u think

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English discussion (12 min)

- \*Ben Um (...) Which um which things do you (.) which which do you think is the [most important or most important ar] important  
 \*Ala =Pretty and Handsome face that  
 =Why  
 The so important ar  
 \*Sam =Why so important ar  
 \*Ala Er The face is important so is important  
 \*Sam =Why the face is important (no reason reason)  
 \*Ben Um do u mean that (.) um um (.) we have a handsome face <GIVHELP>  
 \*Ala =( yes then we can )  
 \*Ben =everybody will like us <GIVHELP>  
 \*Ala =( yes )  
 No I don't think so  
 \*Ben =But I think when u old (.) do u think somebody like u (.....)  
 \*Ray how about 20 years ago no 20 years later  
 \*Sam =U can keep your (.) face but (.) cannot keep your body  
 \*Ray U only can keep your face(.) So is a big problem  
 \*Ben =I I think the life is very import is the most important so the heart is the most important one because er when u have a strong super heart (.) u can live for 100 years ( chinese ) do u do u agree?  
 \*Ala Er Yes of coz (of coz) of coz  
 \*Ben Ok how about the second ( second one ) Er Ray do u have any (.)idea ( decision decision )thing to tell  
 \*Ray =I think the super smile brain  
 \*Ben Super Oh u fing the ( brain ) oh ( give us instruction reason ) can u give me (.) u think u think clever er is the most important ( the second important ) the second important sorry um why but why u think (.) clever is (.) quite important  
 \*Ray No clever the brain is control all your bone in your and u know  
 \*Ala =Because  
 =U know this  
 \*Ala =Because because because now u not clever so u want more clever  
 No  
 No  
 \*Ray I think u are stupid not clever u know (.) so u must u must get this brain  
 \*Ben =um how about the  
 \*Sam =I think I think um I think the lungs ( extra strong lungs ) strong lungs yes I think so  
 \*Ben =Are are u agree ( why u agree )I think the the your liver (.) er er I but the liver (.) is (.) not more important  
 =u can u can take out the  
 \*Sam =poisonous poisonous <GIVHELP> Um but why (but do u must think) to beef must need lungs  
 \*Ala Ray ray er do u think it is very chinese  
 \*Ben Alan Pang what u want to say do u say speak louder  
 \*Ala so u do u thought this is very (chinese)  
 \*Ray Oh don't speak (don't speak) in cantonese do u agree U can take off your cold

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- \*Sam =[but have the other things] u cannot smell  
 \*Ala =but but I think the danger is coming er the snow will move  
 \*Ben I think the x ray eyes because =The nose The nose cannot move  
 But I think the x ray eyes  
 \*Ray =Because the X ray eyes can see behind the thing things  
 \*Ben =Because because u u want to (.) make u safe I think the super leg is (.) is er quite important  
 \*Ala [=How about the x ray eyes] =Powerful legs not super legs  
 \*Ray =X ray eyes x ray eyes x rays  
 X ray eyes  
 \*Ben =Why u think x ray eyes is important  
 \*Ray =Because (because) u can see behind the things (.) something like (.) ( something like) many many things ( like many many things )  
 \*Ben Danger (.) but if u see the danger (wild ray eyes) u can't move quickly  
 \*Ray Why  
 \*Sam Because  
 \*Ben =U can go to die  
 \*Sam Because u haven't powerful legs  
 \*Ben =If u an a if u in tr (trm if if if if if) something danger animal ( not something many many many many )  
 \*Ray =U U know this danger u enough go to these one  
 They are very fast  
 \*Sam =So I think er the important is powerful legs  
 \*Ben =Legs ya we think the legs is quite important  
 \*Ray =Ha how about the muscles  
 yes  
 \*Ben The muscles  
 =The muscles is not  
 \*Ray Muscles Er The muscles u can take it in your legs  
 =No but  
 powerful muscles  
 \*Ala U can exam our self  
 \*Ray =High high powerful muscles  
 \*Ala =you can do exam  
 \*Sam Ya exam  
 myself  
 \*Ala yourself  
 exercise ar  
 \*Ben Exercise chinese exam  
 \*Ala Exam  
 \*Sam\*BenExercise  
 \*Ala Exercise  
 Yes good  
 \*Ben How about um so the legs is the next important  
 yes  
 \*Ben how about the the high (next) powerful muscles (.....) second  
 \*Sam I know  
 \*Ben I think the muscles it is very important ( OH ) when when u have big muscles u can (.) do much thing and u er  
 \*Ala =if if someone kill u

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\*Ben Er u can kill him her first  
 \*Sam No if he has a gun if he has a gun (.) u die he has a gun ( u can go ) but u die  
 \*Ben =then the gun cannot hit u  
 \*Ray Why?  
 He got  
 haven't  
 \*Ben =u have High powerful muscles Like a Like something metal  
 \*Sam But there haven't  
 \*Ray Something metal titanium  
 \*Ben Ya titanium  
 \*Ray titanium is boken too  
 \*Ben So how about (.) er do do u agree the muscles is important  
 \*Ray =no  
 \*Ala =no  
 \*Sam =I think the powerful cars is important  
 \*Ray =Powerful powerful cars  
 \*Ben Ears? =Why ears is important  
 \*Ray =Too big  
 \*Sam =Um U can hear um the other (.) people thing and  
 \*Ray =Hear  
 \*Sam =Ya  
 =Hear his face  
 The things the mind  
 \*Ben =If somebody want to (.) kill u u can hear his his thing  
 \*Ray =Yes  
 \*Ray =Always kill u very very  
 \*Ben =If if someone if some people tell lies u can know that  
 \*Sam yes and  
 \*Ray tell what  
 \*Sam u can know er he is good or bad man  
 \*Ben How about Alan Pang do u agree (yes) But but but the u have the super super er  
 ( car ) super car if the other people is has the super car too he can listen your your thing  
 Um um  
 \*Ala Good lor  
 \*Ben Um then we haven't any  
 \*Ala =If they er say u u can hear  
 \*Ben But I think we haven't any our own things we when we want we have something  
 don't want to tell other people  
 =Why  
 Or I know  
 Tell u what  
 \*Sam But they said u only his thing and not go (we are go out )to said it to other people  
 Why why tell me why  
 That things tell me why  
 \*Ben So the cars is quite important  
 =I think  
 \*Ben But ray do er u think (.) cars is important or muscles is important  
 Important which one is important  
 \*Ray X ray eyes  
 \*Ben Why x ray eyes important

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## Preparation talk in Cantonese (5 min 20 sec)

\*Ben I think strong teeth are useless.  
 \* um er  
 \*Ben Ray, please talk about which item is the most important.  
 \*Ala Yes, yes, Ray.  
 \*Ray Er (....) I'd like to pass this to Alan.  
 \*Ala What about you Ben?  
 \*Ben Which item do you think is the least important? I think super hair is not useful.  
 \*Ray Why?  
 \*Ben Even if your hair falls out, it can grow again.  
 \*Sam No, how? When you are old, you hair will fall out. Regeneration is a problem and your body functions start to deteriorate.  
 \*Ala Oh, right.  
 \*Sam What do you think about strong bones?  
 \*Ray Useless if you don't have strong muscles, strong bones don't help much.  
 \*Sam =But you need bones to support your muscles.  
 \*Ben Then which body part do you like?  
 \*Sam What about bones first?  
 \*Ben Then what do you think bones can help you do?  
 \*Sam You won't have a hunch back if your bones are strong.  
 \*Ala That seems right.  
 \*Ray Um I want powerful legs.  
 \*Ben Pardon.  
 \*Ray Powerful legs.  
 \*Ben What's wrong if you have no powerful legs?  
 \*Ray Doesn't matter. They have no functions.  
 \*Ben No, powerful legs have functions. They can be found in the notes.  
 \*Ray Really.  
 \*Ben What about handsome face? I think it's important.  
 \*Ray why? Because you have a handsome face. (laughing)  
 \*Ben Then which do you think is the most important?  
 \*Ray X ray eyes.  
 \*Ben X ray eyes?  
 \*Ray Yeah, quite good. Why not?  
 \*Ala =But there are electric torches in this world.  
 \*BenRay What? Electric torches. They are different.  
 \*Ray With x ray eyes. You can see through many things. OK?  
 \*Ala Right. Right.  
 \*Ray With x ray eyes, you can see through bones and skeletons. There is no need to do any more x ray tests.  
 \*Ala Yeah. What about skin problems?  
 \*Ray x ray eyes help you detect where malignant tumours are in your body.  
 \*Ben Hey everybody, what you think about 'teeth'? Any use?  
 \*Ray No, not useful. Will you use 'strong teeth' to bite?  
 \*Ben What about strong bones?  
 \*Ray Still not good. You see all the bones only.  
 \*Ala =Ah, what you really want to drive at is that handsome face is the most important.  
 Right? (laughing)

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\*Ray Muscles is important la  
 \*Ben =Ya muscles alan pang which do u think is important  
 \*Ala =Muscles la  
 Er U know what is this (.) can u  
 ok  
 \*Ala We can la  
 Can what ar  
 Muscles muscles is the next  
 \*Ben And the next is next next is ear And then (ok)is x ray eyes  
 Why  
 \*Ala Because ray is x ray eyes  
 Ya  
 \*Ben X ray eyes is safe ourselves we must safe our self first  
 \*Ala then the last  
 \*Ben and then is ( the last)I think I think the strong teeth is (.) very important too  
 =why  
 \*Ben because I have er  
 \*Ala the last er last  
 \*Sam u is old and u can if not  
 \*Ben =what u want to say  
 \*Ala =the last one is super the last one is superskin (putting hands across the desk)  
 =something  
 \*Ray u u can the the stomach ( ya ) is important than your teeth ( chinese ya yes yes)  
 \*Ben but how about the handsome face (....)  
 \*Ray no inside your body is important than (yes)outside your body  
 ya I think so  
 \*Ben so what is the next important (.)  
 I think (.)  
 \*Ray number number what  
 \*Sam No number here  
 \*Ben =(How about how about the (.) um (....) super air  
 Super air not fall out  
 what super air  
 super air  
 the super  
 \*Ray Hair  
 \*Ben Oh sorry sorry sorry  
 =Hair hair is super ( sorry)  
 Why u think this is important ( that not fall down )  
 \*Ben Because somebody because is he haven't ( hair ) hair so they are they they want hair  
 \*Ray No  
 \*Ben why  
 Now look at the time  
 \*Ben When u old u your air

The End

No. 6 \*Phase 3 Control (H)

30

\* (joking for some while)  
 \*Sam Hey, let's go back to this.  
 \*Ala OK OK.  
 \*Sam Which is the most important? Nose, bones or muscles?  
 \*Ray Ears are fine as you can hear many things. But you may be better off by not hearing so much!  
 \*Sam Bones can help you in many respects.  
 \*Ala Like what?  
 \*Ray Powerful muscles are quite good, we won't feel tired.  
 \*Sam No, why do you think that you won't be tired.

(Time is up.)

English discussion in progress (12 min)

\*Ben Hey sam  
 \*Sam Yes  
 No english  
 haven't (chinese )  
 \*Ben Do you think is the important?  
 \*Sam I think is (.) er powerful legs  
 \*Ray Why?  
 \*Ben =Why?  
 \*Sam Because um (....)  
 \*Ben How can it helped u <givehelp>  
 \*Sam Um u can use this and (.) at fast at a car and  
 \*Ray =A car  
 And don't  
 \*Ray Which car?  
 \*Ben Bike <givehelp>  
 \*Ray ar bicyCAR (laughing)  
 \*Ben What do u think (.) the powerful low er powerful leg can change your life  
 \*Sam Can degree  
 \*Ray no need to (.) buy (.) by car  
 \*Sam by car  
 \*Ray by car  
 \*Ben oh yeah but I think powerful leg  
 \*Sam =and save our money  
 \*Ben yes  
 \*Ray how about u?  
 \*Ben I think the super super (leg) super  
 \*Ray =super what?  
 \*Ben super nose is er (this turn) more important  
 \*Ray Why?  
 \*Ben Er because it can (....) smell the danger (.) like the (.) some (.) danger (people) yes  
 or (accident) some er things bad  
 \*Ray Why do u don't (.) don't (....)  
 \*Ben Hey men what this thing?  
 \*Ray Why do u don't choose x ray eye (.) u can see many thing (.) how about danger  
 \*Ben Um the the most of the most of the x ray eyes is use to (.) see in the dark

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Dark  
Dark  
Dark  
Dark  
dark  
\*Ben And (.) turn on the light  
Then  
U can bites  
\*Ben Do u agree  
\*Ray No  
\*Ben No why  
\*Sam Because the x ray eyes is save the energy Ya and now  
\*Ala But now the light bulb  
\*Sam The energy is no if the the light bulb  
\*Ala The the the  
\*Ray The light bulb  
\*Sam I say the nowadays the energy is few then few  
oh  
Oh quite good quite good  
\*Ben how about u Alan Pan?  
\*Ala Ha I think (.) what is best?  
\*Ben What?  
\*Ala u say what I think is best?  
\*Ben Yes can u speak louder (.) I can't hear it  
\*Ala Ok  
Said  
\*Ala Energy  
\*Ray Speak ar  
\*Ala Er (.....)  
\*Ray Quick Alan Pang  
\*Ala Strong hand (.) strong hair  
\*Ben Um are u sure that it is important?  
\*Ala yes (nodding)  
\*Ray Why why?  
\*Ala Er (.) because (.) er u can (....) some (.) heavy thing now we can't to push up (.) we  
have strong hand then (.) we can pick up  
\*Sam But height power muscle  
\*Ala High power muscle  
\*Sam But high power muscle also can put it up  
\*Ala Ok the same  
\*Ray But u (.) but why u think this it is the most important?  
\*Ala I don't know  
U don't know  
\*Sam Why u (.) (.) why u don't think er ex right eyes  
\*Ala X ray eyes  
\*Sam X ray eyes is (.) most important  
\*Ala Most important?  
\*Sam Why u don't think it is (.) most important  
\*Ala I think it is most important now  
\*Sam Now

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\*Ala powerful cars  
\*Ben hey Alan what do u think  
\*Ala cars can  
\*Ben can u speak loudly  
louder  
I beg your pardon  
\*Ala Loudly loudly  
Ok  
\*Ala Louder loudly  
\*Ben So so  
Loudly  
Chinese  
\*Sam Help me help me (.) this <askhelp>  
\*Ben Which is the most er important they know  
\*Sam The second one  
\*Ben The second one? Powerful legs?  
\*Ray I think the high muscle high power muscle  
\*Ben =No I think the legs (but) is more important (\*Ray why?)because (\*Ray when but  
we can do it more) the important things is save your life  
\*Ray u can put your muscle on your leg (.) You can put your muscle (.) on your leg so  
your leg is high power  
\*Sam but only muscle is no  
\*Ray high power high power (.) Your leg has big very power (.) so u can run very fast  
\*Sam power is no fast  
\*Ala =can powerful leg walk as fast as er  
\*Ben how about the super skin?  
chinese  
super skin  
\*Ala stop change  
\*Ray change the what ar  
\*Ben handsome face (.) second one  
\*Sam no go away  
\*Ala go away  
\*Sam why u think handsome face is (.) second important  
\*Ray haven't a beauty face  
\*Ben I I I no I am handsome  
I am  
Beauty handsome face  
\*Ben second no important  
\*Sam No important (.) ok I am I am (.) agree  
Ok ok  
\*Sam Now is second important (.) what do u think (.) Alan?  
Alan  
\*Ala I think the er (....)  
\*Ray Can u speak louder  
\*Ala The powerful cars powerful cars  
Why  
\*Ala Because they can hear some people what  
Louder  
\*Ray Can u louder

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\*Ben But I don't sure  
\*Ala Ok u said  
\*Sam How about u Ben Lo?  
\*Ben I don't agree that  
Ben Lo how about u  
Why why  
\*Ben Um because the nose is (.) Because the noses (.) Because the the nose is more  
important than the eyes  
\*Sam Why u think this?  
\*Ben Um (....)  
Um  
\*Ben Now u can see the everything (Ray/ no) but now u can't smell everything  
\*Sam I can't smell (.) u also can smell (.) but (.) no (.) very (.) good so (....)  
\*Ben I am not sure what you think  
\*Sam I also (laughing)  
\*Ben How about u Ray?  
\*Ray Ha (.) I am (.) my idea (.) the same to u  
\*Ben Do u think the handsome face is important?  
\*Ray no  
\*Ben I think yes  
\*Ray Why  
\*Ala Face  
\*Sam U think it is important (.) (why why) more important ( because somebody ) than x  
ray  
\*Ray Who?  
\*Sam Just like Alan (.) not Alan Pang  
\*Ala Alan chan his face is very beautiful (.) no handsome  
\*Ben And when u see other er (.) people (like him him) if u have a have a handsome face  
(.) and then u will some (.) something (.) good (.) for u (like him)  
What good ar  
\*Ben How about the er (.) strong teeth? Hey Ray  
\*Ray Er I have no comment how about u sam  
\*Sam But now where have  
But our  
\*Sam Where can (.) er which one is most important?  
\*Ben Er the eyes and the nose (.) are the most important  
\*Ala Nose yes  
is the most important one  
but choose one U must choose one most most important  
\*Ray yes yes I will choose I will choose the handsome face  
oh  
oh  
\*Ala but u have a  
thief  
\*Ben but thin because I have so I want more  
more things more handsome put it in your  
\*Sam but now have 3 people (.) agree x ray eyes (.) so the most important is x ray x ray  
(.) eyes (.) and the second important (....)  
oh give u u are  
\*Ben how about the powerful cars

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I beg your pardon  
\*Ben I beg your pardon  
\*Ray Can u speak louder pleas Alan  
\*Ala Powerful cars  
\*Sam why  
here haven't no powerful cars  
\*Ala because er  
\*Sam cars  
\*Ala because it can help some unhappy people  
ha why  
\*Ben how to help  
\*Ala because er it can er hear what other people they think (.) let me think  
think  
\*Ray u can't u can only hear some some people think and u cannot help them  
\*Ben if some people think u ugly  
\*Ala ok kill him  
\*Ray I think u (.) Kill people  
\*Sam Ok continue Alan  
\*Ala Then u hear some people (.) so unhappy u can (.) do a er (.....) listening lor listener  
listener  
\*Sam But if (.) they er no your friend and u also go to help them  
\*Ala No  
\*Ray So bad u Ben  
\*Ben I think the urn (.) super nose is the second  
\*Ala Why why  
Second second  
Now it is explain  
\*Ben I know the strong (.) bone strong bone is the third important because  
\*Sam Now is second  
\*Ben No  
\*Ray High power muscle high power muscle  
High power muscle  
\*Ben High power is not important than (.) bone  
\*Sam Yes  
\*Sam Because the bone can support (.) your (.) power  
Only one  
Chinese

The End

No. 7 \*Phase 1 Direct (H)

Pre-discussion planning in Cantonese (4 min)

The group seemed to focus a lot on suggested phrases. Stephen was quite strategic; he was able to point out a few strategies while others kept reading the notes to gain understanding.

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- \*Ste The suggested words here might help us. Say, for instance, the word "funny" may mean that we could discuss with more fun.
- \*Ann No, there are suggestions like "protect myself", "many people will be jealous of me."
- \*Ste Yeah, those might be the cause and effect. I mean they might be the consequence of your being too smart, for example.
- \*Ann What about 'protect yourself'?
- \*Ste Again, it might be some kind of cause and effect. I mean people will envy you if you are too good-looking and attractive.
- \*Ann In addition, 'protect yourself' might be a reason for choosing super strong bones.
- \*Ste But some suggested phrases here don't seem to be relevant and don't make much sense like 'can swim fast'.
- \*Ann No, I think it might mean that if you choose strong bones, one reason could be that it can help you swim fast.
- \*Cyn What about this one? "Like a ghost"?
- \*Ste Oh, maybe we have 'superhair', ha ha.
- \*Ann Yeah, that might be the reason.
- \*Ste During the upcoming discussion, let's relax and don't be so nervous.
- \*Cyn Let's relax, yeah.
- \*Ste We should use simple words to replace difficult ones to express ourselves.
- \*Ann OK, Stephen, remind yourself to do so in the discussion. (laughing)
- \*Ste But my English is not that good.
- \*Ann Any other views? What do you think we should pay attention to during the upcoming discussion task?
- \*Cyn Don't be too nervous or shy. (Looking at Penny)
- \*Ann We could have our own views and ideas.
- \*Cyn Keep calm too.
- \*Ste Anything to supplement?
- \*Ann Any ideas to express?
- \*Ste No, nothing special.
- \*Cyn What about 'a boy is crossing a road'?
- \*Ann It must be somehow related to the function of a body part.
- \*Ste Either it's about a super strong leg or a handsome face.
- \*Cyn Many people look at your handsome face.
- \*Ste Yeah, yeah.
- \*Ann I don't think a pretty or handsome face is really important.
- \*Pen What about this? "Other people may not like you"
- \*Cyn Maybe you sound too pompous.
- \*Ste Or you are too smart. So people may be jealous of you. Like Einstein. Super hair. Or you may have a hole in your brain and become very smart.
- \*Ann Oh then drill a hole in your head.
- \*Ste No, no this is natural; he is born with a hole in his head.

English discussion in progress (10min 10 sec)

- \*Ste A heart
- \*Ann Heart or the bones
- \*Ste I think heart is most important (no) (\*Ann why) because three thousand years (.) I mean three zero zero zero and then someone (u mean the relationship about the) because er technology (.) rise up (.) days by days yeah (yes) now (.) the computer is very very useful

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- \*Ste X ray eyes means see something right?
- \*Ann Yes we can see other (.) people what they are thinking about
- \*Ste So it is no secret yes right
- \*Ann No secret
- \*Ste So if we speak in the low voice the super ears what er powerful ears may heard so
- \*Ann =But that that means we can talking to others in a low voice during the class (yes oh)
- \*Ste Haha but a teacher teacher still (.) (\*Ann hear what u are) right right right they also have the powerful ears so both of them are (...) good er for a teacher (.) eye see (.) what (.) we are doing during (.) she he or she writing at the blackboard (...) and ears can hear who are speaking (\*Ann so many have to choose this three) yes but we must choose one (\*Ann oh eyes)
- \*Ste Legs
- \*Ste Legs
- \*Ste I think technology can (.) use another thing instead of legs
- \*Ann We can make a leg
- \*Ste Yes which one U choose? (speaking to Penny)
- \*Pen Um
- \*Ste Penny
- \*Pen Um I think eyes
- \*Cyn =I don't know in order
- \*Ste No we just choose (.) because all of them is outside is not (.) as important as inside
- \*Ann Yes
- \*Ste Yes right but still still still er I think these three is (.) quite important quite important these three
- \*Ann But muscles (.) is is not
- \*Ste Yes no I mean these (.) these three (.) nose ears and (x ray) eyes (ah ha) are quite important (ah ha)
- \*Ann Eyes eyes
- \*Ste So eyes first
- \*Ste Choose one
- \*Ste Yes
- \*Ste Do u agree with us (.) how about (.) what is another one is in important (.) which one do u think is more important (.) between (handsome boy again) nose or ears? Nose or ears or (\*Cyn ear) anything
- \*Cyn I think is ear
- \*Ste Ear why
- \*Pen Hear
- \*Ste So hear
- \*Ste er
- \*Ste Yeah fine fine
- \*Ann So how about we (.), we have a super nose we can smell something
- \*Ste But is not as useful (.) as ears (.) (yeah) may be but still important
- \*Ann Ah if u say this I don't think it's important anymore
- \*Ste So u want to cut down your nose
- \*Ann Ok Haha
- \*Ste Ok so so ear first or nose first
- \*Ann Ear ear of course
- \*Ste So er here how about teeth, skin
- \*Ann =teeth (.) if we haven't any teeth we can't eat anything

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- to our daily (.) daily life yes I think heart (.) because heart (heart worst than heart) can keep (worship heart) keep can keep up the blood circulation
- \*Ann Ok ok ok ok
- \*Cyn Er what is the third one?
- \*Ste Third one third one
- \*Ann Bones I think is bones (bones) it can protect our heart (yes) if heart is important
- (\*Ste inside of our body of us influence a lot) (protect ya) Ah ha how about u what do u think (.) Penny what do u think?
- \*Ste The fourth one
- \*Pen The forth one is
- \*Ann =handsome boy? <givehelp>
- \*Cyn Haha or super skin <givehelp>
- \*Ann Super
- \*Ann X ray eyes <givehelp>
- \*Ste Um
- \*Ste Extra strong lung <givehelp> A powerful liver
- \*Pen Um
- \*Ste What do u think is (what do u think) the (.) fourth important?
- \*Pen Um this one (pointing at a paper strip)
- \*Ste Powerful liver
- \*Ste ya
- \*Ste So why (why what reason)
- \*Pen What is this this?
- \*Ann What is this?
- \*Ste Ha ha ha
- \*Ste Crazy crazy no no
- \*Ste I know what is this but (dry) I (....) know what is this but I really can't explain (.) I don't know what is the function of liver
- \*Cyn (ha ha) ah ha (...) try try try
- \*Ann If we smoke, our liver
- \*Ste Ah Yes if we smoke, liver will go bad and have cancer (yes), liver (.) cancer, liver cancer
- \*Ann Ha ha, ha
- \*Ste So what is the fifth one?
- \*Ann All right a
- \*Ste No I think not (.) is this one lung lung lungs
- \*Ann Lungs
- \*Cyn Lungs
- \*Ste Lungs (.) is (.) I think is help us the carbon dioxide out and oxygen in (.) to let us breathe (\*Ann breathe?) yes that's right and also the stomach (.) stomach also will breathe (breathe) yeah yes right and (.) for food because we when we take in oxygen lungs give to break down the food in the stomach in the cell (ah ha um um) yes so it is quite important (um um) so what is this (.) one ?
- \*Ann Um
- \*Ste All here is outside not the inside <gesturing about paper strips on the desk> (.) so teeth nose
- \*Ann Skin
- \*Ste Skin why? I think eyes (.) can see everything eyes
- \*Cyn =But I think is no nose important
- \*Ann =But I think more as we have eyes

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- No
- \*Ste We can \*good <drinking sound>
- \*Ann Is difficulty only \*good <drinking sound>
- \*Ste No but I mean but we can have congee (.) and I know that may be (.) something can (.) instead of (...) (teeth) no no no instead food I mean some liquid (or Or) some some er patients in (.) hospital they can't eat they still use salt water salt water they can't use salt water
- \*Ste Um um
- \*Ste So hands hands
- \*Cyn Um those
- \*Ste Hands
- \*Cyn I think also important because we (.) we need to (....) <using gestures> do activity by hands (\*Ste yes) or legs
- \*Ste I I think com (.) computer arm (.) can't
- \*Ann Computer arm
- \*Ste Yeah yeah yeah
- \*Ann Computer
- \*Ste So um (.) extra hands is more than extra (.) strong teeth (.) I think (.) then how about
- \*Ann =what do u think
- \*Ste Yes Penny
- \*Ste Penny
- \*Pen Um (...) more important
- \*Ste Ya and this come (.) extra strong teeth (.) because can attack people er protect (\*Ann How about super skin in) protect (\*Ann how about super skin) themselves because super skin is to protect (\*Ann our body) yes muscles
- \*Ste Yes
- \*Ste So (.) it should be skins and then (.) high power muscle
- \*Ann Hair is (.) I think hair is not (.) so important
- \*Ste So right right (yes) handsome face would be ruh ruh ruh right
- \*Ste So
- \*Ann Then next
- \*Ste Is just how about this one?
- \*Ann Muscles
- \*Ste We have skin to protect muscles
- \*Ann Just like all others no muscles what can happen?
- \*Cyn If we
- \*Ste We but we've we have brain (.) we (.) I don't think we need muscles
- \*Ann I I want to ask what is the use of the muscles
- \*Ste Muscles
- \*Ann What do u
- \*Ste What
- \*Cyn Look more stronger
- \*Ste Look stronger more powerful can carry (.) (\*Cyn attract the people) can carry heavy things (.) (ah ha) can carry (.) help someone to may be they want to move (.) their home (.) to one place to another (.) so someone can can help them to carry out the furniture (um um) for example TV stand something like that (not important) so (.) not (.) (not quite) not quite yeah yeah not quite
- \*Cyn Then how about this
- \*Ann Of course
- \*Ste I think leg

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\*Ann =I think this one is more important than hair  
 \*Ste No no no  
 \*Ann Haha  
 \*Ste No is no  
 \*Cyn Hahah  
 \*Ann =Can you see (um) some people nowadays some people they don't have hair but they still are handsome  
 \* haha  
 \*Ste So handsome I don't think is important (.) anyway there  
 Haah  
 \*Ste How about legs or teeth or teeth (legs) which one is more important?  
 \*Cyn I think Legs  
 \*Ann Legs  
 Legs  
 \*Ste So teeth (.) muscles (.) hair (.) handsome face(.)  
 \*Cyn Yeah ha ha ok  
 \*Ste why?  
 \*Ann What do u think Penny which one is better?  
 \*Pen I think this one  
 Yeah  
 Why  
 \*Ste Why  
 \*Pen Because (....) u have some people haven't got hair (.)  
 \*Cyn =so u look er u think (\*Ste no I again) he is so ugly (\*Steno I think hair is quite important (.) to protect) Ar (.) I see Um um  
 \*Ste And then ( if u have time because ) Because handsome or not handsome (.) but still that one is have a smart brain have a lot of money have those powerful things u also need to accept him (.) right yes (.) so I don't think handsome is  
 \*Ann =if someone is excellent will if someone is excellent er er (....)  
 \*Cyn =Something like that (power)  
 haha  
 \*Ste so  
 ah  
 ah ya  
 ya  
 ya  
 um um right  
 um  
 That's all  
 Chinese

The End

No. 8 \*Phase 2 Direct (H)

Pre-discussion planning in Cantonese (6 min)

\*Ann I don't know the words. Check the dictionary first. Come on.

\*Ste OK (checking the dictionary for the first few minutes).  
 \*Ann What do you suggest, Penny?  
 \*Pen Well you say something first.  
 \*Ann I don't know. Let's er  
 \*Cyn Play by ear during the discussion.  
 \*Ann Oh yes play by ear.  
 \* OK we should check the dictionary first if we don't know the words.  
 \* what do you think we should do?  
 \*Ann We should think and plan in advance.  
 \*Cyn We should read the instruction sheet first.  
 \*Ste What did you say? Let's check the dictionary first.  
 \*Ann What is it?  
 \*Ste Oh, I've found it. It's digestive system.  
 \*Ann Oh right. That's it. Which do you think is the most important?  
 \*Ste Brain.  
 \*Ann Yeah, I agree. Brain is better. You can know what and how to think about.  
 \*Cyn Right whenever you think you need to use your brain.  
 (Long pause; members didn't seem to know what to do.)  
 \*Ann And we should give some reasons too.  
 \*Ste Yeah yeah. Penny what do you think?  
 \*Pen er er.  
 \*Ann Yeah, just tell us what you think is important and why you think so. We'll then consider your views. [givehelp to Penny]  
 \*Ste Yeah, yeah. (giggling)  
 \*Pen er I haven't really finished reading the instruction sheet yet.  
 \* that's all we need to say now.  
 \*Ste Nose and ears are important.  
 \*Ann No ears are more important. You can hear what other people think and protect yourself.  
 \*Ste But nose can help you smell danger too.  
 \*Cyn Yeah agree. Nose can help you smell danger too.  
 \*Ann Well on second thoughts, if we can hear what other people think, we will have no privacy at all. Super ears are no good no good.  
 \*Ste But you can know many things about others.  
 \*Ann Yeah but others will also know what you think.  
 \*Cyn It's dangerous too. Others might harm you with their powerful ears.  
 \*Ann Alright, no good to hear what others think anyway.  
 \*Ste What about x ray eyes then?  
 \*Ann Terrible. X rays eyes seem to be able to penetrate you.  
 \*Ste Don't we often say that wind can penetrate walls?  
 \*Ann It seems that strong teeth are not of much use either.  
 \*Ste Then super bones that last forever.  
 \*Ann Oh lungs. (pause) ah I remember something like a powerful liver that er  
 \*Ste No, super strong heart that lasts for 100 years.  
 \*Ann Looks ok. It can last 100 years.  
 \*Ste What about handsome and pretty face?  
 \*Ann Yeah you have a handsome face. (laughing) Actually I think a pretty or handsome face could be quite useful to us, you know.  
 \*Ste High powerful muscles.

\*Ann No if you have nose and ears that are so powerful, you won't need muscles any more.  
 \*Cyn But you might get hurt or bumped into and then muscles could be useful.  
 \*Ste We have a heart that lasts for 100 years.  
 \*Ann Oh terrible you have a heart that lasts 100 years but the rest of your body has decayed. Oh that sounds horrible.  
 \*Ste Your turn now, Penny.  
 \*Pen You continue first, I'll then come in later.  
 \*Ste Come in later?  
 \*Ann Strong bones then.  
 um  
 \*Ann Come on what do you think Penny?  
 \*Pen er er.  
 \*Ste That's worth considering.  
 What do you think Penny?

(Unfinished but time is up.)

English discussion (11 min 20 sec)

\*Ann er first first of coz is the  
 \*Ste = brain  
 \*Ann = the brain  
 \*Ste = why  
 \*Ann = because um because if u have a super (.) brain um u know u can think (.) more er it is it is better than a computer (.) then u can remember everything um everything can er u can remember everything u know (giggling)  
 \*Ste =but is it useful to remember everything?  
 \*Ann of coz not just remember everything u can do other things (.) if u if u have a test or exam u can remember it your works and if your mother advise u something and u can remember it clear  
 \*Ste or  
 \*Ann and then (is quite) we won't forget  
 \*Ste so what is the second one?  
 er  
 an  
 \*Cyn strong heart  
 \*Ann =strong heart? (laughing)  
 \*Cyn strong bone  
 \*Ann that last forever  
 \*Cyn which one? (laughing)  
 \*Ann which one? (laughing)  
 \*Cyn super strong heart  
 \*Ste super strong heart why you think Cynthia?  
 \*Cyn um u can live longer  
 umum  
 \*Ste so?  
 \*Cyn so  
 so  
 \*Ste what

\*Cyn what I don't know  
 \*Ste just longer and then I think  
 \*Cyn then we don't die we won't die  
 \*Ste just a 100 years only  
 \*Cyn what do u want a 1000 years?  
 \*Ste at least la  
 \*Cyn oh  
 \*Ann and then what is next?  
 \*Ste ears (I I think years ar  
 \*Ann oh yes ears (.) is it that can (.) hear (.) no I don't think so it it should be a super nose that can smell danger  
 \*Ste so ears is the fourth  
 \*Ann yes yes  
 \*Ste your turn (pressing Penny)  
 \*Pen um er  
 \*Ann why don't u ask me why I choose the nose?  
 \*Ste because I agree with u  
 \*Cyn oh let me tell u  
 \*Ste what  
 \*Cyn when we have a danger then we can smell it er we can er (.)  
 \*Ste =avoid [givehelp]  
 \*Cyn ya avoid it  
 and that's ok  
 \*Ann how about u Penny?  
 \*Ste speak up  
 \*Ann is your turn u haven't said anything  
 (long pause)  
 \*Ann er I I think I think (.) is it a lungs what do u think Panny I think is lungs to express [givehelp]  
 \*Pen er strong lungs extra  
 \*Ann what do u think I think this one  
 \*Pen lungs  
 \*Ann or or u have another choice?  
 \*Pen yes  
 \*Ann what is your other choice?  
 \*Ste I think is bones  
 \*Ann Er we haven't got bones  
 \*Ste Not yet  
 Ar Then we think  
 \*Ste This is the strong lung  
 \*Ann What do u think Penny? [pressing her]  
 \*Ste My choice is bone (.) do you agree with me?  
 \*Pen Yes yes  
 \*Ste =Why  
 \*Cyn Why do u think that it is important?  
 \*Pen Er if we haven't bone we will like a ghost Chinese  
 I see I see  
 \*Ste So what should be the next one? (long pause)  
 \*Ann Um may be x ray eyes

\*Ste X ray eyes (....) why?  
 \*Cyn No I think is the powerful legs  
 \*Ste No I think is the liver  
 \*Cyn Why  
 \*Ste Liver is for (.) let us to breathe (.) breathe we need oxygen (um ) is quite important (....) is the stomach u can get food  
 \*Ann What is the next?  
 \*Ste Powerful powerful stomach (.) do u agree?  
 \*Cyn Yes  
 \*Ste How about u Penny?  
 \*Pen agree  
 \*Ste Why why u agree with me? [pressing]  
 \* Why u don't know  
 \*Ann actually I don't agree with this (why ) I I can't I can't get any reason to revoke it  
 \*Ste what do u mean?  
 \*Ann I I mean that (....) actually (.) (lauging) I ( well ) I I don't think stomach is quite important  
 \*Ste So which one is more important than this?  
 \*Ann I have told u that I don't know er (laughing)  
 \*Ste This is inside our body this is outside (reshuffling the paper strips on the desk)  
 \*Ann How about I I (....) I I heard u just say that a a power muscles is important  
 \*Ste I didn't  
 \*Ann U didn't ?  
 \*Ste No I didn't  
 \*Ann Oh sorry  
 \*Ste This one a pretty handsome face should be because  
 \*Ann =I I I know why u choose this because u haven't  
 \*Ste I have  
 \*Ann No, u haven't.  
 \*Ste Yes I haven't because I have a very very handsome look I know it (.) so forget it (.) sixteen so this is important  
 \*Ann u u think that u should be succeed  
 \*Ste yes of coz (.) so how about the super hair u think is hair can protect our head and head inside the head is the brain can protect our brain indirectly  
 \*Ann but pretty or handsome face can make more people like u  
 \*Ste but if u have a brain u can make many money without a handsome face (....) just like Richard Li (.) is he handsome? ( I I agree) I don't think so I don't think so  
 \*Cyn Agree agree  
 \*Ste He is handsome  
 I like him  
 \*Ste But He he He really really gain a lot of a lot of a lot of money  
 \*Ann But I I think handsome (.) boys or handsome girls ar no handsome boys or pretty girls is more popular (.) more popular than those who is ugly  
 \*Ste So what but they don't have as much as money as mr lee  
 \*Ann I know I know I know ar um as u say  
 \*Ste As richard lee  
 Ar  
 \*Ann Do u  
 \*Ste Yes so this is agree  
 umum

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\*Ann How about strong hands what is the use of strong hands?  
 \*Ste Heavy thing (....) but if u have a smart brain u can have something to let another one to do  
 \*Cyn But u really have some new ideas  
 yes  
 haha er  
 \*Ste Or any excuse to tell them 'oh I am busy (.) can u help me?' it smart brain what to do (.) hand is not import more important than this one  
 \*Ann And u mean this one and x ray  
 \*Ste Right  
 \*Ann ha (.) /is  
 \*Ste No  
 \*Ann We haven't finish this part ( yes ) the thing  
 \*Ste Penny can u give us some ideas?  
 \*Ann Oh sorry (paper strips all on the floor)  
 Er er  
 \*Ste Give us some ideas [pressing Penny]  
 \*Pen Er I think (....) legs  
 \*Cyn Ya I think so  
 \*Ste Why why  
 \*Cyn Because we can walk as fast as a car [resou]  
 \*Ste So  
 \*Cyn How about u Penny? What is your idea?  
 \*Pen When we are danger we can run faster  
 \*Ste Good idea  
 To me and u  
 Better than u  
 \*Ann hurry when we are in hurry we can run faster  
 \*Cyn Do u like this  
 \*Ste how about x ray eyes  
 \*Ann er actually I think it's quite terrible if someone see (to the bone it is ugly) yes it is bones and if u inside your house u will very afraid of someone who has a x ray eyes and see through the walls to see what are u doing doing here (S/but still important ) er er (....) not so important (.) useless useless useless  
 \*Ste no how about we have left (.) hands skin and muscle  
 \*Ann oh skin  
 \*Cyn yes it can it can protect our (....) skin  
 \*Ste u agree  
 #  
 yes  
 \*Ste why  
 \*Pen just agree  
 \*Ste how how about the left one  
 \*Ann maybe strong hands?  
 \*Ste heavy things?  
 \*Ann haha  
 \*Ste strong high power muscles  
 \*Ann yes then (here here can protect ) x ray eyes  
 the face so is  
 haha  
 small

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small  
 \*Ste ok democracy (.) super hair put in nine or fourteen if it is nine put u your hand please if it is fourteen put up your hand please so  
 \*Ann I think is really important  
 \*Ste Ok sixteen strong teeth and pretty handsome face which choice teeth is important  
 teeth ok fine (.) Be leadership  
 \*Ann Check check check it all over again (....)  
 \*Ste Super smart brain heart nose er (.) it's perfect. Done. (.) U see  
 \*Ann Yes  
 \*Ste So want change do you want?  
 \*Ann Ok  
 \*Ste Finish. Do u want any change. No then. It's the end.  
 \*Ann May be

The End

\*Ann No we all have our private thoughts. No good. And there is no choice as to whether you want to hear or not. If you had the power, you would hear whatever was on someone's mind. No good no good.  
 \*Ste Then you should cover your ears.  
 \*Ann No I don't want my thoughts to be overheard. I feel intruded.  
 \*Ste Maybe ar.  
 \*Ann I think 'pretty/ handsome face' is important.  
 \*Ste What's the point of being pretty or handsome?  
 \*Ann Then the world would be very peaceful if everyone was good-looking.  
 \*Cyn Then the last item should be 'super hair'. Now young people like to apply 'hair gel'. We might reduce air pollution by having 'super hair'. (giggling).  
 \*Ste Yeah 'super hair can protect your head and skull.'  
 \*Cyn But super hair won't fall out. So what's the use?  
 \*Ste But you can cut your hair short though it won't fall out.  
 \*Cyn Yeah. OK

Group discussion in English (12min)

No. 9 \*Phase 3 Direct (H)

Pre-discussion planning in Cantonese (6 min)

\*Ann It seems that there're some new items this time. Yeah, we don't have 'smart brain'.  
 \*Ste And we have 'strong as tiger'. Yeah.  
 \*Ann There are some new things added such as er "a pretty/handsome face that attracts the opposite sex". (pause)  
 \*Ann Er I think that 'a super nose that can smell danger is important' because it can protect yourself whenever there is danger. You can run away from danger.  
 \*Cyn Then 'powerful legs' is better.  
 \*Ann Yeah that's good too. 'Powerful legs that can walk as fast as a car'. At that time, there might be no need for cars, then there would be no air pollution.  
 \*Cyn I think 'high-power muscles' is good too. You can fight well.  
 \*Ann No, don't use force. 'Pretty handsome face' seems good. (pause; looking at S)  
 \*Cyn What about 'super skin'? Looks good. (Pause)  
 \*Ann Quite a number of items are good. What? 'Strong bones that last forever' for example.  
 \*Cyn 'Extra strong bones' right?  
 \*Ann Yeah, yeah you won't get hurt particularly when you play ball games.  
 \*Ann "Muscles" sounds OK. I personally think that 'nose' is the most important. What do you think? When you smell danger, you can run away immediately.  
 \*Cyn OK then "powerful legs" should be the second.  
 \*Ann The third one is .... (long pause)  
 \*Ste X-ray eyes.  
 \*Ann "Strong muscles" is good. You will be strong. You don't have to worry that you will be hurt by others. (.) What about 'strong hands that can lift things up to 100 pounds'? Are they useful to our daily lives?  
 \*Cyn I think powerful ears are better.  
 \*Ste You can hear what others say.

\*Ann Er (....) I think the most important one is (.) a super nose that can smell danger (.) it is because when (.) we are dan in danger (.) er we can smell it and we can protect ourselves and we can escape  
 Yes  
 \*Ann Ahah (.) when do you think?  
 Yes  
 \*Ann Can you explain?(long pause; looking at S) Haha protect yourselves (long pause) What do you think? Do you agree? Do you agree? (Initiating others to respond)  
 \*Cyn es.  
 \*Ann Thank you. Thank you.  
 \*Ann Will hurt you easily.  
 \*Cyn Yes yes.  
 \*Ann How about the second one?  
 \*Ste Powerful legs that can walk as fast as a car  
 \*Ann Yes  
 If  
 \*Ste When you smell danger then you need to have some (.) action  
 \*Ann Yes  
 \*Ste To do it and next to the  
 \*Ann =Actually I think (.) Hong Kong is now polluted (.) when we have a strong legs (.) and we can walk as fast as a car (.) and that means we we (....) cars is no need for us (.) so ha (.) so also there is no air pollution (giggling) air pollution anymore (....) Can I say this? (Looking at S)  
 \*Cyn Yes so we no need to (.) use cars  
 \*Ann Yes  
 \*Cyn Haha  
 \*Ste So next thing  
 \*Ann Yes we agree  
 \*Ste Bone? Ear? (Shuffling paper strips on the desk; long pause.)

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\*Ann Third one is that er (long pause)  
 \*Ste High power muscles that are as strong as lion's (.....)  
 Um  
 \*Ste Also protect (.) yourself.  
 \*Cyn =[Yes, won't be hurt easily.  
 \*Ste =[And some hit you  
 \*Cyn Won't be hurt easily (.) we all protect ourselves haha yes (....)  
 \*Ste Um this is also one method to protect ourselves and save hurt from danger  
 \*Ann Um um how about (.) extra strong bones that (.) last forever (....) er (.) because (.) if we have strong bone there is another method that we won't (.) er er broken our leg or arms and it can also protect (.) us [and won't be hurt  
 \*Ste [but also have (.) a feeling of pain  
 Um  
 \*Cyn Yes  
 \*Ste A feeling of pain (....)  
 \*Ann That means you think (.) muscles is more important than (.)  
 \*Ste =[Strong bones. That's right.  
 \*Ann Then (.) let's put muscles first and then (.) strong bone (.) Is that ok? (looking at P)  
 \*Pen Yes  
 Um um um er (long pause)  
 \*Ste Powerful ears that can hear what other people think  
 \*Ann No I don't like these actually  
 \*Ste But it is useful  
 \*Ann I don't think so (.) what you think is useful because you can [Because you can  
 \*Ste =[Someone in their mind want to (.) hurt you or hit you or do something bad to you you may know (.) you may know that and then you can (.....) avoid those things happen  
 \*Ann =[But everyone (.) er everyone have their own feeling they want they don't want others know about what they think they (.) they have something deep in their heart and they won't (.) let other know but if you have a strong ears powerful ears you can hear what people what other people think and this means they can also hear what you think do you want you're (.) your secret (.) um your secret be out (.) other one about what your secret do you want it?  
 \*Ste Quite because  
 \*Ann Quite what is your secret? (Patting on S's left shoulder)  
 \*Ste Lots of secret (.) because we can (.) communicate with others (.) know any differences that means er you know all the things of me and you I know all the things of you  
 \*Ann =No  
 \*Ste so there won't there with friends or a couple something  
 \*Ann =no  
 \*Ste so they may know each other deeper and deeper  
 \*Ann no  
 \*Ste what more  
 \*Ann because we are extra my  
 \*Ste excuse me  
 \*Ann no because it is very important that (.) one person will not know other very well because (.) all of us have some secret in our be because all of us will have some secret so we won't know each other (.) and I I think is quite important because we all have secrets (giggling) (Patting on S's left shoulder)  
 \*Ste no if they were real friends they will share all the things with others (.) they will share

\*Ste No if your (.) friends or girlfriends or boyfriends just like your face outside of your face because you are pretty or you are handsome (.....) just love your outlook of your body (.) he or she may not be true (.) to you  
 \*Ann But sometimes when you have a kind heart (.) and also you have a pretty face and you really will be popular among all the people  
 \*Ste =Yes but (.) if he or she had a bad mind  
 \*Ann But sometimes as you know er as you know (giggling)  
 Ha (giggling)  
 \*Ann As you know (giggling) some people may have a ugly face or they they are not good looking and they will be (....) as you know some people will (.) hate them and play jokes to them and and said oh you are so ugly they really hurt you  
 \*Cyn =[But still have some  
 [He or she have a some have a good heart  
 \*Ann But although they have a good heart people won't know that they only (.) they only  
 \*Ste They could hear  
 \*Ann They could hear (giggling)  
 \*Ste And still they have friends like him (.) or her although there is some bad but still have some really good friends (.) and then  
 \*Cyn And what if you stay together with her then you can know that 'oh she has a good heart'  
 \*Ann Ok ok (giggling)  
 \*Ste So this one is not the next one  
 \*Ann Oh What is the next ar I don't know  
 \*Ste Sush. Thinking. X ray eyes that can see in the dark (....) The main point is to save energy (....) yes and the more convenient that it need not to always switch on the light switch off the light switch on the light switch off the light / (.) when you in the dark and when you want to do something for example go to toilet when you are sleeping so you no need to switch on the light and let others know you are going (....) you can do it secret  
 \*Ann Um thief  
 \*Ste No  
 \*Ann Just like thief  
 \*Ste But if someone go in you also know that (....)  
 \*Ann Thief.  
 \*Ste No no not thief (....) and we can save more energy (....) electrical energy

(The discussion was stopped as time was up.)

The End

No. 10 \*Phase 1 Direct (L)

\*Pre-discussion planning in Cantonese (4 min)

I think we should rank the most important items first. Em because if we don't have the most important organ, we might not be able to live on.  
 \*Luc Er er also we should also have brain, bone or other organs such as heart. You know they are laos important.

with all the things with others and the friends will help help her or him to slow off the difficulties they face  
 \*Cyn yes if your friend is er unhappy then you know so you can (....) con confirm her  
 \*Ann =[but if they want to er share their er sadness to you they will tell you and they will (.) talk to you (.) you you don't need to listen their feelings  
 \*Cyn =some friends may  
 \*Ste =may be shy (.) may be shy  
 \*Ann =yes because because they won't they don't want to talk to you  
 \*Cyn =[no they don't =[they don't know how to say it or um  
 \*Ste [They don't want you to worry (.) they don't want you to worry about them  
 \*Cyn Yes  
 \*Ste So you can do something that they don't (.) know and to let her feel better  
 \*Ann Oh oh help Penny help (touching P's hands) What do you think (giggling)?  
 \*Pen Ar (.)but I don't want other to know my secret actually  
 \*Ann Yes all of us have (.) feelings (.) so sometimes we we don't want other to know (.) yes  
 \*Ste but if you are really really real friends they this could help (.) this could help  
 \*Ann but if we we (.) we good friends we can talk to each other and we don't need [they don't need  
 \*Ste they don't know how to express  
 \*Ann but  
 \*Ste Something like our classmate they don't don't like to talk (.) in fact they don't like to talk (....) they just something bad to him and he just hide or she just hide it in his her heart and don't share with others and always unhappy and unhappy (.) we can't help (....) so it is better to know what they think (....) of course we know that er you have secret but if I don't tell her that so I won't they you won't know I hear but if you want someone to share I can know it (.) right away  
 \*Ann But if we know (.) our friends er feeling they they ( haha) it doesn't mean that we can help them although we know what they have think  
 \*Cyn [but you can realize  
 \*Ste [but we would try our best  
 \*Ann Really? Hey I want you (touching C's right shoulder)  
 Help (laughing)  
 Yes  
 \*Ann I want to I want to know your secret (giggling) (touching C's right shoulder)  
 \*Ste It can help them to afford their worries  
 \*Ann Ok  
 \*Ste And they  
 \*Ann As you like lor  
 \*Cyn As you like  
 \*Ste So ears  
 \*Ann Maybe (giggling) Ok  
 \*Ste Um um so what is the next?  
 \*Ann A pretty handsome face that can attract the opposite side (giggling)  
 \*Ste Why?  
 \*Ann Because you are not ugly you have a pretty and handsome face  
 \*Ste So?  
 \*Ann So it will be happy  
 \*Ste So?  
 \*Ann So you can attract the opposite side sex (giggling)

\*Kwo But I'm worried that I might be very nervous during the English discussion and won't be able to know how to say it.  
 \*Cha Don't worry there are ideas in the notes. You see you can actually use the suggested words here. You could just read aloud from the notes.  
 \*Ng Were we talking about brain?  
 \*Cha Yeah we ranked it the first. Without it we might not be able to live on  
 \*Kwo What do you mean by 'liver'?  
 \*Cha it means vitality.  
 \*Kwo Yeah no vitality no life.  
 \*Luc Also if we have no heart, how can we live on. Right?  
 \*Kwo Then brain. We use it for thinking. If we have no brains, there is nothing left except our body. But on the other hand, if our body is handicapped with no legs or whatever, it's still OK. Because we can still think. Nobody can be perfect you know.  
 \*Cha Then bones, right? <givhelp>  
 \*Ng Yeah, they support our body. Without them, we can do nothing.  
 \*Cha Apart from bones, what else?  
 \*Luc Also lungs. Without breathing, you have no air to survive.  
 \*Kwo I think that lungs are more important than bones.  
 \*Cha But without lungs, you can do nothing with bones. So I think both are important.

\*English discussion (8 min)

\*Cha =[I think I think the powerful liver (.) is the (.) more important part (.) because (.) er we can live in the earth forever  
 Um Let me see  
 \*Luc Is a super strong heart um if u have not heart er u can't (.) u can't (.) er (.)  
 \*Cha =breathe Um breathe <GIVHELP>  
 \*Luc breathe No  
 No um  
 \*Kwo If u think ( if u think) yes  
 \*Cha =heart <GIVHELP>  
 \*Kwo =heart is about ar about (about) I think um. I think that's is ok  
 \*Luc Yes  
 \*Kwo And then er I think I chose this extra strong ling because we need to breathe (.) breathe air  
 \*Cha =every day <GIVHELP>  
 \*Kwo yes every day  
 \*Cha Um how about  
 \*Kwo which is important  
 Um

\*Kwo And then the (....)

\*Cha I think the

(strong)

And then

\*Cha Yes yes yes yes

\*Luc Duanc (discuss now)

\*Ng I think er super er super smile (brain) bain because X(....)

\*Cha =is important <GIVHELP>

\*Ng =is important (because) because (we think) we we think

\*Cha anything use brain <GIVHELP>

\*Ng any anything  
 \*Cha use brain <GIVHELP>  
 \*Ng choose brain  
 \*Cha And the forth the five one (...) (er is) is stomage (.) ar super powerful stomach  
 \* =Ahah yes yes  
 \*Kwo U can choose u choose  
 \*Cha =No no no  
 \*Cha Stomach (.) yes a powerful stomach if in the world (.)er in the life u can't eat (.) u er u will have er u will have no any fund because fing eat fing er fing is very delicias and (.) food is very delices (.) if u if u er (...) can't to eat (...) er it is so so unhappy  
 \*Kwo And then me first (.) Ye and then extra strong (.) (rub) rung because there rungs let us to stand up (.) it need to move and (.) do exercise (.) and keep fit  
 Haha  
 \*Luc Me super skin if u have not skin u can't potect er your body  
 \*Cha Muscle u  
 \*Ng I think I think the high (.) I think the high (.) pow power muscles (.) is important because (...) it it can (...) (C was moving the paper strips on the desk to give help/ hint)  
 \*Cha Because it is to er (.) give us power? <givhelp> (C used eye contact to signal.)  
 \*Kwo =Yes we can move (.) and we we don't have sick  
 \*Cha But power (.) u can (.) not easy be hurt  
 Um  
 \*Cha And how about the nineth (.) the nineth I think the ears  
 \*Kwo Ears  
 Yes  
 \*Kwo =Where where (.) This u thinks this  
 \*Cha No yes  
 \*Kwo Eyes  
 \*Cha Eyes yes (eyes yes) because if u have no eye u can't see anything  
 Um  
 \*Luc um (.) Yes (.) Powerful lings if u have lings, er (yes) u can't walk and how about u Jenny (...) (Looking at K; the first time)  
 \*Kwo Um I think is (no) I think is hands er extra strong hands because we need hands to write (.) to pick something  
 \*Cha to hold something <GIVHELP>  
 \*Kwo yes to hold something the important thing is to write. (.) We need to write thing  
 Um.  
 \*Kwo Yes (C kept shuffling paper strips on the desk to givo hints to K & N) How about u Duane  
 \*Ng I I think the powerful (.) I think the powerful car (...) becau becau if (we can) we can (we cannot) we cannot (hear) hear hear  
 \*Kwo =anything <GIVHELP>  
 \*Ng =anything ( listen) listen to listen anything  
 \*Kwo Yes um how about u  
 \*Cha Um I think the next is the extra strong (I think is the nose) nose er (.) (we can breathe yes) but If we have no nose u u can breathe (.) u can breathe also also u can breathe so the teeth is the first  
 Haha  
 \*Cha Because if u no no stronger (.) teeth u (.) u can't eat anything  
 Um  
 Um nose

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\*Kwo Why?  
 \*Cha Well we need it to think. If you don't think, you aren't a human being, you know.  
 \*Ng Bones because they help support our whole body.  
 \*Luc No but what about heart? If you have no heart, then er. .  
 \*Kwo Then eyes are important as we need them to see.  
 \*Cha But even if you can't see you can still live.  
 \*Kwo OK as you like it. What do you prefer? Do you like x-ray eyes?  
 \*Cha Lifer.  
 \*Kwo Then let's rank them rank them.  
 \*Cha Lungs should go first.  
 \*Luc Well eyes and ears then.  
 \*Kwo No I believe hands are more important.  
 \*Ng =No we can hear things with ears.  
 \*Kwo This is hand.  
 \*Luc Skin too. You can catch diseases easily without skin you know.  
 \*Cha Yeah without skin what can you do?  
 \*Kwo Then rank it.  
 \*Cha Then stomage.  
 \*Kwo No eyes are important?  
 \*Cha Yeah window of the soul.  
 \*Luc What about teeth? I know we can have false teeth.  
 \*Kwo Not much use.  
 \*Cha Nose em then handsome then hair then ..em what about hair important? It's fashionable to be bald now.  
 \*Kwo No it's horrible if you are bald. Hair is more important. Let's see if the ranking is correct. This is more important .. this should be here. Hair is important can't be more important than bones  
 \*Cha Well if we believe that internal organs are important we should rank them first. (.) Then we should think about how we can make use of the body parts? (reading from the instruction sheets) <problemidenreq>  
 \*Luc Brain is of course for thinking.  
 \*Kwo Yeah to be wise and do the thinking.  
 \*Luc If you have a smart brain you should use it more  
 \*Kwo if you have no heart then  
 \*Cha If you have no brain even if you have a heart it's useless.  
 \*Kwo If you have no heart then you can't live either right?

\*English discussion (12 min)

\*Kwo First I think a super smart (smart brain) brain is important (because what because what because what)  
 Tell me  
 \*Luc Umum u can't think  
 \*Kwo I will use this to think ( yes) think our idea <givehelp>  
 \*Luc Yes yes. The second is the super strong heart if u no heart u will die um (...)  
 \*Kwo Duane you try  
 \*Cha This  
 This  
 \*Ng Have heavy power um because it (.) it can um er (reading from the notes)  
 \*Cha Yes. The first one the forth one is (.) extra strong lungs (.) because everyone need

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\*Cha Nose  
 \*Luc Can't beathe um can't beathe in and beathe out how about u? (Kept looking at K; the second time)  
 \*Kwo How about I think is super hair but (.) I don't know (.) in the hair what is important ar is nothing  
 Um  
 \*Luc Hair (.) U can (...) Maybe a pretty face or handsome face  
 \*Cha I don't think so.  
 Um what  
 \*Kwo Ok I I identify it (.) Ok I I identify Haha  
 \*Cha Um (...) If u if u go to (...) go to (...)  
 \*Kwo =If u so ugly u er some (someone will will) someone will attract u <GIVHELP>  
 \*Cha =Yes  
 hair  
 \*Kwo and the last is hair  
 \*Cha the last (yes) the last important one is the super hair  
 \*Kwo =How about Duane?  
 \*Luc Your hair  
 \*Cha Super hair  
 \*Kwo Er is nothing important I think (yes) is the last one  
 \*Cha =Yes er but (.) but if u has no hair u are ugly too  
 \*Kwo =yes, gut someone have er (.) someone are all have hair  
 \*Cha Um (...) in the (...) in in (...) here I (.) here we talk about the important one er the important thing um the important thing we (...) we need it er very important (.) the first one is er the powerful lifer la  
 \*Luc Second is the super strong heart  
 \*Kwo The third one is extra strong legs  
 \*Ng um (the forth) the the forth super super mass swain  
 \*Cha =And so on that is very important  
 yes  
 \*Luc um how about the others  
 \*Kwo and then the one to four is important  
 Yes  
 \*Luc Yes  
 \*Cha I think no (.) er all the thing is important  
 \*Luc U can say this  
 Yes  
 Um  
 # hahaha

The end.

No. 11 \*Phase 2 Direct (L)

\*Pre-discussion planning in Cantonese (6 min)

\*Cha I think we should begin with the most important item. The most important is the brain.

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to breathe (.) breathe u need the lungs (.) so the lungs er is important  
 \*Kwo Um then a powerful stomage is also important  
 And and (...)  
 \*Luc Er Yours your (...) x-ray eyes. Um maybe stomage. Your food can't er (...)  
 \*Cha =You can eat as you like. <givehelp>  
 \*Luc Yes. (inaudible)  
 \*Ng <askhelp in Cantonese>  
 \*Cha Extra. <givehelp>  
 \*Ng Ex Extra strong strong be because um because it will be be strong and leg oh other er other people  
 \*Cha Um the next one is the powerful ears (.) because (.) er everyone have ear it can listening some pop music and (.) and so on so ears is (.) important too  
 \*Kwo Um and then I think extra strong hands (.) is (.) because we use hands to do things we like (.) and (.) then use hands to do anything (giggling)  
 \*Luc And the ten is powerful legs and u can run er walk er do it everything er walk where er anywhere um (...)  
 \*Ng And er this an any thing I fight  
 \*Kwo Next Su super skin super skin  
 \*Cha Super skin  
 \*Ng Super skin er  
 \*Kwo If if if you haven't supper skin the sun will hurt U <givehelp>  
 \*Luc And then u will die <GIVEHELP>  
 \*Cha Won't won't be wont' be easily hurt  
 \*Kwo He Won't be stronger  
 \*Cha Won't be hurt easily  
 Er  
 Yes  
 \*Luc U will have some er (...)  
 \*Kwo may be the next extra (very long pause)  
 \*Cha The next one is (.) snow super nose super nose er (.) the nose is use to er to smell some (.) to smell er something er (.) but I can't say so er so (.) so it is important la  
 \*Kwo Um And extra strong teeth we use teeth to eat (.) if (.) Do u have teeth? If u haven't teeth u can't eat u will be hungry  
 \*Luc And last is high power muscles um it is not important and u have not muscle u can't put a hard (...) thing um (.) yes  
 \*Ng Su super hair be because (.) it it it can (...)  
 \*Cha Would u agree? <givehelp>  
 \*Kwo Would u like to take our hair? <givehelp>  
 \*Ng Beautiful hair And then no hairs  
 \*Kwo u need to take our hair (speaking to L)  
 \*Cha Next one is a pretty or handsome face (.)  
 \*Kwo =It isn't important  
 \*Cha =because  
 \*Kwo =it isn't important  
 \*Cha =it is important because many people will like U  
 \*Kwo Also important too in Hong Kong  
 \*Cha yes ya so it is important (...) um (.) the super smile brain we use to (.) think something about (.) about study about er anything (.) as u like  
 \*Luc Um um then the heart (.) er in the heart in our and we will die and (and mei ar) and a powerful?

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\*Kwo Lifer <givehelp>  
 \*Cha But u can't do er an any any exercise  
 \*Kwo If u if something u u will lie to do it but you can't do it if u u haven't powerful lifer  
 \*Cha Again powerful life lifer is (.) use to to protect to to help other to liv-ing (.) longer and longer (....)  
 \*Kwo Then (....) if you have not extra strong lung and u haven't u can't breathe ( yes ) so u will u will die  
 \*Cha Do u know the lung use to do what? <givehelp>  
 \*Ng Because no lungs (....) u will die  
 \*Luc Um um and powerful ears um  
 \*Cha If u have a powerful stomage do u will u eat anything as u like ( u can't said u can't said it) (know it) u have u have a powerful stomage and u can eat anything  
 \*Kwo Work faster work faster  
 Er  
 Extra ears  
 \*Kwo X x ray eyes um  
 X ray eyes  
 X  
 \*Luc Um (u can see many many people thinks )um yes of coz and  
 \*Cha Extra strong bone  
 \* If u have  
 \*Cha U can do many (.) exercise ( yes ) um  
 \*Kwo U will health  
 \*Cha Yes u will healthy  
 yes  
 \*Luc How about ears? (looking at N)  
 \*Ng Pow powerful ears be because it can ( because ) (hear )  
 \*Luc hear hear many things as u as u like <GIVEHELP>  
 \*Kwo If something beautiful  
 \*Luc Extra strong hands have work um do any thing then (looking at K)  
 \*Kwo And use this  
 \*Ng Powerful leg for for what? <ASKHELP>  
 \*Cha for do anything  
 \*Kwo yes  
 \*Luc yes  
 \*Ng Pow powerful legs because can can swim fast and er  
 \*Cha Run away run away fast <GIVEHELP> Extra car can protect (.) ours  
 \*Luc Yes  
 \*Cha And we we will not be easy to er to hot hurt  
 \*Luc And a super nose u can smell many good smell er just like  
 \*Cha =how about the bad smell  
 \*Luc um u u can eat  
 \*Kwo and cut food <givehelp>  
 \*Luc Yes. Muscle not important  
 \*Cha =Yes important. Not not important if er if he have have have high power muscle it will be very  
 \*Luc superman <GIVEHELP> (gigling)  
 \*Kwo And we use stronger  
 \*Luc And then hair no hair is

\*Cha =Ugly  
 \*Kwo Ugly  
 \*Luc Yes  
 Then ok  
 Which  
 \*Luc No hair and  
 \*Cha This beautiful handsome (Cantonese) pity handsome face  
 Pretty handsome face  
 \*Luc In Hong Kong is very important  
 Er  
 \*Kwo If u have pit pity face and the someone (the u can )like u many many will like  
 \*Cha Many many many girl or or boy will like u  
 That's all

The end

No. 12

\*Phase 3 Direct (L)

\*Pre-discussion planning in Cantonese (6 min)  
 (long pause)

\*Ng What does this mean?  
 \*Kwo Skin.  
 \*Cha Eyes. um A bit exaggerating.  
 \*Kwo Say something. Which is important? How should we rank the body items?  
 \*Cha It seems that the information in the notes is different from what we got in previous discussions. Some common, internal organs like heart are missing this time. We have only skin and and er  
 \*Kwo Let's talk about what is important and what is not. Don't talk about differences.  
 \*Cha What is important?  
 \*Luc I think x ray eyes.  
 \*Kwo Me too.  
 \*Luc Yeah if you have thieves you can see.  
 \*Kwo Yeah it saves electricity.  
 \*Cha But in the year 3000 you can ..  
 \*Kwo =just imagine the year 3000 er  
 \*Cha Yes of course we can imagine many things for the year 3000. But I think it should still be nose. You can smell danger.  
 \*Kwo But is it the most important?  
 \*Cha Yeah. It's no good if you can only see but not smell. You know. Say if you have a hand that can lift things up to 100 pounds but then you aren't able to smell that it is so heavy and can hurt you when it falls, then the powerful hand is still useless. Right?  
 \*Kwo Then?  
 \*Cha =Must be bones.  
 \*Kwo No powerful cars.  
 \*Cha I think bones.  
 \*Ng no, bones are no good. What's the point of having only a skeleton?  
 \*Luc cars, then.

\*Cha But cars will intrude upon others' privacy.  
 \*Kwo But at that time everybody will be like that. So it doesn't really matter. Duane, could you suggest one item?  
 \*Ng Hands.  
 \*Cha Why? You need to give a reason.  
 \*Kwo I think legs are better.  
 \*Luc You can walk.  
 \*Cha you can walk on hands too.  
 \*Kwa How about high powerful muscles? We can protect ourselves?  
 \*Cha =No, it should be skin.  
 \*Luc Skin seems ok.  
 \*Cha Yeah. It doesn't change even if we hurt ourselves. This will happen in year 3000.  
 \*Kwo But this will happen even in the year 2000.  
 \*Cha That's different. That's skin grafting.  
 \*Kwo How many are still left?  
 \*Cha er em  
 \*Kwo Muscle? What about teeth?  
 \*Cha No teeth and hair are not needed.  
 \*Kwo the rest is not important.  
 \*Cha Teeth and hair.  
 \*Kwo What about nose? Have we talked about it?  
 =yes.  
 \*Cha Three more left. Teeth, hair and pretty handsome face. Right.  
 \*Kwo I will then choose pretty face.  
 \*Cha To attract the opposite sex, right? (.) Then teeth, of course.  
 Yeah.  
 \*Luc Hair is not important. It doesn't matter if we are bald.  
 \*Kwo Ok that's it.  
 \*Ng We've talked about muscles. Right?  
 \*Luc yeah.  
 \*Ng Then what?  
 \*Luc The first one is x ray eyes. Second is nose. Third is cars. Then ...

(Time is up.)

\*English discussion (9 min)

\*Kwo Extra eyes is the first important because .. (.) when it can be cr  
 \*Luc Er where in on your phone  
 \*Kwo t can see on the dark in the dark (reading from the notes)  
 Er haha  
 Said  
 When?  
 Chinese in the  
 \*Luc A thief is going into your home as u can  
 \*Kwo Stole something <GIVEHELP>  
 \*Luc U can see him ar  
 \*Kwo and catch him <GIVEHELP>  
 \*Luc and it may be there is  
 \*Kwo no light in the night but also u can see

Er  
 Er  
 \*Luc The next important is a super nose that can smell danger (...) u can smell some danger is good  
 \*Kwo it it it con  
 \*Cha =It can save yourself <GIVEHELP>  
 \*Luc yes  
 \*Kwo Protect yourself  
 \*Luc Yes um  
 Um (....)  
 \*Kwo And then  
 \*Luc This nose er no thief will (.) will stole  
 \*Kwo May be some delicious food  
 \*Cha If someone want to kill u u can smell it  
 \*Kwo Yes  
 \*Luc The next is powerful ears that can hear what other people think um um (...) u can hear who thought u er who like u  
 \*Kwo =Yes Something other people will attract or do not like u something u u know already  
 \*Luc Um  
 \*Kwo And then (signalling to N)  
 \*Ng Number number 4 here is the  
 \*Kwo Extra bone that  
 \*Ng Extra bones that ( that )last ( last ) forever um be because it it can powerful we and people  
 Um  
 \*Luc If u have not bones u just like a ghost haha  
 \*Kwo Um and then somewhere else  
 \*Luc Next is  
 \*Cha Muscle  
 \*Luc Muscle  
 \*Kwo Your turn  
 \*Cha Er muscle is  
 \*Kwo Say something  
 \*Luc But I think superskin is good  
 Ah may be change the  
 \*Luc Um Because  
 \*Cha Because skin can protect er your muscle  
 Er  
 \*Cha Your muscle is easily be hurt (.) so the skin is important (....)  
 \*Luc Um um high power muscles that are as strong as a lion er (....)  
 \*Cha That's good  
 \*Luc Yes  
 \*Cha Why  
 \*Luc Because if you have not muscle u can't have energy (.) to hold the things just like this dictionary (.) is too heavy  
 \*Kwo =yes because u are so strong and may be (.) the animal agree u  
 \*Cha =u said that as strong as (yes) u said that as strong as a lion's (yes) so and u can  
 \*Kwo =u can frightened with him  
 \*Ng pow powerful legs that can walk walk last last last ( as fast as a car ) as fast as a car be

because want be late ( late for school ) for school  
 \*Luc um then  
 \*Cha but er but no fast as er er but not need to walk as fast as a car  
 \*Luc good (...) if u  
 \*Cha no need to drive the car  
 \*Luc =yes (....) and if u live er  
 \*Cha u walk to far  
 \*Kwo and with the car so fast (.) u can not need the car what but its very tire  
 \*Luc er extra strong hands that can lift things up to 100 pounds ( 100 pounds) um  
 but  
 \*Cha how can it change your life (....) er can can it hell u to hold the thing  
 \*Luc yes  
 er  
 but not not important  
 \*Cha no um  
 \*Kwo I don't think so I think teeth is important too (.) extra strong hands  
 Um  
 \*Kwo Because we use teeth to eat  
 Eat eat  
 \*Luc Are very it ah  
 \*Kwo very hungry U haven't teeth u are old men U haven't teeth eat  
 \*Cha U can't eat  
 Um  
 \*Kwo And u will be hungry  
 um  
 \*Luc have no important pretty handsome face um if u have a pretty or handsome face  
 er someone will like u (um)um er u look like young  
 \*Cha =the opposite  
 \*Kwo =other people all like u  
 um  
 opposite  
 \*Luc look young ar  
 \*Cha oh the  
 \*Kwo extra strong  
 \*Cha last important one  
 \*Kwo =no this this extra hand (looking at L)  
 \*Cha =no it said it it already er the last important one is soap per hair  
 yes  
 no important  
 \*Cha because hair is not important  
 \*Kwo =but it it can also need us  
 \*Cha =than than this not important than this(yes) because hair is er  
 \*Luc just er people look u  
 \*Cha yes  
 \*Kwo but u haven't hair there is white may be like ghost in the in the night  
 yes  
 \*Cha u no need to tidy your hair  
 \*Luc er may be it  
 \*Cha if u if u no hair (.) er do u angry?  
 \*Ng er it can (.) er it can problem the hair

upcoming discussion? Any words we don't understand?

\*Ric The stomach. (Checking dictionary)  
 This is tummy.  
 No this is stomach. Tummy is belly.  
 \*Ric Then what should we do now?  
 \*Vic Hey I've seen this word in Geography lessons.  
 \*Jaz Really. A powerful legs  
 Yeah  
 \*Vic soil (?)  
 \*Jaz No you must have remembered wrongly.  
 \*Vic No I definitely remember having memorised the word.  
 \* liquid. (?)  
 \*Step What about this? Liver. What is liver used for?  
 \*Vic Excrete toxin from the body. (Checking the dictionary) (.) Removing toxin to beautify yourself. Ha ha.  
 \*Jaz You must remember to speak. OK? (.) Nutrients. It means they are good for our body.  
 Liver turns food into nutrients.  
 \*Vic Make you fat.  
 \*Jaz Fatty acid makes you fat.  
 \*Vic Anything else we don't understand?  
 \*Jaz This one means perfect.  
 \*Step Then liver should be ranked last. We don't need to be so perfect.  
 \*Vic Now I feel x ray eyes can be considered.  
 \*Jaz Brain is good not that we could be smart but that we can maintain our thinking capability.  
 \*Step In tests and exams we get higher marks.  
 \*Ric But if we think too much we will be very sad and painful.  
 \*Vic no powerful ears is terrible. If we know what others are thinking it will be very painful.  
 \*Ric What about this? You read it aloud once to me?  
 \*Vic You must be crazy. (.) Muscles.  
 High power ...  
 \*Vic This is not useful for us. Muscles is for men.  
 \*Jaz But you can stop the cars.  
 \*Step 'A boy is crossing the road?'  
 \*Vic We should now discuss how we should do the discussion task.  
 \*Vic Well we take turns to talk about one item at a time.  
 \*Jaz No good. That way we'll be doing it very slowly. We don't have enough time.  
 \*Ric Then what to do?  
 \*Step One person should speak first to lead us.  
 \*Vic It should be OK if each of us is prompt to respond and speak.  
 \*Step Who should take the lead then?  
 \*Vic Jazzy should.  
 \*Jaz why?  
 \*Vic We are good pals.  
 No more.  
 We can all start.  
 But we should all laugh madly first.  
 Ha ha ha

um?  
 \*Cha Are u angry (...) if u no hair  
 \*Ng No  
 \*Kwo =What's your feeling no hair  
 \*Ng Um so ugly  
 ugly  
 \*Kwo Yes  
 \*Cha But u are fee thousand years  
 Um  
 It is ???  
 \*Kwo But  
 \*Luc But I don't like no hair  
 \*Kwo Yes so ugly  
 \*Luc Yes  
 \*Cha So so (K/ because we are women)that the super hair er (.) super hair will will be the first one  
 \*Kwo No may be change this  
 \*Luc Yes  
 No  
 \*Kwo U can u like as u like  
 Um  
 The hair  
 \*Kwo Ok the end  
 Is the end

The end.

No. 13

\*Phase 1 Indirect (H)

\*Pre-discussion planning in Cantonese (6 min)

\*Jaz We should speak whatever we want.  
 \*Vic She doesn't speak much. Ask her to speak more.  
 \*Ric We need to speak in English.  
 \*Vic If we don't know, we use Japanese. (.) We use 'gestures'. (.) What to do?  
 \*Step Dance for rain.  
 \*Vic Then what? (.) What about these words given to us?  
 \*Jaz Yeah we can. They are for our use.  
 \*Vic But we might not be able to use them.  
 \*Jaz No some of the words could be used. (.) 'Avoid crossing the road'. What does it mean?  
 \*Vic You have x ray eyes so er you could see well across the street.  
 Moving the mountain.  
 \*Jaz What about 'Like a ghost'?  
 \*Step Like Frankenstein.  
 \*Vic In year 3000, what we can buy can also be bought by others you know.  
 \*Jaz Maybe we invent things so we are superior.  
 \*Ric So then what? Come on.  
 \*Vic I also want to ask the same question. (.) What do you think we can prepare now for the

\*English discussion (8 Min)

(Chinese)

\*Jaz I think er I think  
 (Chinese )  
 U think  
 \*Jaz I think most important one is the smart (smart what?)  
 Is the bain?  
 Bain  
 \*Jaz Brain  
 \*Vic No the heart (.) I think it is most important  
 \*Ric Why?  
 \*Jaz you need er your imagine er your  
 \*Vic Imagination <GIVHELP>  
 \*Jaz Your your (your what)  
 \*Vic you need to think something <GIVEHELP>  
 \*Jaz Yes (ya) so u can learn more (help the exam)  
 It control your heart  
 \*Vic Control your heart?  
 Ya  
 \*Step Is not (your heart control) tell that u haven't got this  
 Is er er balance?  
 \*Jaz Balance (.)The brain need the blood er but the heart is controlled controlled by the  
 bain  
 U know  
 Brain  
 Chinese equation  
 So ( explain)  
 Er then  
 Then  
 Then  
 er  
 Then  
 I think is heart  
 =Eyes again  
 \*Vic X ray eyes  
 \*Jaz =/No heart  
 \*Step Heart is very important  
 Yes  
 \*Jaz Your eye need the blood u know (.) B L O O D blood  
 Blood  
 Blood  
 But nothing  
 \*Vic Life is too long and boring  
 Chinese do u know  
 Yes  
 \*Vic Too long and boring  
 \*Ric Haha (so I don't think) but many many people have long life (long life) if u can buy this part  
 \*Vic So this is too long and boring

I think  
What  
\*Vic I think 100 years (I will tired) is ok  
\*Jaz Because of the long life (um) I think I will feel tired because of the long life  
And louder  
And then u go to die (I beg your pardon)  
\*Vic I beg your pardon  
\*Jaz Then u go to die la (crazy)  
Az...  
And then  
Next  
\*Vic It's your turn?  
\*Ric Um Um (long pause)  
\*Step Do u agree? (Having put the paper strip 'eyes' on the list) <GIVEHELP>  
\*Ric Eyes again ok  
\*Jaz Without the eyes u will er u will see nothing just the black black (black color) black  
everything are are back. are black are black  
Um.  
not Not colourful  
\*Jaz U are eas er u will vis er u will easily (.) er attack by other people  
I think this is attack  
\*Vic I afraid  
afraid what?  
Er Ok  
And then dark  
This case  
\*Jaz er ear or ear or skin  
Skin  
Skin  
Ear  
Ear  
Ears  
Why  
Can hear many  
\*Jaz But can not (no no no no no) affect people thinking (.) No is not good I think u u u but  
(painful) u need your nose  
\*Vic =I think the skin is the important skin (.) Super skin super skin  
Do u love it  
Um  
\*Step Can protect ar (.) Protect ourselves  
\*Vic Won't be hurt easily (body the bone, YES) then u can hit the car =Your turn  
\*Step Then I think the lungs  
Yes always (the same)  
\*Vic U like lungs  
\*Jaz Where's the ear  
Yes  
\*Vic LAST. U can u can er (hear other people think) ar ya. And what other u will feel boil (.)  
Painful u know other people how to how to think ar  
Super hair  
\*Jaz Super hair no (Chinese) never mind

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A powerful storage  
\*Jaz How about cars? (.)Ears.  
\*Vic Last.  
\*Step The nose.  
Yes.  
\*Jaz You can't breathe. (you can't breathe) (.) And then you can't do respiration and then  
you will die.  
\*Vic Respiration. (.) Crazy (.) Science and history (.) Can smell danger and I think this is  
important (yes)  
Um  
And  
And then  
Handsome face  
No need  
High power muscles, a powerful  
=This one  
=Hands  
Hands (.)  
I think  
And then the key  
Why  
\*Step Why think  
\*Jaz It is because u just er (it is more in that Power) (and then u have power)  
Don't u (this one ar) have the powerful storage  
Storage  
er er A  
Storage  
\*Ric I think this one  
super hair  
leaver (....)  
like this  
Agree?  
Um  
Yes  
\*Ric U think muscles is more important than  
\*Vic =No muscles  
\* =Liver is important than muscles  
\*Vic =But I think I think a pity hand er  
Go with u  
um um um um um  
\*Vic And muscles is not good for (.) for girl  
Oh the ear can  
Falling down  
\*Jaz What what can the hair help u  
Do not fall out?  
Fall out  
\*Vic The Mediterranean Sea  
you see.  
Finish  
Nothing

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Muscles  
Muscle  
Muscle is no er  
Liver.  
\*Vic Yes I think liver.  
\*Jaz No (why)  
\*Vic No can turn every (No No) can turn every anything u eat into this  
\*Jaz No u will become very very very fat  
\*Vic Fat keeping fit  
Um.  
Nose ( Legs)  
Nose(legs)  
Hands  
\*Vic =Legs  
\*Jaz =Hands  
\*Vic =Legs  
\*Jaz =Hands  
\*Vic Powerful legs er can walk as fast as a car  
\*Step Walk around the road  
\*Jaz u can't write (so) and u can't hold (so so u no need no need to buy a car er less  
money will use) (.) u are very rich now  
no  
um.  
\*Vic Don't Don't talk about this point  
How about is  
And hans  
\*Vic Sun your turn  
Yes  
\*Ric My turn er ar er er  
Chinese  
\*Ric This one la  
\*Step Why  
\*Vic =Why  
=Why  
\*Jaz =Why why tell me why I don't agree  
\*Ric Because I think (Chinese) (because I think what) the bone is  
\*Vic yeah yeah why  
\*Ric Um. Don't ask  
\*Vic Say something  
\*Jaz U have no reason and choose the bone  
Because can't move can't move  
Can't move?  
Can't move  
\*Vic Bone is important also  
\*Jaz Remember renascence time people use reason to ( wa wa ) the then resolve the  
question trach  
I listen to u  
(Chinese) bones (then) bones bones (this)  
\*Jaz The dog will eat all your bones  
A powerful stom

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So fast  
um um um

The end

No. 14

\*Phase 2 Indirect (H)

Pre-discussion planning in Cantonese (6 min)

\*Jaz Didn't seem to be involved in checking the dictionary  
\*Vic Dutifully checking pronunciation and meanings from the dictionary  
\*Step Not much except apparently concerned with who is going to speak first.  
\*Ric/Step Shuffling and provisionally ranking the paper strips on the board  
\*Vic <checking dictionary> "liver"  
\*Jaz What should we to to help us do the upcoming discussion task better? I think we were  
too noisy last time. We didn't seem to be receptive enough to each other's views.  
\*Ric Let's read the content of the notes carefully first. Hey, there're some suggested words  
or phrases here for us to use. You see. (pointing the notes to Jazzy).  
\*Jaz But they are suggestions only. We can speak whatever we like. We don't necessarily  
have to follow them. It's said, "you may" here. Right?  
\*Vic I want to chech this word. (checking the dictionary most of the time at the beginning)  
\*Jaz I think it means "digest".  
\*Vic Yeah how do you pronounce it?  
\*Jaz I don't know.  
\*Vic (checking some words in the dictionary)  
\*Step What about 'liver'? How does it help you?  
\*Ric It helps you with your food. I think.  
\*Jaz We should do some analysis. I don't think we need to do problem identification. We've  
done it in our oral lessons. That's not our problem. Our problem is that we either have no  
ideas or we fight for our views without giving way or even listening to others.  
\*Vic "Digest" (pronouncing it). Um liver (Checking and trying to understand the words)  
\*Step Don't know how to pronounce this word. It seems that we've seen the word in  
Geography.  
\*Vic Immediately checking the dictionary again. What about 'nutrients'? (checking and  
practising the pronunciation) (checking the dictionary again)  
\*Jaz (looking impatient and apparently waiting for the group) It seems there is not much to  
talk about now. It's because we already did problem identification last time. We've analyzed  
the problem already.  
\*Vic (reading the dictionary with Ricky) 'nutrients' (trying to pronounce and practise it.)  
\*Jaz Nu nutrients (trying to pronounce it)  
\*Vic What's jealous?  
\*Jaz (explaining jealous). Actually you can guess from the context.  
\*Step/Ric (shuffling paper strips and ranking them provisionally on the desk)  
\*Jaz Maybe we should quickly rank all the items first.  
\*Step No let's do it slowly.  
\*Vic Problem identification  
\*Ric This seems to be different from the first discussion we had earlier. We had 'Titanic'. I  
remember we did similar things in our oral lessons. Let's separate the paper strips first. It

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will be easy to find/locate them later.

- \*Step We could reverse the ranking order. Powerful cars.
- \*Vic Think positive.
- \*Jaz No need we are calm enough. Let's think about how we should prepare for the upcoming discussion task.
- \*Vic Problem identification helps us prepare for the task. Let's think about the purpose.
- \*Jaz Purpose?
- \*Ric To see which is the most important.
- \*Vic But we shouldn't talk about it now. Jazzy said that this was what we needed to do during the discussion but not before the discussion.
- \*Ric Are you sure?
- \*Vic We should then decide who should speak first, and who should speak last.
- \*Step Perhaps we should talk about what to say at the beginning. Doesn't matter. Take turns to say something.
- \*Jaz No need, we just freely speak up whenever we like.

English discussion in progress (11 min)

- \*Vic What do think is the most important?
- \*Jaz Super strong heart
- \*Step I think a super strong heart
- \*Jaz super hairs powerful ears
- \*Vic These thing strong heart um
- \*Step This is the most important (pointing at the paper strip)
- \*Vic A a super strong heart
- \*Jaz I think heart is important (pointing at the paper strip)
- More important ( more important yeah )
- \*Vic Then a super smart (.) bain\*
- \*Step Why ar
- \*Jaz Super (reading the notes quickly and checking)
- \*Vic If u (.) look smart if this work is super (better than a computer ) strong heart that last for (.) 100 years after 100 years your brain ( u are too old ) u u are too old and u can't think (.) And u don't need to live (.) and u must have a pretty handsome face (.) After 100 years u will be ugly u know and and
- \*Step Ugly or not is not important
- \*Vic Super skin that does not change
- Super skin forever greedy
- \*Step =X ray eyes (putting the paper strip forward)
- \*Jaz X ray eyes no (quickly reading the notes again)
- What is
- \*Jaz =No u will be very ugly U know your (.) body inside (no no no no) your your (.) inside is very ugly
- \*Step Er then (extra) powerful ears
- \*VIC =extra strong lung (putting the paper strip forward)
- \*Jaz =No I don't want to hear (.) (yeah ) I don't choose to hear danger
- \*Step =Ex extra strong (\*Jaz hear the danger) ex extra strong lung
- \*Jaz =no danger there is no fun
- lung Protect your life
- \*Vic I have said after 100 years
- \*Ric [=Bones or choose the bone

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- Extra strong lung
- \*Vic Many many many many many yes
- \*Ric extra strong bone (.) forever this one may be (eager to interrupt and contribute) yes
- \*Jaz and then super hair here
- \*Step I think the hair is not (suggesting a paper strip)
- \*Vic Yeah a powerful liver
- \*Jaz U will be very old
- What s' this
- \*Vic And also super hair is very (.) important (em) if u have not ( ha why ) ex ( chinese head ) er er u can't go out
- \*Ric=U think hair is more important than your body
- \*Jaz Super hair does that( the powerful leg ) does not fall out (reading from the notes)
- Super hair the does not fall out
- I think powerful cars is more important than super hair
- no
- Yes yes
- Does not fall out
- \*Vic <dominating; she is the one to reshuffle paper strips>
- \*Vic I think I think ex extra strong
- \*Ric=No The stomach (yeah )u must have some stomach
- Stomach
- \*Vic Stomach powerful livers also very good u know ( very good stomach) er extra strong teeth ( teeth ) if the teeth all (.) er all fall down (.) you can't eat
- What teeth
- \*Step =How about the x ray eyes
- \*Vic=No need very ugly your inside
- U talk no need too see
- \*Vic=Why Why are pretty handsome face is also
- Here la which one (no )liver is more important
- \*Vic Er muscles er I think ( no no no no no ) some this extra strong lung
- \*Ric Why (Chinese) if u die u (.) then u have a handsome face is (...)
- \*Jaz I don't need face (not useful )because I am handsome now (looking at Ricky)
- \*Ric What (laughing)
- But not u may not be
- not handsome forever
- ya ya
- \*Vic beautiful handsome is the boy
- \*Jaz but u have strong heart already
- \*Step =a super nose (looking at the paper strip)
- er super nose (all reading the notes)
- nose
- because (all checking the notes)
- \*Jaz =super super nose can ( smell danger ) smell danger
- ya
- can smell danger
- super nose
- \*Step powerful cars (pointing at the paper strip)no x ray eyes
- super car
- \*Ric I don't like this ear (then reading the notes)

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Now danger they will

- \*Jaz Powerful cars that can hear (half the ) what other people think (reading from the notes)
- \*Step Extra strong hand (putting forth a paper strip)
- \*Jaz What is the use (long long pause & reading notes with all members) Strong hand they are?
- Strong hand Extra strong hand
- Over there
- Strong hand
- Strong hand
- \*Jaz I don't need er I need er (why ar) I need strong hand to play marjong is
- \*Vic =pow powerful legs I think too heavy
- ha
- \*Ric U want to run fast
- \*Jaz Yeah
- To chase the bus u go to school
- Take part in in in the competition
- \*Step High power muscles
- \*Jaz ugly
- \*Vic=No need
- =I don't want to fight with a ugly
- Powerful legs
- [Imagine how]
- Know when u danger and then
- \*Vic Super hair is (.) is (.) important
- \*Jaz =No it does not fall down
- \*Ric U can smell u can smell danger
- \*Step =the muscles to buy it machine u know
- \*Vic =may be
- [It does not fall down and then u u u like miscellaneous need
- [That's mean u won't
- [It won't grow
- \*Jaz it won't grow (.....)
- \*Step X ray eyes
- umum
- \*Jaz No I don't want to see your bone
- \*Vic Super hair is hair
- \*Vic =And
- \*Step =very beautiful
- \*Vic =Powerful cars powerful cars
- no
- \*Ric No no no no (no ) the cars just use to listen to what other people thinking
- \*Vic =X ray eyes x ray eyes
- \*Step x ray eyes see through (eyes is more important ) your body
- He do your
- X ray eyes May be
- \*Jaz Muscles? I want to say ugly
- \*Step Yes may be u need to fight when u in danger
- \*Jaz =But u are very ugly (laughing)
- =Fight is more important

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- =They are so much muscles
- \*Ric I think the cars is hear some bad thing (pause)
- =Other people can't see your muscles u know
- ok
- \*Vic um I think x ray eyes pretty handsome
- \*Jaz no
- \*Vic x ray eyes u just see through some thing u know
- \*Ric may be this one
- yes
- \*Ric go down
- what more
- ray
- \*Step Power muscles
- \*Vic Muscles is ugly yes
- \*Jaz muscles ugly
- \*Step Powerful legs
- \*Vic Yes yes this is important
- \*Ric Finish
- No
- \*Step Super skin
- \*Ric Skin yes
- \*Vic Yes
- No
- \*Vic Important
- Da da da da
- \*Ric Does not change <givehelp>
- \*Vic Does not change
- \*Jaz no skin lungs
- \*Vic won't won't be hurt won't be hurt easily (reading from the notes) won't be hurt easily
- \*Vic u know
- \*Jaz =when need to breathe out in oxygen
- \*Vic =if u have super strong heart then u will have 100 years old but after 100 years your skin will be so (.) ugly u know
- \*Jaz your lung will be old too
- \*Step yes lung (pointing at the paper strip)
- \*Jaz =which is more important
- \*Step ok lung or skin
- \*Jaz then this u want me to cut out your skin or lung (pause)
- \*Ric nothing change
- \*Step extra strong bone
- um um
- \*Vic is the result different from the last time
- bone or skin
- yes
- \*Jaz if u haven't got the bone
- yes
- u will become a
- \*Vic super III (...)
- \*Ric =u better say what is most important (liver)

- \*Step what is liver?  
 \*Vic liver (.) live liver is something that er (reading the notes to check)  
 \*Jaz Lifer\* (wrong pronunciation)  
 \*Jaz (checking the dictionary)  
 \*Vic 'Liver' (pronunciation corrected) I have check this  
 \*Ric What is the meaning  
 \*Step I know la I know la  
 \*Vic She know what is the mean  
 \*Step Or (pointing at her stomach for everybody to see)  
 I see  
 \*Jaz Or stomach  
 Liver not important  
 Stomach  
 What is stomach  
 Teeth  
 Stomach  
 Stomach here  
 \*Vic What is the use then (.) I think liver is important u know  
 \*Jaz why?  
 \*Step Strong teeth (pointing)  
 Strong teeth  
 Yes this this is the best  
 \*Ric Strong teeth  
 This Can I change this u think no need  
 Change the what  
 \*Step I think super nose there (super) can smell danger  
 \*Vic Extra strong teeth Every time u think about danger u will u will not happy u know (.)  
 every time u think about danger( just me super strong teeth ) sometime is ok  
 \*Jaz super strong teeth is here  
 \*Vic extra strong teeth (.) extra strong teeth is used to eat thing ( super nose um teeth is  
 more important ) ya  
 \*Jaz Um And extra strong hands (.)how about (.) the next (.) a pretty handsome super hair  
 (very hesitant)  
 \*Step Super hair what is?  
 \*Jaz Ears is more important I think ( listen ) like this  
 Um  
 Um  
 \*Vic =Super hair  
 \*Step =Fall out  
 \*Vic If if  
 \*Step =er But u have a handsome face  
 \*Vic But u but u U don't think super hair is important (.) then (um)super skin is not  
 important (.) extra strong bone is not ( no u can move ) important  
 \*Ric Why  
 \*Jaz U need your skin to ( protect ) to protect but your hair if u have no hair (.) u can just er  
 wear a hat  
 \*Vic =If u have no hair u u are so cold u know  
 \*Jaz =U can wear a hat  
 \*Step =U can wear  
 \*Vic Hair will trap air then

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- Who hasn't suggested anything yet?  
 \*Ric Me er(.....)  
 \*Vic Problem identification now. Right? Purpose (.....) What's the purpose this time?  
 \*Ric Purpose is er ...  
 \*Jaz Deciding on the relative importance of the different body parts and then putting them  
 in a strict rank order.  
 \*Ric Yeah, similar to the previous time. This is important .. um this is not so important.  
 something like that..  
 \*Vic Any words we don't know?  
 \*Jaz No.  
 \*Ric Hey .. did you notice that some body parts are missing this time? Like er heart, etc.  
 \*Vic Yeah, what's 'pounds'?  
 \*Jaz It's related to the concept of weight.  
 \*Ric We don't have 'brain'.  
 \*Step Nor have we got 'legs'.  
 \*Ric Yeah.  
 \*Vic Can we start now?  
 Not yet.  
 \*Vic How many minutes left?  
 Four more.  
 \*Jaz We should discuss how we could improve our discussion this time.  
 \*Vic Any words we don't know?  
 \*Step =You two should speak more, OK? (looking at V & J).  
 \*Jaz =We should all speak more in the discussion later.  
 \*Vic =We should discuss the purpose of the discussion now..  
 \*Step [How should we follow one another during the discussion?  
 \*Vic [OK. Purpose?  
 \*Jaz [Why can't you start first and then I will pick up where you stop  
 \*Vic [OK let's talk about the purpose first.  
 \*Ric We've already said it. Which one is most important? Ranking the importance of the  
 different parts.  
 \*Vic Then what do we need to do?  
 \*Jaz =Rank the items first. Then give reasons.  
 \*Step [We should decide on who should break this ice first. Then who should continue  
 and so on.  
 \*Jaz =Take turns. (looking at S & R)  
 \*Vic No don't take turns. It's said here.  
 \*Jaz Don't take turns. Where?  
 \*Vic But it's said "Don't simply take turns". (Pointing the notes to J.)  
 \*Ric [What can we do without a heart?  
 \*Step You should think of something to say and then we'll fit in or continue from  
 where you stop. (looking at J)  
 \*Jaz no.  
 \*Step [OK. What about this? Let's do 'paper, rock, scissors' now and then see who loses.  
 The loser should start the discussion. One, two, three.  
 \*Vic I remember what 'paper', 'rock', 'scissors' mean.  
 \*Jaz \*Vic OK one two three.  
 \*Ric OK Jazzy you start. (nudging at J)  
 \*Jaz Give you a chance. (looking at V)  
 \*Ric Don't you feel that we're wasting time now?

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- \*Step Then u will warm  
 \*Vic =prevent heat lost by radiation (laughing)  
 Is not very hot  
 Finish  
 \*Ric No? No u want to talk more  
 Er do we  
 \*Step Then we arrange again  
 no  
 \*Vic Do do we en do we need to (.) (evaluation is hinted)  
 \*Jaz =X ray eyes or pretty handsome face  
 \*Vic Evaluation  
 \*Step =Pretty face  
 \*Ric face  
 \*Step =more important than x ray eyes  
 \*Vic Evaluation (strategy is named)  
 \*Jaz No no no  
 Do we not  
 Not the list  
 After  
 \*Vic After our (.) after the presentation u mean (.) after the discussion (speaking to Jazzy  
 who doesn't want to do evaluation here)  
 \*Jaz (nodding her head)

The End

No. 15

\*Phase 3 Indirect (H)

\*Pre-planning conducted in Cantonese (3 min 30 sec)

- \*Ric What methods to use?  
 \*Vic Problem identification.  
 \* P1.  
 P1 yeah.  
 \*Ric Anything else?  
 \*Vic Evaluation.  
 \*Jaz Asking for help.  
 \*Step Giving help.  
 \*Ric Functional planning.  
 \*Jaz Asking for help.  
 \*Step Planning ideas in advance.  
 \*Jaz Yeah use them all.  
 \*Ric I don't like 'relax and think positive'.  
 \*Vic Why?  
 \*Jaz Are you tense?  
 \*Ric No.  
 \*Vic So why 'relax and think positive'?  
 \*Jaz Yeah, not much use.  
 \*Step Anything else?

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\*Vic Yeah, let's start.

English discussion begins here. (6 minutes only)

- \*Ric Which one is (.) the (.) most important?  
 \*Step Ha?  
 \*Jaz um ..strong bone  
 \*Step Um I agree  
 \*Vic =But why strong bone?  
 \*Step =If bone is important (.....)  
 \*Vic After you die (.)  
 \*Jaz =[it support your body <GIVEHELP>  
 \*Vic [would would would you keep it?  
 \*Step =give other people to you  
 \* wa don't  
 \*Vic good (.) good idea  
 \*Ric so can you?  
 \*Vic no I don't think so  
 um  
 \*Ric =disagree  
 yes disagree  
 \*Step Why ar?  
 \*Vic Because bone ar (.) after you die will you keep the bone? (.....) But the (.) but the use  
 of this bone [is  
 (then power muscles lor (inaudible)  
 muscle?  
 \*Jaz a super nose that can smell danger  
 \*Step =super skin (.) skin can protect yourself?  
 Yeah  
 Yeah  
 Yeah super skin  
 (inaudible)  
 um  
 \*Step the second one (.....) Long pause.  
 \*Jaz super-nose  
 \*Step no  
 \*Jaz Really? (expressing surprise)  
 \*Step can smell the bad smell  
 \*Jaz =danger not bad smell  
 =can smell the danger  
 \*Vic yes I think this is important  
 yes  
 \*Step why ar?  
 Then  
 \*Jaz It protect you  
 Maybe you can  
 \*Vic =Er if you know the danger you can (.)  
 \*Jaz (run away as fast as  
 \*Vic [you can protect yourselves  
 \*Step Run away you use your powerful legs

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\*Vic Yes no need to use so many money  
 =But (.....)  
 Is it important?  
 Um  
 \*Vic=[no need to buy car  
 \*Ric=[but you will feel very tired  
 \*Vic no need to buy cars (.....)  
 \*Step then strong bone la  
 \*Jaz x ray eyes that can see in the [dark  
 \*Step [only can see in the dark (disagreeing with J)  
 um  
 \*Step no use  
 \*Jaz no use? (challenging S)  
 \*Vic Extra strong teeth that can eat eras strong [as tiger  
 \*Jaz [Whow. very ugly you know  
 \*Step =Bite people?  
 (.....) when you when you are [bite people  
 [danger  
 \*Vic no need to (.....)  
 \*Ric What (.) what is the meaning?  
 \*Vic Quiet. I don't know how to say it.  
 \*Step Then bones lor bone lor  
 Bones  
 Um um  
 \*Vic Then er (.) x ray eyes [that can see in the dark  
 [but only can see in the dark  
 You can see ..  
 \*Vic =If you can see in the dark then you will be very (.....)  
 =What?  
 \*Step Use this (.) strong hand you can fight with other people (.....) fight with other  
 people fight with other people  
 \*Jaz [can be more care care and more careful  
 \*Vic You crazy (looking at S) X-ray eyes that can see in the dark  
 \*Step Super hair (.) does not fall out (.....)  
 \*Vic [No (.....) We are not (.) we are not many so not very to fall out our hair you know  
 \*Step Powerful cars  
 \*Jaz =No  
 \*Vic No no no no  
 \*Step Hands  
 \*Vic Yes fight with other people  
 \*Jaz Is more helpful  
 \*Vic =Why?  
 Um (.) I think [it protect yourself  
 [It is more important  
 [??? Bites to you  
 \*Jaz [when you (.) when you in the supermarket, hey you can take as many things as you  
 want  
 \*Ric =I think this one is more important than the teeth  
 \*Step =Why ar?  
 \*Jaz =Yes the teeth is so ugly

\*Vic =When when you (..) when you (..) when you are old and ur teeth will (.....)  
 \*Step =Fall (giggling) Fall down  
 \*Vic Then so painful you know (.) my mother is like this (.) so I  
 \*Ric =Painful?  
 \*Vic Yes (.) painful very painful and no teeth to (.....)  
 \*Ric = [But do you mean the teeth is (.) healthy (.....) healthy all the time?  
 \*Vic = [And no teeth is healthy all the time and no teeth to eat . things . only strong only eat  
 things  
 \*Step 'Strong' is not meaning 'don't fall down'  
 \*Ric = Then what is (.) what does it mean?  
 \*Vic = Strong that means (.) that means  
 \*Step = Only can fight people  
 \*Vic That that extra strong hand  
 Ooh oh  
 Um  
 \*Vic Um super hair that does not fall down (.....) (giggling)  
 \*Step Like a glue. (touching J's head)  
 Um this (.....)  
 I agree (.....)  
 \*Ric 'cause the other things [is not good  
 \*Step [no need to swept the hair on the floor  
 Wow  
 \*Ric May be in the sink  
 \*Vic Um a pretty handsome face that attract the opposite (.) sex  
 Ha?  
 \*Step The opposite sex attract (.) No need no need  
 \*Vic But would you like to (.) (giggling) have high power muscle muscle  
 No  
 =High power muscle  
 = [There would you like to fight with tiger (.) something that  
 \*Vic = [But would you (.) would you like to buy powerful cars that can hear what other  
 people think?  
 \*Step = No no the last one  
 Yes  
 \*Jaz So the pretty handsome face  
 \*Step Attract the opposite sex  
 \*Jaz Yeah  
 \*Ric And then (.) The high power muscle  
 ? Yeah  
 \*Ric The last one  
 \*Vic = With . with a pretty (.) with a pretty face would you like to have a high power muscle  
 \*Step = Yes muscles (.) Oh not every people have handsome face or pretty face  
 \*Vic = Powerful cars that can hear what other people think  
 \*Jaz Um (.) but nose are too ugly  
 \*Vic Yeah I agree like this. Why so quick?  
 Um  
 \*Step Finish  
 \*Vic Finish  
 Yeah.

The end

No. 16 \*Phase 1 Indirect (L)

Pre-discussion planning in Cantonese (6 min)

\*Dal First I feel that I need to know the meaning of the words.  
 \*Kwa No the words are quite simple and we could just check them from the dictionary.  
 Or we could also guess unfamiliar words from their contexts.  
 \*Dal OK we also need to know the function of every body part.  
 \*Kwa What's the meaning of the word after "high power" .. er What's it?  
 \*Gar Let's check the dictionary.  
 \*Yeu Right, I'll do it.  
 \*Dal Aren't we supposed to rank the items first?  
 \*Kwa Put pretty and handsome face first, I believe.  
 \*Dal Powerful legs first, then strong hands em ..  
 \*Gar What about other things like bones?  
 \*Kwa Not much use.  
 \*Dal Yeah what's the point of living so long if you don't have a wonderful life?  
 \*Kwa wow that's deep meaning.  
 \*Dal What does this mean? "Heart that lasts 100 years"?  
 \*Kwa That means a heart that lasts very long.  
 \*Dal Right. But does it mean a heart that won't age or a heart that hasn't got any problems?  
 \*Kwa A heart that has no problem and then won't age.  
 \*Dal What about this word? Does it mean 'the stomach'?  
 (Y is checking the dictionary)  
 \*Yeu (Y is busy checking the dictionary).  
 \*Dal Oh I know, it means the digestive system.  
 \*Kwa Yes, that's right.  
 \*Dal OK let's check if there are any words we don't know and haven't checked the meaning.  
 This is lung. This is hands, this is  
 \*OH what about this? Oh yeah lungs. At that time, air might be very polluted.  
 \*Yeu Oh we breathe in carbon dioxide and breathe out oxygen.  
 \*Dal What about this?  
 \*Kwa It means skin em that's super-skin and we won't need to change.  
 \*Gar What about this?  
 \*Yeu That's superhair. It won't fall out even when you are burnt.  
 \*Kwa Well I think it means that our hair won't fall out. So we won't be ugly.  
 \*Dal But we just need to buy wigs. No need to have such kind of hair.  
 \*Kwa But wigs don't look real.  
 \*Dal What about this? What's this?  
 \*Kwa Hand.  
 \*Dal What about this?  
 \*Gar Stomach.  
 \*Dal What can the stomach do?  
 \*Gar You can digest whatever you've eaten. It's powerful.  
 \*Yeu It means the stomach can digest whatever you've eaten.  
 \*Dal What about this word?

\*Gar (checking the dictionary immediately)  
 \*Yeu (checking the dictionary)  
 \*Kwa It's the digestive system.  
 \*Dal No, it's said here that it turns something into the nutrients.  
 \*Kwa Let's look at the diagram at the back of the dictionary.  
 \*Yeu It's liver.  
 \*Dal OK then, it's different from stomach. We can change food into into what?  
 \*Yeu Let me check. Oh it's energy. Change to energy.  
 \*Kwa We can then remember better.  
 \*Dal Then this is good.  
 \*Yeu No it means nutrients. Something which is nutritious. That means the liver  
 changes whatever we eat into something nutritious.  
 \*Kwa No we don't need it. Food has nutrients already.  
 \*Dal No there are something we can't absorb.  
 \*Kwa Oh we need to excrete it out of the body.  
 \*Dal What else do we need to prepare for the upcoming discussion?  
 \*Kwa The word means super smart brain.  
 \*Dal Apart from checking the meaning, what else should we do to prepare for the upcoming  
 discussion?  
 \*Kwa High power what? (doesn't seem to hear what D's asked)  
 \*Gar (busy checking the dictionary)  
 \*Yeu It's difficult to predict what will happen in the year 3000.  
 \*Dal Let's look at the bottom of page one. There are several questions here. Let's read them.  
 \*Yeu OK 'Why do you want the new parts?' (reading directly from the notes)  
 \*Dal 'How can they change your life' (reading directly from the notes)

(The discussion didn't finish but time was up.)

English discussion (11 min)

\*Dal The mind (the mind mind) super mind (Chinese)(where) I think this is most important  
 (.) (why) because (.) he (.) I also can't spell any words. Have this I can (.) do many (.) I  
 can um.  
 \*Kwa Make u remember more thing  
 \*Dal =yes then  
 \*Yeu =Then you can do more man  
 \*Dal Yes, have this you can (.) (using gestures to signal for help)  
 \*Kwa =er .. divide <GIVEHELP>  
 \*Dal Divide yes divide many things out (ar) something like that  
 \*Kwa er me too  
 \*Yeu haha why  
 \*Kwa because because clever boy in the (.) in te world (murmuring in Cantonese to a  
 neighbour) world er in the world yes the world (.) if you clever many people will (..) er  
 er (.) will will like you to do the things  
 =yes yes yes  
 \*Yeu many beau ti ful girl haha  
 \*Kwa =yes  
 \*Dal and  
 \*Kwa And number two  
 \*Dal What do u think (.) what did u think

\*Gar I think (the bone) the bone  
 \*Kwa bone what is the bone  
 \*Garbone  
 \*Dal What help?  
 \*Garer (how can we use it)  
 \*Kwa =the bone  
 u  
 \*Garer difficult to die  
 \*Dal difficult to die  
 \*Kwa but dog dog can eat u  
 \*Dal but have the heart we can (the heart) yes we have the heart  
 haha (Chinese) I am sorry  
 \*Kwa U can (super strong heart) (yes) (yeah)  
 \*Dal Yes a spoke super strong heart (super heart)  
 but (my ques) what is the bone use (bone use) I think not very useful  
 \*Kwa We never afraid  
 \*Yeu =Many people want to cut your bone  
 \*Dal Kill u and hit u  
 \*Kwa No er we don't people kill u er from the (.) u go u fall down from the (.) floor  
 (Chinese we)(building)  
 \*Dal Building ok  
 \*Kwa Then u don't die  
 \*Gar Alone u can spell the danger (after checking the dictionary) (.) Spell the danger  
 Danger  
 Danger  
 Yes the nose  
 \*Dal The nose (.) we can we can smell the (but) danger we can  
 \*Kwa It start I think no not people (yeah) what can u this guy remain  
 \*Yeu If the American have danger  
 \*Dal (Chinese) but u er can smell (.) the danger u can go first (.) go out first?  
 Go first oh.  
 \*Dal Yes (u smell) then u don't need the bone now  
 \*Kwa =Then u go away go away  
 \*Dal Then u can go away don't need the bone (oh) I think the (legs) legs is not important  
 \*Kwa no  
 \*Yeu No  
 No  
 \*Dal Ya I think the bone  
 \*Yeu I think the x x-ray eyes is important too  
 \*Kwa Objection objections  
 \*Dal Objections (giggling)  
 \*Kwa Did u think extra strong?  
 \*Yeu Why objections  
 \*Kwa The yes no I I objection er the bone because (yes) the strong bones is strong (.)  
 tea (signalling for help) (D/tea <GIVEHELP> yes) because u u can u no u don't' cat  
 anything but u also all can't life  
 Yes  
 But  
 \*Kwa no hill Chinese (Chinese) u can eat what (.) water (.) drink drink the water ( but  
 but)

\*Dal But u can haven't super tea but u have (.) tea also u can eat things also  
 \*Kwa No u about er eighteen (.) ar eighteen years (oh the food is very) 18 years old u  
 know no tea (oh ya) like my grandmother only (oh) drink the the the  
 \*Dal =water OK OK <GIVEHELP>  
 \*Kwa no soup soup ok  
 No  
 Oh  
 So  
 We think  
 \*Kwa She die  
 \*Dal Then this one is the  
 \*Yeu Objection  
 \*Dal I think the nose is most important  
 \*Kwa No  
 \*Yeu First is the no I think the eyes  
 \*Dal =Why tell me why is the x ray eyes  
 No  
 \*Kwa er Because if u exam or test u can see er under the chair ( other people chair) the  
 other people answers then u get 100 marks  
 \*Dal =er if the eyes not say u can see very far (yeah far away) if u the eyes just can see  
 something like (using gestures) that u can't (no) see the thing  
 \*Kwa Er If I can ar He or she use hand to to cover the answer but I can see I can see I  
 see over this (.) But u have revision u have remember all the thing u can don't need to use  
 this in the exam (.) =I think  
 OK  
 \* smart  
 \*Kwa Do u remember this have but the people (Chinese) but you you remember things  
 the things is not all the all the same as the (exam) exam  
 \*Dal All the things is the exam  
 \*Kwa U can see the people  
 Ok  
 \*Kwa U can see the people but why if the if the other people won't clever  
 oh  
 \*Yeu Other people if (.) not clever than u  
 \*Kwa Oh Then my god I only can say my god  
 \*Dal =Other things others (.) to use it  
 \*Kwa Agree  
 \*Gar Ok  
 \* Yeah strong  
 U have say something  
 \*Kwa =Eat cat  
 No.6  
 \*Kwa cat animal  
 yes  
 \*Gar Handsome face  
 Handsome face  
 Yes then no 6  
 Yes  
 No  
 No

\*Kwa No I have  
 Choose  
 No  
 Ok no.6  
 \*Yeu =If u die u have handsome face  
 \*Dal =is no u?  
 \*Kwa =No Er U can u can? Other people u can u can  
 \* =No the handsome face is  
 \*Dal Did he will be old 18 years old did the handsome face also handsome?  
 \*Kwa Also handsome But I am the most handsome most  
 \*Yeu If u no money u have handsome face  
 \*Kwa No handsome face I can do duck  
 Do duck  
 \*Kwa U know  
 \*Gar And then  
 Um  
 \*Dal Or. What did we need to (.) in the seven?  
 \*Kwa Eye  
 Eye  
 Our Eye  
 Yeah  
 Yeah  
 Oh Sorry I  
 \*Dal Can hear other people what did they think  
 \*Kwa Because it also  
 \*Yeu I like it  
 \*Kwa Like the like it  
 \*Yeu I like see it other people what he think  
 \*Kwa Like it Like ar  
 Chinese  
 \*Dal U like to see other people  
 \*Kwa No  
 \*Dal What he think  
 this  
 \*Dal Extra um  
 \*Kwa Extra er Super ( ar if) nose because u ar u if people know what ar think to to  
 danger (danger) Something danger ( danger)  
 \*Dal Want to kill u and ( yes) hit u u also can <GIVEHELP> (.) But u can ear  
 \*Yeu Hear people thinking if the people think to  
 \*Kwa Is super nose like a dog but u hear no people er ( yes) know u can hear er will  
 danger u  
 \*Dal =But many many thing u can hear  
 yes  
 \*Dal =Oh something like that something like that  
 \*Kwa Yes big (chinese)  
 \* U will be  
 \*Yeu Your nose is also ( busy very busy busy ) the america is danger they are in the  
 indian is danger Yes all is danger  
 \*Gar Ok u must meet the power powerful  
 \*Dal U need to say why

\*Gar Because u (trying to read the notes)  
 U very  
 Once  
 \*Gar U know the danger u can (slowly) run very fast to er to far away the danger  
 Oh  
 \*Kwa Oh run away like a dog  
 \*Dal Yes is talking too because  
 He think the he run away  
 Um  
 \*Gar And no 9  
 \*Dal I think (.) what did we  
 \*Kwa No super skin  
 yes  
 =No not this  
 No  
 Why  
 \*Dal Why  
 \*Kwa Because if if or  
 \* I think why  
 \*Kwa No Because If if ar the fire fire heat u (um) don't afraid it because u can u can er  
 er use your hand to make it down  
 oh  
 \*Dal =But u know (.) the danger u can (.)  
 \*Kwa =go er but I am I am the  
 \*Dal =u can make the fire first  
 \*Kwa I am like superman  
 \*Yeu If the fire burnt your eye (every one I want to help) what about  
 \*Gar If your eye know the danger (yes) and u can help too  
 \*Kwa I I can help  
 \*Dal =u can help very fast too  
 \*Gar U can faster than the fire  
 \*Kwa No I don't go away I help other people  
 \*Dal U help very fast and u can go and help very very fast  
 \*Kwa But if I want many people u u can help who  
 \*Yeu =Then I think we need  
 \*Dal I think we need  
 \*Yeu =have a super hand  
 \*Yeu =No  
 \*Kwa =No if fire hand  
 \*Dal =u can Help many many people at one time  
 hand hand at one time only one and one er  
 no er u can  
 \*Kwa =the other one will die one and one and one  
 no one and one and one  
 \*Kwa =ten finger u want (I think) ten finger  
 \*Yeu =I think I think it is extra super lung  
 \*Kwa Lung  
 What  
 Lung  
 What is lung?

Time is this  
 Yes  
 \*You Because in 3000 years (yes) I think there are no oxygen  
 \*Kwa =no oxygen yes yes may be  
 \*You if u if we haven't (lung) then oxygen (but) we will die  
 \*DalBecause there are very dirty  
 Yes  
 \*DalIs very dirty then I think it is most important  
 \*Kwa Oh  
 Then  
 \*Kwa I agree wor  
 Chinese  
 \*Kwa Ok next  
 Next time is  
 \*GarSkin  
 \*Kwa Skin  
 \*You Skin  
 \*GarNot change  
 \*Kwa No objection  
 Ok  
 \*Kwa Then  
 \*DalSuper hand (yes) because u can help other people with your stronger hand  
 ya  
 \*Kwa Yes stronger stronger bone  
 \*DalBone I don't agree because (.) not very useful (.) not very (.) useful (.) I think  
 \*Kwa Oh oh then super (hair)hair  
 \*Dalum  
 \*Kwa Because some some old some old people use money to to hope they want to get a  
 um (hair) a good better hair if u have er super hair u u don't need to think this (.) no need to  
 pay more money  
 \*DalBut it is very expensive u know  
 \*Kwa I know but it one time u can u ne u for u never want to two times (.) one time is  
 ok  
 Ya ya (next)  
 \*DalNo bones  
 \*You I think u need to say  
 \*Kwa Is last (.) bones is last  
 No  
 No use  
 Why  
 Oh  
 Why  
 \*Kwa Because bone has before this this  
 No  
 \*You If u old (.) u will (....)  
 \*DalUm. Not need I think if u have (.) er which one is to have change the food to the  
 \*Kwa Change the food to the (I know) yes something like power  
 \*You Energy  
 \*DalYes because u have this u can er  
 \*Kwa Help other people

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\*DalNo u have this u don't will be have many many (yes) u don't will feel sick so easily  
 then u don't need to (K/die die <GIVEHLEP>) don't need to cc (pay money to see doctor)  
 yes something like that (save the money)  
 \*Kwa Um The  
 \*Daler what this let me see  
 Chinese  
 \*You I think it is a powerful storage  
 \*Kwa Anything u eat  
 What is stomach?  
 \*Kwa Every thing u eat because I like it like the like the (....)  
 Chinese  
 Oh.  
 \*DalSomething (very interesting) some cr  
 Like apple  
 Like Apple  
 Yes like some don't need to say this

The end

## No. 17 \*Phase 2 Indirect (L)

\*DalWe should be talking about preparation before the real discussion  
 \*You Yes, pre planning before the discussion.  
 \*DalOK let's do problem identification. What we've to do is that after three thousand years,  
 there'll be many body parts we could buy. And we have limited amount of money.  
 \*You Yeah, we should decide how much money we have.  
 \*DalNo we've very limited money. So we have to prioritize the body parts. So you see, this  
 is the purpose of our upcoming discussion.  
 \*Kwa (laughing)  
 \*DalRight. Let's start.  
 \*Gar(start moving the paper strips) We know the meanings of all the words. Right?  
 \*DalYeah, this is nose (pointing at the notes)  
 \*GarThis is eye, nose (pointing at D's paper)  
 \*You Anything we need to explain?  
 \*GarNo need, we did that last time. We explained everything already.  
 \*DalYeah, right.  
 \*You No, last time we didn't explain words or phrases on the second page (pointing at  
 the notes)  
 \*GarWe know them more or less.  
 \*DalBeautiful forever. Happy. Funny. um ... What about planning the language we will  
 need?  
 \*GarUm let's decide which item to choose first (putting a paper strip forward)  
 \*Kwa Let's think what to choose on our own first. My opinion for the moment is x ray  
 eyes. It's most important.  
 \*DalOk x ray eyes. ... (inaudible) Any words we don't understand?  
 \*GarI don't know this. (pointing at Dale's paper)  
 \*Kwa Ok then check the dictionary. But any other words? (without really checking the  
 dictionary). The second page, let's read it.

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\*You Let's explain each phrase one by one.  
 \*DalFunny means interesting (laughing)No lets' see which one we don't know.  
 \*GarOK this one this one. (pointing at Dale's paper again)  
 \*DalAlright. What does this word mean? Many people will be ... What?  
 \*You Of course. Let me check the dictionary (opening it)  
 \*GarOK the three of us should continue to discuss.  
 \*DalOk let's continue. Anything else?  
 \*GarWhen we suggest a body item during the discussion, we should remember to give a  
 reason too. OK? (Looking at Kwan and sounding like a reminder)  
 \*Kwa OK  
 \*DalBe sensible. Don't just argue for the sake of arguing. OK? (Looking at Kwan)  
 \*You At last, I've found the meaning of 'jealous'  
 \*Kwa So what is it?  
 \*You I won't tell you.  
 \*GarOh say it please.  
 \*You It means 'jealous' (in chinese)  
 \*Kwa Ok.  
 \*DalSo many people will be what?  
 \*Kwa 'smart' here is good.  
 \*GarNo 'smart' is 'handsome'  
 \*Kwa Ok then.  
 \*GarLet's not waste any more time on nonsense. Let's continue.  
 \*DalLet's do some mind mapping to brainstorm ideas. Any ideas?  
 \*GarYou say first.  
 \*DalI'm still doing mind mapping. Don't interrupt.  
 \*You Not just use your mind, you should penny out your thoughts you know.  
 \*GarCome on, let's discuss.  
 \*You Yeah, if we talk about it in Cantonese first, then when it comes to the English part,  
 it'll be easier.  
 \*Kwa What about talking about how each body part can help us.  
 \*DalWhat's this? A super smart what? (pointing at a word)  
 \*GarThe same. Super smart.  
 \*Kwa A very smart brain that's smarter than your home computer.  
 \*DalWhy do you want the new parts? How can they help you? (reading from the notes)

(time is up) (the group heaped a sigh of relief)

\*English discussion in progress

\*DalOh what do we need to do? Put it in the first ok  
 Ok  
 Um  
 \*You Any suggestion?  
 \*Garwhat do u want to say  
 \*You Objection just say objection  
 \*DalEr I think um um  
 \*Kwa I think  
 \*DalLeg la leg la the leg ar the leg where the leg  
 \*GarWhy  
 \*Dal=Oh leg Powerful leg ar ( why ) because lei (powerful leg) er when u is become (.) late

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(\*Gar yes go to other place )when u er go to yes (ok) other place (yes agree agree ) u  
 can be fast to there  
 \*You Only faster than car  
 but  
 \*Garbut agree agree  
 er U can  
 No  
 \*GarWhy  
 \*You No  
 no  
 \*You Why why  
 \*DalU can er (why) help other people ( why ) and then (....) ( no why )er and then and  
 then we can er we can ( don't play don't play why u think deep )help other pupils because  
 we have powerful legs (\*Kwago away go way )u can why u help people u will go away u  
 (ok next)will running and help people to get something (.) or help people to get back  
 \*GarOk Next next next next  
 \*Kwa x ray eye is the second (\*Dal oh u want to cheating why why ) no I want to see  
 the answer when when u put  
 \*Dal=cheating cheating ok  
 \*Kwa U can (.) see (.) cert u can see the book (.) don't use hand la  
 \*DalBut u think (.) when u walking (.) every people is the book what do u feel (\*Kwa er  
 the thief the thief copy book u can see in the book shop la you don't need to buy la ) to  
 buy la (.) save many money la  
 \*Kwa yes  
 \*Gar=Next next  
 \*DalBut this is not (.) nevermind la  
 \*You Nevermind nevermind  
 \*Dal=Er I think a computer er  
 \*GarEx tra (putting a paper strip forward)  
 \*Kwa =Extra strong lung  
 \*DalNo (lung) lung lung why oh I know  
 \*GarBecause the air pollution is very bad <givehelp>  
 \*DalYes in this time  
 \*Kwa Yes u can  
 \*DalYes (.) everybody  
 \*Kwa =flesh  
 \*Dalya  
 \*You =more than 100  
 \*Gar=ok another  
 \*Kwa =fresh air u can  
 \*Dal=ya ya ya I agree  
 \*Kwa =strong hand strong hand u in  
 \*Dal=I think the lung is the first one ya (changing the order of paper strips) yes ok agree  
 \*Garagree ok ok  
 \*Dalum because is more agree ok agree  
 \*Kwa strong hand  
 \*Garstrong hand strong hand  
 \*Kwa =high power  
 \*Dalwhy does the strong hand (stopping Gary from putting the paper strips)  
 \*Kwa u ask reason I don't (....)

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\*GarKill people kill the people <using gestures>  
 \*Kwa no  
 \*Dalat the time I don't like people kill (.) kill (.) people  
 \*GarOk  
 \*Kwa =No kill myself (yes agree) save myself (.) save myself?  
 \*DalOk agree  
 \*GarYes ok  
 Agree  
 ok  
 \*GarSuper strong er (....) (putting paper on desk)  
 \*Kwa Ar hands  
 Hand  
 hand  
 \*DalNo I don't want that (\*Kwa yeah) but when you every people die only (.) u is living  
 (.) is not like (.) is the bad one  
 \*Yeu I think this ...  
 \*Garok  
 \*DalWhat what what is this  
 \*Kwa Super  
 \*GarVery clever  
 \*Dal=Oh very clever  
 \*GarVery clever u can find many money  
 Or  
 yes  
 Clever  
 \*DalClever?  
 Yes  
 No no  
 \*Yeu Clever than the computer  
 Yes mean  
 \*Yeu =Yes clever than the computer  
 \*GarYes ok u can find many money buy this and buy this ok  
 \*Yeu =Ya super skin  
 \*Kwa =Handsome (putting a paper strip forward) Handsome  
 \*Dal=yes u can have a beautiful wife  
 =Handsome  
 U can  
 Ok  
 \*Yeu No  
 \*Kwa Why no  
 \*GarWhy  
 \*Yeu U don't know?  
 \*Kwa Why  
 \*Yeu Handsome people and the (.) animal (no)  
 Yes ok  
 Yes  
 \*Yeu Handsome girl and the (.) animal (.) nevermind stupid people  
 \*Kwa Disagree ok  
 \*Gar=Super skin  
 \*DalSuper skin why superskin

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\*GarWhen u die (.) u can u can keep your face <using gestures>  
 \*Kwa No when u get get fire u can keep yourself  
 \*GarOk next  
 \*Yeu But u (.) er (.) thief a lot of (....) steal  
 \*Dal=but we have a super lung u know  
 \*Yeu =only buy one (.) if you a super lung  
 \*Dalwe buy this one first (first) shut up (.) what do er  
 \*Kwa =objection  
 \*DalI sup powerful eyes but we have ex tra  
 \*Kwa Extra teeth (putting a paper strip forward) no food to eat (.) u u must die  
 \*Dalbut this is eat any food u can  
 \*Kwa =yeah what do u want to eat  
 \*Dalcat your self  
 \*Kwa er no  
 ok agree agree  
 \*Kwa like \*ghost like \*ghost la  
 \*Yeu =no if u eat \*ghost (.) your teeth ( a corn I oil oil but) your teeth can eat the  
 \*ghost but your ( your )lung (lung lung )  
 \*Kwa u can lung lung  
 \*Dallung breathe to go in and breathe to go out  
 \*Kwa lung yes solve it (solve it)  
 \*Garsolve the problem  
 \*Yeu I think the ok (.) a super nose is (.) better (no) because (.) you can (.) smell (.) the  
 danger  
 \*Gar=(only smell ) danger  
 \*Kwa =Danger  
 \*DalOk Ok and the ear I like the car I like the car where is the car ( car car ) because er u  
 can (.) hear other people what they think and they want to kill ( u can)u can know  
 \*Kwa =u can kill him first kill him first  
 \*Dal=and they she like u u know she hate he hate u u know and u know other people think  
 that is <using gestures>  
 \*Kwa Ok  
 \*DalYes That's good  
 \*GarNext next Um strong er stronger what  
 \*Dal=high powerful what  
 \*Gar=stronger high power er muscles  
 \*Dalwhat's that?  
 \*Garmuscles (putting a paper strip forward)  
 \*Garmuscles (touching Gary's arm)  
 \*Kwa muscles like me muscles  
 \*Daloh u haven't got any u know  
 \*Garu can hit the bad people ok keep (.)  
 \*Dal=hit the bad people  
 \*Gar=keep safe  
 \*Yeu hey hit the good people too  
 yes other  
 \*Garand then this la  
 \*Kwa this la ok  
 \*Dalwhat's that  
 \*Garer u can (can)u can what? (reading from the notes)

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\*Yeu u can what u don't know  
 \*Daloh what is this?  
 \*Yeu oh I know but I don't know how to say  
 \*Dall see  
 \*Gara powerful stomach stomach  
 \*Yeu stomach oh  
 \*Garu can eat anything  
 \*Kwa ya  
 \*Dalbut I think this is gooder than the teeth lei  
 \*Yeu teeth  
 \*Kwa nose  
 teeth  
 nose  
 teeth  
 teeth  
 \*Yeu nevermind (Chinese) this is lei better than the teeth  
 um  
 \*Dalwhat is this strong bone (showing paper strips to friends)  
 \*Kwa bone  
 \*Dalbone um  
 \*Kwa is very poor er  
 \*Dalbut u have muscles <using gestures>  
 \*Garlast forever (ready to put forward paper strips for ranking)  
 \*Dalu know for forever yes when u die (yes) your bone still here (still here) <using  
 gestures>  
 \*Garvery good ok  
 ha stupid  
 \*Dalwhat's that  
 \*Kwa/Gar/ =powerful  
 \*Dalpowerful what?  
 \*Kwa =legs \*liver  
 \*Garcheck the dictionary  
 \*Yeu I find it  
 \*Kwa Anything u eat into nat \*natural less (pointing at the notes)  
 \*GarYes ok very useful Ok (um um) very useful (pushing the group to move forward)  
 \*DalOk let me see (reading Gary's paper) Or I know I know  
 \*Kwa U know  
 \*Yeu What ?  
 Ok next  
 \*Kwa The last the last is  
 \*Dalthe super hair Hair  
 \*Kwa No use No use  
 Ok  
 \*DalWhen u have super hair u can't cut hair u haven't have many style of your head u  
 know <using gestures>  
 \*Kwa Ok  
 \*Dalstyle U always is long hair  
 \*Kwa Yeah  
 \*GarFifteen  
 \*Kwa we agree

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\*Dalwhat did u not (.) What is the problem of there (.) haven't have anything we not agree  
 \*Kwa Agree all agree  
 \*DalAll Agree  
 \*Kwa Yes yes  
 Yes yes  
 \*DalAll agree  
 \*GarYes  
 um  
 \*DalAll agree  
 \*Kwa Finish  
 \*GarFinish  
 \*DalWe need to think back oh u have page 6  
 No  
 Ok  
 \*DalI think back what what were we do in  
 \*Kwa May I tink half um the  
 Um (.) What what what  
 X ray  
 X ray  
 \*Kwa powerful  
 \*DalLung  
 \*Kwa The change (Oh why) the leg and bone  
 \*Dalwhy  
 \*Kwa Because u u have stronger bone ( people hit u ) people hit u don't afraid u can  
 \*Dal=But u have stronger leg u can hit back he(yeah)  
 \*Yeu =no high muscles u can u can (.)  
 \*Kwa =Ok high power O k high power  
 \*Yeu =Hit  
 yes  
 \*Dal=But this is very helpful I think because is this time you do many thing you need to  
 fast and fast and fast u know  
 \*Kwa =U fast Only go away not  
 \*Dal=Not only go away u can go many place  
 \*Yeu =two legs U can (.) run to school  
 \*Kwa =Run to school  
 \*Dal=But u think when u is (.) very low b u can't find (.) a job you can go to the er (.)  
 \*GarOther place to find <givehelp>  
 \*Da =Yes (.) Other place to find the job if take the thing and running and running too there  
 as <making gestures>  
 \*Kwa Ok ok  
 \*GarNext  
 \*Kwa A loss and (....)  
 \*DalWhat do think back  
 \*GarNo No need to think back  
 \*Kwa Too perfect perfect  
 \*DalNo need? We need to to think back help we to do in the last time is gooder  
 Chinese  
 \*DalYa what did we need to think  
 \*Gar=muscles muscles muscles  
 \*Dal=muscles (muscles) here

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- nothing
- \*Dal Ok ok not the powerful legs ( joint hand ) is different muscles first (reshuffling paper strips)
- \*Gar why
- \*Dal because muscle is important ( why why ) because when u have powerful muscle u can running running (.) fast too but er (....) er but u have the (.) (last one ) leg is faster than the er u have the muscle u know but still fast the muscles ya
- \*Yeu I think pretty (.) handsome face is not (.) no use
- \*Dal No
- \*Yeu No use
- \*Dal But in in the world all u can people see your face u know <making gestures>
- \*Yeu If u If u (.) are clever (.) no need (.) no need the handsome face
- \*Kwa U are not clever no handsome face can't meet girl u know
- \*Yeu Now girl like the clever boy u know
- \*Kwa But the But the (but) see you first see your face first
- \*Dal Yes when u go to find job they will see 'oh too ugly'
- \*Kwa Fail
- \*Dal Sever leg nothing nothing I want to eat my lunch u know
- \*Gar U are in fire u are in fire
- Ya
- \*Dal Ok I think the handsome face is important (.) Ok nothing nothing
- Haha
- How many
- \*Kwa Wonderful
- \*Dal is wonderful
- \*Kwa yeah
- Wonderful
- \*Dal We think back (think er think er ) what did we need to think back er when we do the
- \*Gar This is more important (changing the order of the paper strips)
- \*Dal What?
- \*Gar This is more important
- \*Yeu Yes more important
- \*Dal Why ?
- \*Gar Because
- \*Dal But u (.)
- \*Gar U won't die (.) for 100 years
- \*Dal But every people die
- \*Gar Yes I will be very happy
- \*Yeu =Only 100 years only 100 years
- \*Dal 100 years u know
- \*Yeu people die
- u can u can
- not all
- are u sure
- \*Dal not all but when u old (.) the (.) friend will be (.) how to say it
- \*Gar your friend will die here <givehelp>
- \*Dal =u can have a new friend new friend u can have many many friends new friend when u old u know did u always talk to your grandfather or grandmother
- \*Gar yes
- \*Dal ha ok sorry

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- ok
- \*Kwa change powerful e e (ears <givehelp>) and the super nose
- \*Gar why?
- \*Kwa =because your ear e u u use super nose u look like a dog (\*Yeu look like a dog ) but u u use ear u hear u also can know other people thinking (.) so u don't need use super nose
- \*Dal =I agree because the ear can hear the danger too
- Yes
- \*Gar Yes ok next (nudging Yeung)
- \*Yeu Next what next what
- Is u
- Is talking
- Ok chinese

The end

No. 18

\*Phase 3 Indirect (L)

Preparation talk in Cantonese (5 min 30 sec)

- \*Dal Right, Let's find out the reason for the upcoming discussion. Um in year 3000 (reading the notes), we could buy some body parts we like.
- \*Kwa And the money won't be enough for us to buy all. So we'll here to decide on the most important items. (reading & interpreting the notes)
- \*Dal Yeah, so we need to prioritize.
- \*Kwa & Dal (looking, signalling, nudging Yeung who in turns nudges say).
- \*Dal Could you talk about the content first?
- \*Yeu OK, let we talk about the first item on the list. If you have a very strong set of teeth, you could bite whatever you like. (Nudging Gar to talk about the second item.)
- \*Gar Well the second item is about legs. You could be very fast and escape from danger.
- \*Kwa (taking turns to tell about items on the sheet). The third one is about hair that doesn't fall out.
- \*Dal Fourth is er is it about a very super smart brain?
- \*Kwa No, it's about strong hands. (givehelp)
- \*Dal Alright, fourth one is about strong hands on arms that can lift things up to 100 pounds.
- \*Yeu Fifth one is about super strong nose that could smell danger. (nudging Gar)
- \*Gar
- \*Kwa Next is x-rays eyes that help you see things very clearly in the dark.
- \*Yeu Then we've very powerful ears that could hear what other people think.
- \*Gar Then there is an attractive or handsome face that can attract the opposite sex.
- \*Kwa We still have an item, that is very power muscles that are as strong as the lions.
- \*Dal Right next. Let's talk about the grammar, things like that, that might be readed in the upcoming discussion. Let's turn to page two (giggling)
- \*Yeu Yeah, second page.
- \*Kwa Right, let's consider reasons for supporting or not supporting the items now.
- \*Dal Well, we've considered them already (laughing). \* Let's assume!
- \*Yeu What about relaxing a bit in the rest of the time? (smiling)
- \*Dal What about words we don't know?

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- \*Kwa Yeah, quite & few.
- \*Yeu Then, why don't you check the dictionary now?
- \*Kwa OK then, what words do you want we to check?
- \*Yeu What about here? It's said 'Important points'.
- \*Dal Oh, it's about requirements. What we're required to do. We've to give reasons.
- \*Yeu Two reasons, actually.
- \*Dal Yeah. And then there are 11 items to be ranked in 12 minutes.
- \*Kwa About one item per minute.
- \*Dal No, less than that. About 30 second per item.
- \*Kwa No, move on less.
- \*Yeu Come on, let's not waste time arguing about such trivial issues.
- \*Kwa Ok then any words you don't know?
- \*Dal None, what about you?
- \*Kwa None either.
- \*Dal Look here. (Patting at the notes). Some reasons have been suggested for us. Well it seems that we've considered everything we need to prepare for the discussion. That's it.

English discussion in progress (12 min)

- \*Dal What do u want to (...) what do u want
- \*Kwa =important of the important
- \*Dal =The most important of (...) did u want to buy I think (.) let me think um (...)
- \*Kwa \*Pretty face chinese
- \*Dal =Ha I have (expressing surprise)
- \*Kwa Handsome la
- \*Dal I have la
- \*Kwa U are
- \*Dal =I think (.) stronger er
- \*Kwa Face face (.) No ar I objection ar
- \*Yeu =I objection too ar must must the reason
- \*Dal I haven't haven't got say out the reason
- \*Yeu We (.) let (.) him say
- ok
- \*Kwa Ya
- \*Dal Um Because u can get many things and (...) because u have stronger legs u will u will be (.) feel anything (.) tired u can help other people to (...) do something like help your mother to buy things er yes something like that
- \*Kwa Two reason
- \*Yeu =Two reason
- \*Dal =Get many many thing (.) help other people
- Get many
- \*Yeu Objection
- \*Kwa =Objection
- \*Dal =Objection Objection have the reason too (.) Why?
- \*Kwa =Objection lor (.) u can help people ma (.), I I always help people
- \*Dal But (.) u haven't strong legs
- \*Yeu No need no need. But something
- \*Yeu No stronger legs (.) u can can help people too
- \*Dal But not very helpful
- \*Yeu U can help him to

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- \*Dal =Talk more things (givehelp ; signalling to Gar to talk) [Gar is ignoring Dal]
- \*Kwa U talk la
- chinese
- Um um ok
- Yes
- \*Kwa I agree I agree
- \*Kwa =Two reason
- \*Yeu Not agree
- \*Kwa Why
- \*Dal U haven't got the reason (challenging tone)
- \*Yeu U help him at a lot (.) U can do a lot of things (help) u can
- \*Dal =More Helpful
- \*Yeu Teach teach er him or her homework (.) cannot do
- \*Dal Other thing
- \*Yeu Other thing?
- \*Dal For example. Er Do u know what did I mean help I say is help some people (.) some old (.) woman or old (.) old man they get something very heavy u can held it (.) but some time u (.) not have stronger hand u (.) cannot held it (.) because u can not (.) do it too (.) then when u have stronger hand u can (.) held it
- Ya
- \*Kwa I agree la agree
- \*Dal What did u
- \*Gar Agree agree
- \*Kwa =I think the second is pretty and handsome face la because if u like leung kwok chun ugly boy la no body want to do friend with he la (um) and you can do the superstar la in the atv la (um) u can get many many money
- \*Yeu =tvb
- \*Kwa =tvb or tvb you can (.) u can get money
- \*Dal Atv is not good
- \*Gar Yes agree because u can get many money (...)
- \*Dal =Yes I agree too because u can (.) ya u can (...) yeah you can have a (...) beautiful wife (um) or u can have a more friends (right)
- Ya
- \*Dal What did u think (.) u disagree?
- \*Yeu Half agree half disagree
- \*Kwa =Why
- \*Dal =How can u half dis must agree or disagree
- \*Kwa =Must say it
- \*Yeu =And your wife will not only see your face
- \*Dal Oh ya. But u have
- \*Kwa Handsome face
- \*Yeu =Half agree half disagree
- \*Dal =But u have a
- \*Kwa =My my idea not not not the idea er (.)
- Chinese
- \*Dal =You have er (.) get to (...)
- \*Kwa =Get trouble too trouble (gesturing for help)
- \*Dal Yeah
- \*Dal Ya nothing what do u ar let me think (give help)
- \*Gar Um um no 3 I think is a super nose that can smell danger (.) because u know the

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danger and u can  
 \*Yeu run away  
 \*Garand keep your keep yourself (.)safe and u won't die easily  
 \*Dal But  
 \*Kwa Yes Agree  
 \*Dal But er when u can hear other people think (.)u can feel the danger too  
 \*Gar I like the nose (.)but not the ear  
 \*Dal But the ear can  
 \*Gar More Ugly then the ears (.)the the ears is more ugly ok  
 \*Dal But er(.) u can hear hear other people think (.)and u can hear danger but er u can hear (.)other thing too  
 \*Gar =But I don't want to hear people thing(.) because it is er  
 \*Dal =But nose just(.) can smell (.)danger  
 \*Gar No use  
 \*DalWhat?  
 \*Dal No use how can u no use?  
 \*Yeu =Dale dale I think the high (dropping the paper strip)  
 \*Kwa =What matter  
 \*Yeu High power muscle (.) er high power muscles and the (.)extra strong hand is equal(reading the paper strip)  
 Um  
 \*Kwa Yes  
 \*GarYes ok  
 \*Kwa Yes equal(.)  
 \*Kwa Equal  
 \*Gar Two is the one ok (reshuffling the paper strip)  
 \*Dal U can't u can't  
 \*Dal Then  
 \*Dal I can I can  
 \*Yeu =The muscle(.) your hand is only your hand(.) the muscle is the leg  
 Ya  
 \*Kwa U think bad u think bad?  
 \*Dal I think bad I think bad  
 \*Gar U want to think bad?  
 \*Dal What happen to you today?(asking Gar,expressing dissatisfaction to his response)  
 \*Kwa =Are u ok  
 \*Gar =Yes  
 \*Kwa =Go to see a doctor la  
 \*Dal I think muscles is more er more er (...)important yes I think so (.)but I (.)has haven't I forget it ya  
 \*Gar=two reason  
 \*Daland ear the nose and ear this (pointing at Yeu)  
 \*Yeu Ok  
 \*Dal Ear and nose  
 \*Kwa =I think the (...)  
 \*DalEar and nose  
 \*Kwa Number four is er er  
 \*Dal =Haven't got say no.3 is ear or no  
 \*Kwa Ear  
 \*Yeu I think ear is beautiful than nose (looking at Gar)

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What is mark?  
 mak  
 what's that  
 um  
 \*Dal umnevezmind(.) I don't think mak is very ugly  
 \*Gar =ok sixteen  
 \*Dal ok  
 \*Gar sixteen  
 \*Gar ok because u u have the handsome face  
 \*Dal we still only eleven  
 \*Kwa handsome face no hair  
 \*Kwa eleven  
 \*Gar eleven ok  
 \*Yeu =this no ten  
 \*Gar why  
 \*Dal why  
 \*Yeu your teeth is(.)  
 \*Gar u can kill  
 teeth  
 \*Dal but when this time u haven't got anything to eat u can eat something you (.)your teeth can eat(.) because u have a strong teeth and u eat it  
 \*Yeu I think like ann  
 \*Gar Oh  
 Oh  
 \*Dal U haven't got said  
 \*Kwa Yes is no. 6  
 \*Kwa No. 6  
 This can to  
 \*Kwa Yes u can eat anything  
 \*Gwa =Powerful legs  
 \*Dal =When other people hit u u haven't got anything on your hand u can (miming bite)  
 \*Kwa =Bite  
 \*Gar =Bite  
 \*Dal =Bite ya  
 \*Kwa The no 7 is  
 \*Dal =The tire  
 \*Kwa Yes 5  
 \*Dal very tired  
 \*Kwa =No when(.) u as fast as a car don't need to play a money to get a (.) to buy a bicycle  
 \*Yeu U have a lot of money  
 \*Kwa Super is powerful (.)no no tire(.)  
 \*Yeu Go to olympic  
 \*Kwa Yes olympic (.)the the er (.)first one (.)call fast one(.)  
 \*Yeu The fast one  
 \*Dal But I think this time he go with it to play? (unclear)  
 No  
 \*Dal Because u have some change (.)like the er pupil who take the (...)take the (...)  
 \*Gar Yes is ok ok ok

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\*Kwa Yes  
 Yep  
 \*Kwa ear  
 \*Dal Ear ear ear.Because the nose is in the middle of your face  
 \*Yeu Yes yes  
 \*Kwa I think the 4 is x ride  
 \*Yeu ( x ray )  
 \*Kwa X Ray  
 Ray  
 \*Dal X Ray  
 \*Kwa X ray eye that can see in the er (...)dark because when u when u go um  
 But it  
 \*Kwa When u like a cat(.) u can(.) u can(.) u don't need to fighten the some (.)some something in the road u can't see it (...)(um) and the second reason is(...)  
 \*Yeu Something (.)somebody afraid ghost u but has the what eye u can't see ghost too(.)  
 \*Kwa Ghost go die ghost.Ghost is not (.)is not easy to see it  
 \*Yeu Haven't got (.)Haven't got (.)  
 \*Kwa =A thing not a thing.Is some pollution u know  
 \*Dal Prove it the world have ghost u know may be no  
 \*Kwa Let me see let me say.The the second reason is um (...)if u um (...)if u get er  
 \*Gar If u get get what  
 \*Kwa U can see people in the (.)in the dark road he want to to  
 \*Gar(kill) cage u (.) kill u (.)u can go away chinese  
 \*Gar I agree  
 \*Dal Yes I agree  
 \*Yeu The super nose can  
 \*Dal =But U can smell other things too  
 \*Gar =Only smell  
 \*Dal =Only danger but other thing u cannot (.)ya I think x ray eyes  
 \*Gar No 4 because u can smell the danger and u can keep yourself be safe and do other thing and other things yes ok no 5 no 6 (smooth but murmuring,totally unenthusiastic) chinese  
 \*Dal Ya may be may be  
 \*Yeu May be lor  
 \*Dal =Ya and I think this one is the  
 \*Kwa =Do not this one the Super hair  
 \*Dal Hair  
 \*Gwa =No need  
 \*Yeu =No need  
 No need  
 \*Kwa But if u old u u no hair very ugly (.)like like leung kwok chun kelvin  
 But sometime u can is u can  
 is Kelvin  
 Need not a short  
 \*Kwa No no Don't no hair is short hair  
 \*Dal =But sometime u haven't got any hair  
 \*Kwa If u old and no hair u u see like a (...)  
 Mark  
 Mak la

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\*Gar No 8  
 Ok  
 No 7  
 \*Gar Ok no 8 ok  
 \*Kwa No 8  
 \*Dal I think is  
 Um um  
 \*Kwa Only 4  
 \*Kwa Can We try  
 Only 3  
 Er bone  
 bone  
 \*Dal Broken broken ar  
 \*Dal Because is broken (.)the(.) bone is very (.)  
 \*Kwa =important (givehelp)  
 \*Dal ya Because a bone is weak is the last weak and very (.)dan because broken u may be not work (.)how often you have powerful muscle but u haven't got bone just (...something like jelly  
 \*Yeu but it last for  
 \*Dal um but(.) sometime(.)  
 \*Kwa =it is important (givehelp)  
 \*Dal yes other is most important more important (.)but this is important too ya  
 \*Yeu no bone will  
 \*Dal =is not important we don't will be bring buy  
 \*Kwa we don't argue  
 \*Dal Yeah,I think it is important because yeah jelly  
 only one thing  
 \*Dal because  
 \*Kwa when u  
 \*Dal when u old (.)your bone er  
 \*Yeu =will be weak (givehelp)  
 \*DalYeah, because

The end

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## Appendix /2 A coded sample of an English discussion (Performance Data)

Q.S.R. NUD.IST Power version, revision 4.0.  
Licensee: HKIED.

PROJECT: Eng Discuss 10 June, User Wendy, 11:17 am, Oct 3, 2001.

+++++  
+++ ON-LINE DOCUMENT: Indir(L)2

+++ Document Header:

\*Phase 2

\*Indirect (L)

Checked.

299

+++ Retrieval for this document: 299 units out of 299, = 100%

++ Text units 1-299:

1	Oh what do we need to do? Put it in the first ok	(5 19)	/Nontarget/facprog
2	Any suggestion?	(5 11)	/Nontarget/seekviews
3	what do u want to say	(5 11)	/Nontarget/seekviews
4	Objection just say objection	(4 19)	/Direct/selrep
5	Er I think um um	(4 18)	/Direct/stall
6	I think	(5 2)	/Nontarget/repeatothers
7	Leg la leg la the leg ar the leg where the leg	(4 18)	/Direct/stall
		(4 19)	/Direct/selrep
8	=Why	(5 1)	/Nontarget/seekmean
9	=Oh leg powerful leg ar because lei er when u is become (.) late	(4 18) /Direct/stall (4 19)	/Direct/selrep
10	yes go to other place	(3 11)	/Indirect/givehelp
11	when u er go to yes (ok) other place u can be fast to there	(4 18) /Direct/stall (5 2)	/Nontarget/repeatothers
12	Only faster than car	(5 12)	/Nontarget/respond
13	but agree agree	(4 19) /Direct/selrep (5 12)	/Nontarget/respond
14	No	(5 12)	/Nontarget/respond
15	Why	(5 1)	/Nontarget/seekmean
16	No	(5 12)	/Nontarget/respond
17	No	(5 12)	/Nontarget/respond
18	Why why	(4 19) /Direct/selrep (5 1)	/Nontarget/seekmean
19	U can er (why) help other people and then (...) er and then and then	(4 18) /Direct/stall (4 19)	/Direct/selrep
20	=why?	(5 1)	/Nontarget/seekmean
21	=we can er we can help other pupils because we have powerful legs	(4 18) /Direct/stall (5 7)	/Nontarget/clarifself
22	=u can	(1)	/x
23	=why	(5 1)	/Nontarget/seekmean
24	u help people u will will running and help people to get something(.)or help people to get back	(4 2) /Direct/para (4 19)	/Direct/selrep
		(5 7)	/Nontarget/clarifself
25	Ok Next next next next	(4 19) /Direct/selrep (5 19)	/Nontarget/facprog
26	x ray eye is the second	(1)	/x
27	=cheating cheating ok oh u want to cheating	(4 19)	/Direct/selrep
		(5 21)	/Nontarget/Metataalk
28	why why?	(4 19) /Direct/selrep (5 1)	/Nontarget/seekmean
29	no I want to see the answer when when u put	(4 19) /Direct/selrep (5 14)	/Nontarget/mesaban
30	U can (.) see (.) cert u can see the book (.) don't use hand la	(4 2) /Direct/para	
31	But u think (.) when u walking (.) every people in the bookwhat do u feel	(5 12)	/Nontarget/respond

32	er the thief the thief copy book u can see in the book shop la	(4 18)	/Direct/stall	
		(4 19)	/Direct/selrep	
33	you don't need to buy la to buy la (.)	(4 19)	/Direct/selrep	
34	save many money la	(5 6)	/Nontarget/elab	
35	yes	(5 12)	/Nontarget/respond	
36	=Next next	(4 19)	/Direct/selrep	(5 19)
37	But this is not (.) never mind la	(1)	/Nontarget/facprog	/x
38	Never mind never mind	(4 19)	/Direct/selrep	(5 2)
39	=Er I think a computer er	(4 18)	/Direct/stall	(5 14)
40	Ex tra (putting a paper strip forward)	(5 14)	/Nontarget/mesaban	
41	=Extra strong lung	(5 6)	/Nontarget/elab	
42	No (lung) lung lung why	(4 19)	/Direct/selrep	(5 1)
		(5 12)	/Nontarget/seekmean	
43	oh I know because the air pollution is very bad <givehelp>			
		(3 11)	/Indirect/givehelp	(5 7)
44	Yes in this time	(5 12)	/Nontarget/clarifself	
			/Nontarget/respond	
45	Yes u can	(5 12)	/Nontarget/respond	(5 14)
46	Yes (.) everybody	(5 14)	/Nontarget/mesaban	
47	=fresh*	(3 11)	/Indirect/givehelp	
48	ya	(5 12)	/Nontarget/respond	
49	=more than 100	(5 6)	/Nontarget/elab	
50	=ok another	(5 19)	/Nontarget/facprog	
51	=fresh air u can	(5 14)	/Nontarget/mesaban	
52	=ya ya ya I agree	(4 19)	/Direct/selrep	(5 12)
53	=strong hand strong hand u in	(4 19)	/Direct/selrep	
54	=I think the lung is the first one ya (changing the order of paper strips) yes ok agree	(5 19)	/Nontarget/facprog	
55	agree ok ok	(4 19)	/Direct/selrep	(5 2)
56	um because is more agree ok agree	(4 18)	/Direct/stall	(5 12)
57	strong hand	(1)	/Nontarget/repeatothers	/x
58	strong hand strong hand	(4 19)	/Direct/selrep	(5 2)
59	=high power	(1)	/Nontarget/repeatothers	/x
60	why does the strong hand (stopping Gary from putting the paper strips)	(5 1)	/Nontarget/seekmean	
61	u ask reason I don't (...)	(5 14)	/Nontarget/mesaban	
62	Kill people kill the people <using gestures>	(3 11)	/Indirect/givehelp	
		(4 19)	/Direct/selrep	(5 4)
63	no	(5 12)	/Nontarget/gesture	
64	at the time I don't like people kill (.) kill (.) people	(4 19)	/Nontarget/respond	
		(5 12)	/Direct/selrep	
65	Ok	(5 12)	/Nontarget/respond	
66	=No kill myself (yes agree) save myself (.) save myself?	(4 3)	/Direct/selfcor	(4 3)
		(4 19)	/Direct/selrep	(5 12)
67	Ok agree	(5 12)	/Nontarget/respond	
68	Yes ok	(5 12)	/Nontarget/respond	
69	Agree	(5 12)	/Nontarget/respond	
70	ok	(5 12)	/Nontarget/respond	
71	Super strong er (...) (putting paper on desk)	(4 18)	/Direct/stall	
		(5 14)	/Nontarget/mesaban	
72	Ar hands	(1)	/Nontarget/repeatothers	/x
73	Hand	(5 2)	/Nontarget/repeatothers	
74	hand	(5 2)	/Nontarget/repeatothers	
75	No I don't want that (yeah) but when you every people die only (.) u is living (.) is not like (.)			
	is the bad one	(4 3)	/Direct/selfcor	(5 12)
76	I think this ...	(5 4)	/Nontarget/gesture	
77	ok	(5 12)	/Nontarget/respond	
78	What what what is this	(3 12)	/Direct/selrep	(4 19)
		(5 3)	/Indirect/askhelp	
79	Super	(5 3)	/Nontarget/taskknow	
80	Very clever	(5 3)	/Nontarget/taskknow	
81	=Oh very clever	(5 2)	/Nontarget/repeatothers	
82	Very clever u can find many money	(5 6)	/Nontarget/elab	
83	Clever	(5 2)	/Nontarget/repeatothers	

84	Clever?		(4 5)		/Direct/seekconf
85	Yes		(5 12)		/Nontarget/respond
86	No no	(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
87	Clever than the computer			(5 6)	/Nontarget/respond
88	Yes mean	(5 12)	/Nontarget/respond		/Nontarget/elab
89	=Yes clever than the computer	(4 19)	/Direct/selrep	(5 14)	/Nontarget/mesaban
90	Yes ok u can find many money buy this and buy this ok			(4 19)	/Direct/selrep
91	=Ya super skin			(5 12)	/Nontarget/respond
92	=Handsome (putting a paper strip forward) Handsome			(1)	/x
				(4 19)	/Direct/selrep
93	=yes u can have a beautiful wife			(5 14)	/Nontarget/mesaban
94	=Handsome			(5 12)	/Nontarget/respond
95	No			(5 12)	/Nontarget/respond
96	Why no			(5 1)	/Nontarget/seekmean
97	Why			(5 1)	/Nontarget/seekmean
98	U don't know?			(4 5)	/Direct/seekconf
99	Why			(5 1)	/Nontarget/seekmean
100	Handsome people and the (.) animal (no)			(5 14)	/Nontarget/mesaban
101	Yes ok			(5 12)	/Nontarget/respond
102	Handsome girl and the (.) animal (.) never mind stupid people	(5 14)			/Nontarget/mesaban
103	Disagree ok			(5 12)	/Nontarget/respond
104	=Super skin			(1)	/x
105	Super skin why superskin	(5 1)	/Nontarget/seekmean	(5 2)	/Nontarget/repeatothers
106	When u die (.) u can u c an keep your face <using gestures>			(4 19)	/Direct/selrep
				(5 4)	/Nontarget/gesture
107	No when u get get fire u can keep yourself			(4 19)	/Direct/selrep
				(5 12)	/Nontarget/respond
108	Ok next			(5 19)	/Nontarget/facprog
109	But u (.) er (.) thief a lot of (...) steal			(4 18)	/Direct/stall
		(5 12)	/Nontarget/respond	(5 14)	/Nontarget/mesaban
110	=but we have a super lung u know			(4 18 1)	/Direct/stall/filler
				(5 12)	/Nontarget/respond
111	=only buy one (.) if you a super lung			(5 12)	/Nontarget/respond
				(5 14)	/Nontarget/mesaban
112	we buy this one first (first) shut up (.) what do er			(4 18)	/Direct/stall
				(5 14)	/Nontarget/mesaban
113	=objection			(5 12)	/Nontarget/respond
114	I sup powerful eyes but we have ex tra			(5 14)	/Nontarget/mesaban
115	Extra teeth (putting a paper strip forward) no food to eat (.) u u must die			(4 19)	/Direct/selrep
116	but this is eat any food u can?	(3 12)	/Indirect/askhelp	(5 3)	/Nontarget/taskknow
117	=yeah what do u want to eat			(5 7)	/Nontarget/clarifself
				(5 11)	/Nontarget/seekviews
118	eat your self			(5 7)	/Nontarget/clarifself
119	er no	(4 18)	/Direct/stall	(5 12)	/Nontarget/respond
120	ok agree agree			(5 12)	/Nontarget/respond
121	like *ghost like *ghost la	(4 6)	/Direct/resou	(4 19)	/Direct/selrep
122	=no if u eat *ghost (.) your teeth your teeth can eat the *ghost but your lung			(4 19)	/Direct/selrep
		(4 19)	/Direct/selrep	(5 14)	/Nontarget/mesaban
123	* lung lung	(4 19)	/Direct/selrep	(5 2)	/Nontarget/repeatothers
124	u can lung lung			(5 2)	/Nontarget/repeatothers
125	lung breathe to go in and breathe to go out			(5 6)	/Nontarget/elab
126	lung yes solve it (solve it)			(5 12)	/Nontarget/respond
127	solve the problem			(5 6)	/Nontarget/elab
128	I think the ok (.) a super nose is (.) better (no) because (.) you can (.) smell (.) the danger			(1)	/x
				(5 2)	/Nontarget/repeatothers
129	=(only smell ) danger			(5 2)	/Nontarget/repeatothers
130	=Danger			(4 19)	/Direct/selrep
131	Ok Ok and the ear I like the ear I like the ear			(5 12)	/Nontarget/respond
132	where is the ear (ear ear) because er u can (.) hear otherpeople what they think and they want to kill (u can)u u can know	(4 18)			/Direct/stall

133	=u can kill him first kill him first	(4 19)	/Direct/selrep
134	=and they she like u u know	(4 3)	/Direct/selfcor
135	she hate he hate u u know and u know other people think that is <using gestures>	(4 3) /Direct/selfcor (5 4)	/Nontarget/gesture
		(T 25)	//Text Searches/TextSearch216
136	Ok	(5 12)	/Nontarget/respond
137	Yes that's good	(5 12)	/Nontarget/respond
138	Next next Um strong er stronger what	(3 12)	/Indirect/askhelp
	(4 19) /Direct/selrep (5 3)	(5 19)	/Nontarget/taskknow
139	=high powerful what (3 12)	/Indirect/askhelp (5 3)	/Nontarget/facprog
140	=stronger high power er muscles	(3 11)	/Nontarget/taskknow
		(4 18)	/Indirect/givehelp
141	what's that? (3 12)	/Indirect/askhelp (5 3)	/Direct/stall
142	muscles (putting a paper strip forward)	(3 11)	/Nontarget/taskknow
143	muscles (touching Gary's arm)	(5 2)	/Indirect/givehelp
	(5 3) /Nontarget/taskknow (5 4)		/Nontarget/repeatothers
144	muscles like me muscles	(4 19)	/Nontarget/gesture
	(5 2) /Nontarget/repeatothers (5 3)		/Direct/selrep
145	oh u haven't got any u know	(4 18 1)	/Nontarget/taskknow
		(5 6)	/Direct/stall/filler
146	u can hit the bad people ok keep (.)	(5 14)	/Nontarget/elab
147	=hit the bad people	(5 2)	/Nontarget/mesaban
148	=keep safe	(5 6)	/Nontarget/repeatothers
149	hey hit the good people too	(5 6)	/Nontarget/elab
150	and then this la	(5 19)	/Nontarget/elab
151	this la ok	(5 2)	/Nontarget/facprog
152	what's that (3 12)	/Indirect/askhelp (5 3)	/Nontarget/repeatothers
153	er u can (can) u can what? (reading from the notes)	(4 18)	/Nontarget/taskknow
		(4 19)	/Direct/stall
154	u can what u don't know	(5 2)	/Direct/selrep
155	oh what is this? (3 12)	/Indirect/askhelp (5 3)	/Nontarget/taskknow
156	oh I know but I don't know how to say	(5 21)	/Nontarget/repeatothers
157	I see	(1)	/Nontarget/Metatalk
158	a powerful stomach stomach	(4 19)	/x
159	stomach oh		/Direct/selrep
160	u can eat anything	(5 6)	/Nontarget/elab
161	ya	(5 12)	/Nontarget/respond
162	but I think this is gooder than the teeth lei	(5 12)	/Nontarget/respond
163	teeth	(5 2)	/Nontarget/repeatothers
164	nose	(1)	/x
165	teeth	(1)	/x
166	nose	(1)	/x
167	never mind (Chinese) this is lei better than the teeth	(1)	/x
168	what is this strong bone (showing paper strips to friends)	(3 12)	/Indirect/askhelp
169	bone	(5 2)	/Nontarget/repeatothers
170	bone um (4 18)	/Direct/stall (5 2)	/Nontarget/repeatothers
171	is very poor er (4 18)	/Direct/stall (5 12)	/Nontarget/respond
172	but u have muscles <using gestures>	(5 4)	/Nontarget/gesture
		(5 12)	/Nontarget/respond
173	last forever (ready to put forward paper strips for ranking)	(4 6)	/Direct/resou
174	u know for forever yes when u die (yes) your bone still here (still here) <using gestures>	(4 18 1) /Direct/stall/filler (5 4)	/Nontarget/gesture
175	very good ok	(5 12)	/Nontarget/respond
176	what's that (3 12)	/Indirect/askhelp (5 3)	/Nontarget/taskknow
177	=powerful (5 3)	/Nontarget/taskknow (5 14)	/Nontarget/mesaban
178	powerful what?	(4 1)	/Direct/seekclarif
179	=legs *liver (5 3)	/Nontarget/taskknow (5 7)	/Nontarget/clarifself
180	check the dictionary	(5 3)	/Nontarget/taskknow
181	I find it	(5 3)	/Nontarget/taskknow
182	Anything u eat into nutrients* (pointing at the notes)	(4 6)	/Direct/resou
		(5 4)	/Nontarget/gesture
183	Yes ok very useful ok (um um) very useful (pushing the group to move forward)		

		(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
				(5 19)	/Nontarget/facprog
184	Ok let me see (reading Gary's paper) Or I know I know	(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
185	U know			(5 2)	/Nontarget/repeatothers
186	What?			(5 1)	/Nontarget/seekmean
187	Ok next			(5 19)	/Nontarget/facprog
188	The last the last is	(4 19)	/Direct/selrep	(5 19)	/Nontarget/facprog
189	the super hair hair			(4 19)	/Direct/selrep
190	No use No use	(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
191	Ok			(5 12)	/Nontarget/respond
192	When u have super hair u can 't cut hair u haven't have many style of your head u know <using gestures>	(4 18 1)	/Direct/stall/filler	(5 4)	/Nontarget/gesture
193	Ok style	(5 2)	/Nontarget/repeatothers	(5 12)	/Nontarget/respond
194	U always is long hair			(1)	/x
195	Yeah			(5 12)	/Nontarget/respond
196	Fifteen			(5 19)	/Nontarget/facprog
197	we agree			(5 12)	/Nontarget/respond
198	what did u not (.) What is the problem of there (.) haven't have anything we not agree			(4 3 1)	/Direct/selfcor/falsestart
199	Agree all agree			(5 12)	/Nontarget/respond
200	All Agree?			(5 15)	/Nontarget/seekagree
201	Yes yes	(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
202	Yes yes	(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
203	All agree			(5 12)	/Nontarget/respond
204	Yes			(5 12)	/Nontarget/respond
205	um			(4 18)	/Direct/stall
206	All agree			(5 2)	/Nontarget/repeatothers
207	Finish			(5 19)	/Nontarget/facprog
208	Finish			(5 2)	/Nontarget/repeatothers
209	We need to think back oh u have page 6			(3 5)	/Indirect/eval
210	Ok	(3 5)	/Indirect/eval	(5 12)	/Nontarget/respond
211	I think back what what were we do in			(3 5)	/Indirect/eval
				(5 14)	/Nontarget/mesaban
212	May I think half um the	(3 5)	/Indirect/eval	(5 14)	/Nontarget/mesaban
213	Um (.) What what what	(3 5)	/Indirect/eval	(4 18)	/Direct/stall
		(4 19)	/Direct/selrep	(5 14)	/Nontarget/mesaban
214	X ray	(1)	/x	(3 5)	/Indirect/eval
215	X ray	(3 5)	/Indirect/eval	(5 2)	/Nontarget/repeatothers
216	powerful	(3 5)	/Indirect/eval	(5 14)	/Nontarget/mesaban
217	Lung	(1)	/x	(3 5)	/Indirect/eval
218	The change (Oh why) the leg and bone			(1)	/x
				(3 5)	/Indirect/eval
219	why	(3 5)	/Indirect/eval	(5 1)	/Nontarget/seekmean
220	Because u u have stronger bone ( people hit u ) people hit u don't afraid u can	(3 5)	/Indirect/eval	(4 19)	/Direct/selrep
				(5 7)	/Nontarget/clarifself
221	=But u have stronger leg u can hit back he(yeah)			(3 5)	/Indirect/eval
				(5 12)	/Nontarget/respond
222	=no high muscles u can u can (.)			(3 5)	/Indirect/eval
		(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
223	=Ok high power ok high power			(3 5)	/Indirect/eval
		(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
224	=Hit			(3 5)	/Indirect/eval
225	yes	(3 5)	/Indirect/eval	(5 12)	/Nontarget/respond
226	=But this is very helpful I think because is this time you do many thing you need to fast and fast and fast u know	(3 5)	/Indirect/eval	(4 18 1)	/Direct/stall/filler
		(4 19)	/Direct/selrep	(5 12)	/Nontarget/respond
227	=U fast only go away not	(3 5)	/Indirect/eval	(5 12)	/Nontarget/respond
228	=Not only go away u can go many place			(3 5)	/Indirect/eval
		(5 6)	/Nontarget/elab	(5 12)	/Nontarget/respond
229	=two legs u can (.) run to school			(3 5)	/Indirect/eval
				(5 6)	/Nontarget/elab
230	=Run to school	(3 5)	/Indirect/eval	(5 2)	/Nontarget/repeatothers
231	=But u think when u is (.) very low b u can't find (.) a job you can go to the er (.)				

	(3 5) /Indirect/eval	(4 19) /Direct/selrep	(5 14)	/Nontarget/mesaban
232	Other place to find <givehelp>	(3 5) /Indirect/eval	(3 11)	/Indirect/givehelp
233	=Yes (.) Other place to find the job if take the thing and running and running too there as <making gestures>	(3 5)		/Indirect/eval
	(4 19) /Direct/selrep	(5 2) /Nontarget/repeatothers	(5 4)	/Nontarget/gesture
234	Ok ok	(3 5) /Indirect/eval	(5 12)	/Nontarget/respond
235	Next	(3 5) /Indirect/eval	(5 19)	/Nontarget/facprog
236	A loss and (...)	(3 5) /Indirect/eval	(5 14)	/Nontarget/mesaban
237	What do we think back	(3 5) /Indirect/eval	(3 12)	/Indirect/askhelp
238	No no need to think back	(4 19) /Direct/selrep	(5 12)	/Nontarget/respond
239	Too perfect perfect	(4 19) /Direct/selrep	(5 6)	/Nontarget/elab
240	No need? We need to to think back help we to do in the last time is gooder	(3 5) /Indirect/eval	(4 5)	/Direct/seekconf
241	Chinese	(3 5)		/Indirect/eval
242	Ya what did we need to think	(3 5)		/Indirect/eval
243	=muscles muscles muscles	(3 5) /Indirect/eval	(4 19)	/Direct/selrep
244	=muscles (muscles) here	(3 5) /Indirect/eval	(5 2)	/Nontarget/repeatothers
245	nothing	(3 5)		/Indirect/eval
246	Ok ok not the powerful legs ( joint hand ) is different (.) muscles first (reshuffling paper strips)	(3 5) /Indirect/eval	(4 19)	/Direct/selrep
247	why	(3 5) /Indirect/eval	(5 1)	/Nontarget/seekmean
248	because muscle is important ( why why) because when u have powerful muscle u can running running (.) fast too but er (...)	(3 5)		/Indirect/eval
	(4 18) /Direct/stall	(4 19) /Direct/selrep	(5 7)	/Nontarget/clarifself
249	er but u have the (.) (last one ) leg is faster than the er u have the muscleu know but still fast the muscles ya	(3 5) /Indirect/eval	(4 18)	/Direct/stall
			(4 18 1)	/Direct/stall/filler
250	I think pretty (.) handsome face is not (.) no use	(3 5)		/Indirect/eval
			(4 3)	/Direct/selfcor
251	No	(3 5) /Indirect/eval	(5 12)	/Nontarget/respond
252	No use	(3 5) /Indirect/eval	(5 12)	/Nontarget/respond
253	But in in the world all u can (.) people see your face u know <making gestures>	(3 5) /Indirect/eval	(4 3 1) /Direct/selfcor/falsestart	(4 18 1) /Direct/stall/filler
	(4 19) /Direct/selrep	(5 4) /Nontarget/gesture	(5 12)	/Nontarget/respond
254	If u If u (.) are clever (.)	(3 5) /Indirect/eval	(4 19)	/Direct/selrep
			(5 12)	/Nontarget/respond
255	no need (.) no need the handsome face	(3 5)		/Indirect/eval
			(4 19)	/Direct/selrep
256	U are not clever no handsome face can't meet girl u know	(3 5)		/Indirect/eval
	(4 18 1) /Direct/stall/filler	(5 12)		/Nontarget/respond
257	Now girl like the clever boy u know	(3 5)		/Indirect/eval
	(4 18 1) /Direct/stall/filler	(5 12)		/Nontarget/respond
258	But the but the (but) see you first see your face first	(3 5)		/Indirect/eval
		(4 19)		/Direct/selrep
259	Yes when u go to find job they will see 'oh too ugly'	(3 5)		/Indirect/eval
		(5 12)		/Nontarget/respond
260	Fail	(3 5) /Indirect/eval	(5 6)	/Nontarget/elab
261	Seven leg nothing nothing I want to eat my lunch u know	(3 5)		/Indirect/eval
	(4 18 1) /Direct/stall/filler	(4 19) /Direct/selrep	(5 21)	/Nontarget/Metataalk
262	U are in fire u are in fire	(3 5) /Indirect/eval	(4 19)	/Direct/selrep
263	Ya	(3 5) /Indirect/eval	(5 12)	/Nontarget/respond
264	Ok I think the handsome face is important (.)	(3 5)		/Indirect/eval
		(4 19)		/Direct/selrep
265	Ok nothing nothing	(3 5) /Indirect/eval	(4 19)	/Direct/selrep
266	We think back (think ar think ar) what did we need to think back er when we do the	(3 5) /Indirect/eval	(4 18)	/Direct/stall
	(4 19) /Direct/selrep	(5 14)		/Nontarget/mesaban
267	This is more important (changing the order of the paper strips)	(3 5)		/Indirect/eval
268	What?	(3 5) /Indirect/eval	(4 1)	/Direct/seekclarif
269	This is more important	(3 5) /Indirect/eval	(5 7)	/Nontarget/clarifself
270	Yes more important	(3 5) /Indirect/eval	(5 12)	/Nontarget/respond
271	Why ?	(3 5) /Indirect/eval	(5 1)	/Nontarget/seekmean
272	Because	(3 5) /Indirect/eval	(5 14)	/Nontarget/mesaban

273	But u (.)	(3 5)	/Indirect/eval	(5 14)		/Nontarget/mesaban
274	U won't die (.) for 100 years	(3 5)	/Indirect/eval	(5 7)		/Nontarget/clarifself
275	But every people die	(3 5)	/Indirect/eval	(5 12)		/Nontarget/respond
276	=Yes I will be very happy			(3 5)		/Indirect/eval
277	=Only 100 years only 100 years	(3 5)	/Indirect/eval	(4 19)		/Direct/selrep
278	100 years u know			(3 5)		/Indirect/eval
		(4 18 1)	/Direct/stall/filler	(5 2)		/Nontarget/repeatothers
279	people die			(3 5)		/Indirect/eval
280	are u sure	(3 5)	/Indirect/eval	(4 5)		/Direct/seekconf
281	not all but when u old (.) the (.) friend will be (.) how to say it			(3 5)		/Indirect/askhelp
		(3 5)	/Indirect/eval	(3 12)		/Indirect/givehelp
282	=your friend will die here <givehelp>	(3 5)	/Indirect/eval	(3 11)		/Indirect/givehelp
283	=u u can have a new friend new friend	(3 5)	/Indirect/eval	(4 19)		/Direct/selrep
284	u can have many many friends new friend when u old u know did u always talk to your grandfather or grandmother			(3 5)		/Indirect/eval
		(4 18 1)	/Direct/stall/filler	(4 19)		/Direct/selrep
285	yes	(3 5)	/Indirect/eval	(5 12)		/Nontarget/respond
286	ha ok sorry	(3 5)	/Indirect/eval	(5 12)		/Nontarget/respond
287	ok	(3 5)	/Indirect/eval	(5 12)		/Nontarget/respond
288	change powerful e e			(3 5)		/Indirect/eval
289	=ears	(3 5)	/Indirect/eval	(5 5)		/Nontarget/repair
290	and the super nose			(3 5)		/Indirect/eval
291	why?	(3 5)	/Indirect/eval	(5 1)		/Nontarget/seekmean
292	=because your ear e u u use super nose u look like a dog			(3 5)		/Direct/selrep
		(3 5)	/Indirect/eval	(4 19)		/Nontarget/repeatothers
293	look like a dog	(3 5)	/Indirect/eval	(5 2)		/Direct/selrep
294	but u u use ear u hear	(3 5)	/Indirect/eval	(4 19)		/Direct/selrep
295	u also can can know other people thinking (.) so u don't need usesuper nose			(3 5)		//Text Searches/TextSearch216
		(3 5)	/Indirect/eval	(T 25)		/Indirect/eval
296	=I agree because the ear can hear the danger too			(3 5)		/Nontarget/respond
				(5 12)		/Nontarget/respond
297	Yes	(3 5)	/Indirect/eval	(5 12)		/Indirect/eval
298	Yes ok next (nudging Yeung)			(3 5)		/Nontarget/facprog
				(5 19)		/Nontarget/repeatothers
299	Next what next what	(3 5)	/Indirect/eval	(5 2)		/Nontarget/repeatothers

The end

## Appendix 13 A coded sample of a preparatory talk in Cantonese (Performance Data)

Q.S.R. NUD.IST Power version, revision 4.0.

Licensee: HKIED.

PROJECT: Chi Discuss user Wendy, 10:29 pm, Aug 5, 2001.

+++++

ON-LINE DOCUMENT: Indir(H)2

+++ Document Header:

\*Phase 2

\*Indirect (L)

55 turns

+++ Retrieval for this document: 55 units out of 55, = 100%

++ Text units 1-55:

J/OK let' makes the best of the time now. What we should do to prepare  
for the task? 13  
(5 19) /facprog

V/She doesn't speak much. Ask her to speak more. 14  
(5 20) /moncon

R/Remember, we need to speak in English. 15  
(3 13) /probidenreq

V/If we don't know the English expression, we use Japanese.  
(laughter) 16  
(1) /x

R/ What to do? Come on. 17

V/What to do? 18  
(1) /x

S/Dance for rain. 19  
(1) /x

V/Then what? 20  
(1) /x

V/What about these words given to us? What's 'liver'? 21  
(5 3 1) /checkmean

J/Yeah let's check 'liver'. The words are for our use. 22  
(5 3 1) /checkmean

V/But we might not be able to use them. 23  
(1) /x

J/No some of the words could be used. Look, this phrase is useful. We can  
say 'a powerful liver can turn anything you eat into nutrients'. 24  
(3 7) /funcplan

J/'Avoid crossing the road'. What does it mean? 25  
(5 3 1) /checkmean

V/We can say this: "You have x ray eyes so er you could see well across  
the street." 26  
(3 7) /funcplan

J/What about 'Like a ghost'? How is it related to the body parts? 27  
(5 3) /probidenreq

S/Like Frankenstein. (Laughter) 28  
(1) /x

V/In year 3000, maybe what we can buy can also be bought by others you  
know. This idea may be useful. 29  
(3 1) /planide



J/Maybe we invent things so we are superior. ' 30  
(3 1) /planide

R/So then what? Come on. Let's do more planning. 31  
(1) /facprog

V/I also want to ask the same question. 32  
(1) /x

R/What do you think we can prepare now for the upcoming discussion? Any words we don't understand? Let's check all the body parts first. 33

(5 3) /probidentaskknow

R/The stomach. (Checking dictionary) 34  
(1) /checkmean

/This is tummy. 35  
(1) /x

/No this is stomach. Tummy is belly. 36  
(1) /x

R/Then what should we do now? 37  
(1) /facprog

V/Hey I've seen this word in Geography lessons. 38  
(5 16) /x

J/Really. A powerful legs 39  
(1) /x

/Yeah 40  
(1) /x

V/soil (?) 41  
(1) /x

J/No you must have remembered wrongly. 42  
(1) /x

V/No I definitely remember having memorised the word. 43  
(1) /x

/liquid. (?) 44  
(1) /x

S/What about this? Liver. What is liver used for? 45  
(5 3) /probidentaskknow

V/Excrete toxins from the body. (Checking the dictionary) 46  
(5 3 1) /check mean

V/Removing toxins to beautify yourself. Ha ha. 47  
(1) /x

J/You must remember to speak. OK? 48  
(5 21) /moncon

J/Nutrients. It means they are good for our body. Liver turns food into nutrients. 49

(1) /x

V/Make you fat. (laughing) 50  
(1) /x

J/Fatty acid makes you fat. (laughing) 51  
(1) /x

V/Anything else we don't understand? 52  
(5 3) /probidentaskknow

J/This one means perfect. 53  
(1) /x

S/Then liver should be ranked last. We don't need to be so perfect. 54  
(5 9) /rankrehearse

V/Now I feel x ray eyes can be considered the most important. Let's put it the first. 55  
(5 9) /rankrehearse

J/Brain is good not that we could be smart but that we can maintain our thinking capability. 56  
(3 1) /planide

S/In tests and exams we get higher marks.	57
(3 1) /planide	
R/But if we think too much we will be very sad and painful.	58
(3 1) /planide	
V/No powerful ears is terrible. If we know what others are thinking it will be very painful.	59
(3 1) /planide	
R/What about this? You read aloud all the words here once to us? Let's practise pronunciation.	60
(3 7) /funcplan	
V/You must be crazy.	61
(1) /x	
V/Muscles.	62
(3 1) /planide	
/High power ...	63
(1) /x	
V/This is not useful for us. Muscles are for men.	64
(3 1) /planide	
J/But you can stop the cars.	65
(3 1) /planide	
S/'A boy is crossing the road'? What body part is this related to?	66
(5 3) /probidentaskknow	
V/We should now discuss how we should do the discussion task. OK?	67
(5 19) /facprog/	
V/Well we take turns to talk about one item at a time.	68
(5 21) /turntake	
J/No good. That way we'll be doing it very slowly. We don't have enough time. We should take turns freely. It's more natural.	69
(5 21) /turntake	
R/Then what to do?	70
(1) /x	
S/One person should speak first to lead us.	71
(5 21) /turntake	
V/It should be OK if each of us is prompt to respond and speak.	72
(5 21) /turntake	
S/Who should take the lead then?	73
(5 21) /turntake	
V/Jazzy should.	74
(1) /x	
J/why?	75
(1) /x	
V/We are good pals. (jokingly and laughing)	76
(1) /x	
J/No more.	77
(1) /x	
We can all start now.	78
(5 21) /turntake	
But we should all laugh madly first.	79
(3 15) /relaxpostalk	
Ha ha ha	80
(1) /x	

End of preparation talk

## Appendix 14 Codes, definitions, and examples of strategies observed in the performance data

\*\*\*\*\*  
 (1) /x/ (no strategy identified)  
 \*\*\* Definition:  
 The speaker does not suggest using any strategies to prepare for the upcoming English discussion task.  
 \*\*\* Operational criteria and examples:  
 1. The speaker objects to a strategy suggested by a group member without giving an alternative.  
 "But we might not be able to use them".  
 "No good. That way we'll be doing it very slowly. We don't have enough time."  
 2. The speaker has no ideas as to what to suggest for preparing the upcoming task.  
 "What to do?"  
 "So then what? Come on."  
 "Then what should we do now?"

### \*\*\*\*\* *Strategies targeted in the preparatory talks in Cantonese*

(3 1) /planide/ (planning ideas in advance)  
 \*\*\* Definition:  
 The speaker gives some concrete suggestions (e.g. what body parts to rank, reasons for support) that might be needed in the upcoming discussion.  
 1. "Maybe we invent things so we are superior."  
 2. "Then liver should be ranked last. We don't need to be so perfect."  
 "Now I feel x ray eyes can be considered."  
 3. "Brain is good not that we could be smart but that we can maintain our thinking capability."  
 4. "Muscles."

\*\*\*\*\*  
 (3 7) /funcplan/ (functional planning)  
 \*\*\* Definition:  
 The speaker tries to prepare or suggests preparing for the language aspects (e.g. pronunciation, vocabulary, structures, etc.) that might be relevant during the upcoming discussion task.

1. "What about this? You read aloud all the words here once to us."  
 \*\*\*\*\*

(3 13) /probidenreq/ (problem identification)

\*\*\* Definition:  
 The speaker aims to comply with the requirements for the completion of the upcoming English discussion task.

1. "We need to speak in English." "Well we take turns to talk about one item at a time". [As stated in the instruction sheet given to students]

\*\*\*\*\*  
 (3 15) /relaxpostalk/ (positive self talk)

\*\*\* The definition:

The speaker suggests using some relaxation methods (e.g. laughing) before starting the discussion proper.

1. "But we should all laugh madly first."

\*\*\*\*\*

(3 5) /eval/ (evaluation)

The speaker evaluates the group performance in the discussion(s) in previous phases.

1. "I think we were too noisy last time. We didn't seem to be receptive enough to each other's views."
2. "Our problem was that we either have no ideas or we fight for our views without giving way or even listening to others."

\*\*\*\*\*

*Strategies not targeted in the preparatory talks in Cantonese*

(5 3) /probidentaskknow/ (Enhancing task knowledge)

\*\*\* Definition

The speaker tries to understand the information given in the student notes that might be needed during the upcoming discussion.

1. "What do you think we can prepare now for the upcoming discussion? Any body parts we don't understand?"
2. "What about this? Liver. What is liver used for?"
3. "Anything else we don't understand?"

\*\*\*\*\*

(5 3 1) /Checkmean/ (Checking meaning)

\*\*\* Definition

The speaker tries to understand the meanings of words given in the student notes that might be needed during the upcoming discussion.

1. "Avoiding cross the road'. What does it mean?"

\*\*\*\*\*

(5 9) /Nontarget/rankrehearse (Rehearsing ranking)

\*\*\* Definition:

The speaker ranks or suggests ranking of some body parts during the preparation time.

1. "I think we should start ranking the items first."
2. "OK let's roughly rank the first five items."
3. "(er um giggling) I think we should continue the practical aspect first. I mean whatever is of utmost practical use should be ranked first."

\*\*\*\*\* (5

20) /Nontarget/moncon (Monitoring contributions)

\*\*\* Definition:

The speaker gives suggestions pertaining to the contributions of different speakers in the upcoming task.

1. "Connie, remember you should say something? OK?"
2. "Aaron, you should remember to say more things. OK?"

\*\*\*\*\*

(5 19) /facprog/ (Facilitating the progress of the ranking task)

Definition:

The speaker gives hints at speeding up the progress of the discussion or ranking task.

1. "How about the second one?"
2. "So what is the next?"

\*\*\*\*\*

(5 21) /Nontarget/mangroup (Suggesting turn-taking tactics)

\*\*\* Definition:

The speaker organises the way as to how the group should conduct during the upcoming discussion task.

1. "Then we ask a person to say that item first."
2. "Um what about this? When a person is suggesting an item, the others respond and give opinions."
3. "I think it's better to do it like this. First when a person suggests an item, he or she should also give a reason. The rest of us will then either agree or disagree to your reasoning. We'll also need to say why we agree or disagree. Is that OK?"

\*\*\*\*\*

***Strategies targeted in the English discussion tasks***

/x/

Definition:

The speaker does not display any strategic behaviour.

1. "Thank you. Thank you."
2. "When you smell danger, then you need to have some action."

\*\*\*\*\*

(4 6) /resou/ (resourcing)

Definition:

The words, phrases or structures used by the speaker are taken directly from the instruction sheets given to them.

1. "Er I think the most important one is a super nose that can smell danger".\*
2. "Will hurt you easily".\*
3. "High power muscles that are as strong as a lion's".\*
4. "How can it/they help you? How can it/they change your life?" \*
5. "How are you going to use it/they?" \*

<\*> Italicised words were taken from the instruction sheets dated Nov/Dec 1999 for phases 1, 2 and May/June 2000 for phase 3.

\*\*\*\*\*

(4 2) /para/ (paraphrasing)

Definition:

The speaker rephrases or tries to rephrase his or her previous utterances in a different way.

1. "Someone in their mind want to hurt you or I mean hit you or do something bad to you"
2. "in this world er all people need (.) a (.) (\*Aar brain) a clever or something like that um"
3. "Anything u can turn in this so u eat no u have only something careless or u er such like air (air) u can have so u can save many many money"

\*\*\*\*\*  
 (4 18)                    /filler/            (using fillers)

Definition:

The speaker uses fillers such as 'well', 'actually', 'you know' or hesitation devices such as "um" "er", etc.

1. "But sometimes as you know er as you know"
2. "Actually.. I think" (giggling)
3. "Well .. you know em.."

\*\*\*\*\*  
 (4 19)                    /selfrep/            (using self repetition)

Definition:

The speaker repeats some of his/her just completed utterances.

1. "you you really will be popular"
2. "But sometimes as you know er as you know"
3. "er everyone is beautiful and er you may you may not special"

\*\*\*\*\*  
 (4 3)                    /selfcor            (self correction)

Definition:

The speaker corrects the language or content of his/ her utterance (s) during on-line speech production.

1. "It is because when we are dan ... Em ... in danger"
2. "they want ... er .. they don't want others"
3. "if you have a strong ear .... a powerful ear"

\*\*\*\*\*  
 (4 1)                    /seekclarif/            (seeking clarification of meaning)

Definition:

The speaker asks members to explain, elaborate or clarify.

1. "why?"
2. "So?"
3. "Which car?"
4. "What do you mean by ...?"

\*\*\*\*\*  
 (4 4)                    /askrep/            (asking for repetition)

Definition:

The speaker asks his or her interlocutor to repeat what he/she has just said.

1. Pardon?

\*\*\*\*\*  
 (4 5)                    /seekconfirm            (seeking confirmation)

Definition:

The speaker asks his/her interlocutor to confirm what his/her interlocutor has said or meant.

1. Do you mean that we wouldn't die if we had a heart that lasted 100 years?

\*\*\*\*\*

**Strategies not targeted in the English discussion tasks**

(3 5) /Non-target/Eval/ (Evaluation)

Definition:

The speaker thinks back and talks about how well the group has done at a convenient time during the discussion.

1. "We need to think back."

2. "ok I think back what were we do in .." (Then the group started doing the task again as a way to think back and check their performance.)

\*\*\*\*\*

(5 3) /taskknow/ (checking task knowledge)

Definition:

The speaker checks or asks this group-mates the meaning of specific words in the instruction sheet.

1. "Super skin? What's what it?" <quickly referring to the notes for detail>

2. "Check it check it what" <pointing at a paper strip>

3. "Is this clever ha?"

4. "Then what is this?"

\*\*\*\*\*

(5 2) /Nontarget/repeating others

\*\*\* Definition:

The speaker repeats the words or phrases of a previous speaker.

1. "Objection."

"Objection/"

2. "Something like that lar."

"Yeah, something like that."

\*\*\*\*\*

(5 18) /Stall/ Stalling

\*\*\* Definition

The speaker uses 'er', "em", "urh" in his/her utterance.

1. The heart er strong.

2. What's this? Em power leg powerful leg?

\*\*\*\*\*

(4 3 1) /falsestart/ Using false start

\*\*\* Definition:

The speaker stops and restarts an utterance, usually with totally different construction and even meaning.

1. "so I need this very very very (\*Aar ok) I think it is very useful"

2. "How about (...) yeah maybe the (.) strong hands"".

\*\*\*\*\*

(5 5) /repair/ (repairing)

\*\*\*Definition

The speaker corrects the language or ideas used by the previous interlocutor(s).

1. "you are angry"

"if you are ugly"

2. "the policeman appear again"

"em disappear"

\*\*\*\*\*  
 (5 14) /Nontarget/mesaban (Abandoning messages)

\*\*\* Definition:

The speaker does not finish his/her utterances at the end of his/her turn.

1. "Er the last one a powerful \*liver that (...)" (End of turn)
2. "=I don't think so many many (man is too weak) woman is a very (.) (End of turn)

\*\*\*\*\*  
 (5 1) /Nontarget/seekmean (Seeking meaning)

\*\*\* Definition:

The speaker asks for clarification of the reasons or further views of the interlocutors.

1. "Why why why u"
2. "So what?"
3. "But what?"

\*\*\*\*\*  
 (5 11) /seekviews/ (Seeking views from members)

Definition:

The speaker asks for the views of his/her members.

1. "What do you think?"
2. "Do you agree? What do you think?"
3. "Hey, Sam, what do you think?"

\*\*\*\*\*  
 (5 15) /seekagree/ (seeking consensus among group members)

\*\*\*Definition:

The speaker asks for the agreement or consensus of the group.

1. "Let's put muscles first and then strong bone. Is that OK?"
2. "My choice is bone (.) do you agree with me?"

\*\*\*\*\*  
 (5 7) /Nontarget/clarifself (Clarifying oneself)

\*\*\* Definition:

The speaker clarifies his or her meaning at the request of the interlocutor(s).

1. "Why?"  
 "Because (.) u know Hong Kong is a small space but there is many people (.) so (.)"
2. "Why why tell me why?"  
 "Because you can hear many many things ar something like that (giggling)"

\*\*\*\*\*  
 (5 6) /elab/ (elaborating)

Definition:

The speaker builds on a previous comment or phrase by giving examples and adding more words in order to give his/her interlocutor a better understanding of what he/she means.

1. "Space ship"  
 "Yeah, yeah and travel to the space"
2. "to see your bone"  
 "yeah, just remember your bone"

\*\*\*\*\*  
 (5 12) /respon/ (responding)



## Definition:

The speaker responds to a previous utterance by either expressing agreement or disagreement.

N.B. If the speaker simply gives opinions without agreeing or disagreeing with a previous speaker, that will not be counted as "respon" but as /x/.

1. "yes."
2. "yes we agree".
3. "No I don't think so. Actually, I don't like it."

\*\*\*\*\*

(5 19) /Nontarget/facprog (Facilitating progress)

## \*\*\* Definition:

The speaker mentions the position of the items to be ranked e.g. next, second, this one, last, finish, etc.

1. "So this ar this point pass"
2. "Yes the fourth one now"

\*\*\*\*\*

(5 20) /Nontarget/moncon

## \*\*\* Definition:

The speaker monitors the contributions of the group members by nominating or nudging them to speak up.

1. "Aaron, how about you? Your turn"
2. "But u said u said not more Connie"
3. "and Kelly"

\*\*\*\*\*

## Appendix 15 An overview of students involved in stimulated recall interviews

### Key

- Figures under “C” column indicate the number of episodes in which the student recalled his/her thoughts which had taken place during the preparation talks in Cantonese.
- Figures under “E” column indicate the number of episodes in which the student recalled his/her thoughts which had occurred during English discussions.

	Phase 1		Phase 2		Phase 3	
E1-class	“C”	“E”	“C”	“E”	“C”	“E”
<i>High-ability students</i>						
1 Cynthia	-	9	-	12	-	8
2 Annie	-	13	-	18	-	10
3 Penny	-	5	-	4	-	2
4 Stephen	-	9	-	18	-	7
<i>Low-ability students</i>						
5 Lucy	-	10	-	11	-	12
6 Kwok	-	8	-	8	-	13
7 Chan	-	14	-	12	-	8
8 Ng	-	5	-	10	-	3
<b>E2-class</b>						
<i>High-ability students</i>						
9 Jazzy	12	5	14	1	7	5
10 Vicky	15	2	14	2	15	6
11 Stephanie	7	7	12	5	5	7
12 Ricky	8	10	15	1	2	5
<i>Low-ability students</i>						
		<b>24</b>		<b>9</b>		<b>23</b>
13 Kwan	6	5	7	4	5	2
14 Yeung	8	9	9	4	7	7
15 Gary	8	12	10	2	2	5
16 Dale	13	2	8	3	8	8
		<b>28</b>		<b>13</b>		<b>22</b>
<b>C- class</b>						
<i>High-ability students</i>						
17 Aaron	-	12 E1		15 E1	-	18 E1
18 Carrie	9 E2	2	7 E2	10	4 E2	7
19 Kelly	-	11 E1		6 E1	-	8 E1
20 Connie	5 E2	2	7 E2	5	7 E2	6
<i>Low-ability students</i>						
21 Alan	5 E2	5	10E2	5	7 E2	3
22 Ben	-	8 E1	-	5 E1	-	11E1
23 Sam	8 E2	6	4 E2	6	6 E2	2
24 Ray	-	15 E1	-	9 E1	-	10E1

## Appendix 16 Codes 1, definitions, operational criteria, and examples of strategies reported in the stimulated recall interviews (SRI)

Note:

- Each RECALL segment in the SRI data has to satisfy at least one of the corresponding operational criteria listed to be coded at the corresponding strategy type.
- Effectiveness is not criterial. What really matters is that students show awareness of strategy use by considering or attempting to use it.
- Improvement of performance is not criterial.
- Recall examples put under "Preparatory talks in Cantonese" indicate that the events reported had taken place during the preparatory talks in Cantonese.
- Recall examples put under "English discussion" indicate that the events reported had taken place during the English discussion.

### *Strategies targeted in the preparatory talks in Cantonese*

Strategy: Non strategy

Code (1) /x/

\*\*\* Definition:

The speaker does not identify or report the use of any strategies.

\*\*\* Operational criterion:

1. The speaker simply recounts what happened during the pre-discussion preparation in Cantonese or during the English discussion task.

\*\*\* RECALL Examples:

1. /At that point, I said 'the extra bone last forever'. I was asked which one should come first. So I just ranked 'extra bone'./
2. /He said something about 'powerful legs'. There, I was just responding to what he was saying about 'powerful legs'. Nothing special./

\*\*\*\*\*

Strategy: Problem identification

(3 2) /probidengoal/ (problem identification)

\*\*\* Definition:

The speaker reports trying to understand the overall goal, or current provisional goal, or purpose, or requirements of the discussion.

\*\*\* Operational criteria:

1. The speaker reports that the strategy i.e. 'Problem identification' was meant to enhance task performance.
2. The speaker explicitly reports that during the pre-discussion preparation stage in Cantonese, he/she was trying to understand the purpose of upcoming task.
3. The speaker explicitly reports that during the pre-discussion preparation stage in Cantonese, "problem identification" was being used in preparing for the upcoming task.
4. The speaker explicitly reports that during the English discussion task, he/she kept checking that he/she or the group was working towards the goal of the task.

\*\*\* RECALL Examples:

1. /At that time, we're all doing problem identification. I believed that if we could prepare better for the discussion before it started, it would be smoother./ (criteria 1,3)

2. /This time, we really focused on the notes given, reading it carefully and trying to understand what we really had to do in the discussion during the planning time./ (criterion 2)
3. /I was reading the instruction sheets from time to time. I wanted to check what I should do to prepare for the discussion./ (criteria 1, 2)
4. /Well we had learnt about 'problem identification' and I found it useful. As we had to make use of the time to prepare for the upcoming discussion, I felt that we had to know the purpose of the discussion and what we were supposed to do./ (criterion 2)
5. /Here he just said one word "objection" and so I said that he still needed to give reasons to object to any idea. I remembered that we were required to explain./ (criterion 4)

-----  
 (3 13)                    /probidenreq/ (problem identification)

\*\*\* Definition:

The speaker explicitly reports trying to understand the requirements for the completion of the English discussion task.

\*\*\* Operational criteria:

1. The speaker explicitly reports trying to understand the 'rule of the game' governing the upcoming discussion task during the preparation time in Cantonese. The rules - as stated in the notes given to students - included the number of reasons to be given, the number of items to be prioritized within 12 minutes, the need to interact with members, the need to reach group consensus, how many items to rank altogether, etc.
2. The speaker explicitly reports that he/ she checked if he/she or the group was complying with the 'rule of the game' during the English discussion task.

\*\*\* RECALL Examples:

1. /I was asking whether the whole group should reach a consensus regarding the ranking of the sixteen items. Or whether it was OK that each member had his or her own ranking preferences./ (criterion 1)
2. /I was arguing how long we should spend on each item. But at last I lost the argument./ (criterion 1)
3. /I remember I was checking the notes to understand the requirements of the task. Em I was thinking about what we were required to do in the discussion/ (criterion 2)

\*\*\*\*\*

Strategy: Functional planning

Code: (3 4) /funcplan/ (functional planning)

\*\*\* Definition:

The speaker reports trying to plan for the language needed during the upcoming task at the pre-discussion preparation stage or before his/her turn to speak during the discussion task.

\*\*\* Operational criteria:

1. The speaker claims that the intended purpose of 'planning for the language' needed for the upcoming English discussion' was to enhance performance.
2. The speaker explicitly reports that during the pre-discussion preparation, he/she was thinking about or trying to think about the vocabulary items, structures, grammar, pronunciation, etc. that might be needed in the upcoming discussion task. (So 'explicit, metatalk requirement needed.)
3. The speaker explicitly states that during the English discussion task that the language (i.e. vocabulary items, structures, grammar,

pronunciation, etc.) needed had already been planned during the preparation stage in Cantonese.

4. The speaker explicitly reports that during English discussion task, he/she planned for the language (i.e. vocabulary items, structures, grammar, pronunciation, etc.) needed before it was his/her turn to speak. As a proactive rather than reactive step (e.g. NG's case is not counted.)
5. The speaker explicitly reports that he/she was thinking of how to say or express ideas either at the pre-discussion planning state or before his/her turn to speak during the English discussion task.

\*\*\* RECALL examples:

1. /I knew what the words 'digest' and 'nutrients' meant but wasn't sure how to pronounce them. I knew that in the upcoming discussion I would need to say them out. So I checked the dictionary because I didn't know how to say them and wanted to do well in the English discussion./ (criterion 1)
2. /Here I suggested discussing something about grammar. I mean the second page of the notes./ (criterion 2)
3. /I was reading the notes to see what words or structures might be helpful and relevant to the upcoming discussion./ (criterion 2)
4. /At the beginning of the discussion task, I started to think hard, thinking about what to say first .. em whether to say 'when you are at eighty or ninety first or 'when you get old, you can't eat much.. and then I had to organise what not to say .. um so as to save words, you know./ (criteria 4, 5)

\*\*\*\*\*

Strategy: Planning ideas in advance

\*\*\* (3 1) /planide/(planning ideas in advance)

\*\*\* Definition:

The speaker tries to plan for the ideas (not language) needed during the upcoming task at the pre-discussion preparation stage or before his/her turn to speak during the discussion task.

\*\*\* Operational criteria:

1. The speaker claims that the intended purpose of 'planning for the ideas needed for the upcoming English discussion' was to enhance performance.
2. During the pre-discussion preparation in Cantonese, the speaker explicitly reports that he/she was thinking about or trying to think about the ideas that might be needed in the upcoming discussion task. (Explicit, metatalk requirement needed.)
3. The speaker explicitly states that during the English discussion task that the ideas had been planned during the preparation stage in Cantonese.
4. The speaker explicitly reports that during English discussion task, he/she planned for the ideas needed before it was his/her turn to speak.

n.b. Thinking ideas in Cantonese first still counts (Sam 1:69)

\*\*\* RECALL Examples:

1. /I was thinking that we should plan for ideas first in the preparation time. That way, we might do better in the English discussion. (Criterion 1)
2. /I was trying to think hard about what ideas to give in the upcoming discussion but I couldn't think of any. / (criterion 2)

3. /I was suggesting what number six should be. Actually er em earlier in the Cantonese preparation session, we had already decided that the item should be ranked the sixth. So I just said it out at that moment./ (criterion 3)

4. /Most of the time, I was reading the notes to see which items were important and why. I was also thinking of what other reasons to give, em, to prepare for my turn to say something./ (criterion 4)

\*\*\*\*\*

Strategy: Evaluation

(3 14) /eval/ (evaluation)

\*\*\* Definition:

The speaker reports reflecting on what he/she said or how she performed in the discussion task.

\*\*\* Operational criteria:

1. The speaker reports reflection on and evaluation of what he/she just said during the group discussion.
2. The speaker reports reflection on and evaluation of the task product (i.e. ranking of the items) towards the end of the discussion task.
3. The speaker reports reflection on and evaluation of the effectiveness of a given strategy (e.g. resourcing - referring to the notes given by the teacher) in helping him or her during the discussion task.
4. The speaker reports reflection on and evaluation of the performance of previous discussion tasks done in phase 1 or 2.
5. The speaker reports reflection on and evaluation of the just-completed discussion task before the SR interview.
6. The speaker reports reflection and evaluation of the English task in progress.

\*\*\* RECALL Examples:

1. /um there I felt that I wasn't very fluent when asking them if they would support me. Well my grammar didn't seem to be correct though they appeared to be able to understand me./ (criterion 1)
2. /um It seemed that we hadn't really discussed 'eyes' and 'ears' though we had already ranked them. So I was wondering whether that was our final ranking of all the body parts. I somehow felt that we should talk about some body parts more thoroughly before reaching any final decisions./ (criterion 2)
4. /I said that during the previous discussion, the contributions of the group members were very uneven. I felt that some of us had simply listened to others without saying anything whereas others had been talking without listening well enough./ (criterion 4)
5. /But something wasn't very satisfactory. For example, at one point, I chose 'eyes' without much explanation. But they all agreed without challenging me. I felt that something was missing. We didn't really justifying our views fully. We were too politely. We could have done better during the discussion/ (criterion 5)

\*\*\*\*\*

Strategy: Asking for help

(3 12) /askhelp/ (asking for help)

\*\*\* Definition:

The speaker reports asking members for help with the language or ideas needed for the discussion task.

\*\*\* Operational criteria:

1. The speaker explicitly reports that their behaviour was problem-based or goal-directed attempts to ask members for help with either the language or the content of the discussion.
2. The speaker shows awareness of the importance of asking for help, and talks about the need to ask help during the pre-discussion preparation in Cantonese.
3. The speaker explicitly reports asking members for help with understanding the meaning of words, phrases, etc. needed for or the purpose, requirements of the upcoming discussion task during the pre-discussion preparation in Cantonese.
4. The speaker explicitly reports asking members for help during the English discussion task.
5. The speaker explicitly reports his/her intention of asking for help during the preparation stage in Cantonese.

\*\*\* RECALL Examples:

1. /I was asking him the meaning of 'super strong stomach'/. (criterion 3)
2. /I didn't know the word 'boycott' in English and so asked Aaron softly in Cantonese. But he didn't know either./ (criteria 1, 4)
3. /I asked 'what is this?' because I didn't know the meaning of the word./ (criteria 1, 4)
4. /Well I couldn't think of what to do during that part. So I thought that others might have better ways to prepare for the discussion because you know the others might have some ideas which you don't have. So by asking you will benefit. We all have different ways of thinking and so we might help each other./ (criteria 1, 5)

\*\*\*\*\*

Strategy: Giving help

Code: (3 11) /givhelp/ (giving help)

\*\*\* Definition:

The speaker reports offering help to group members with the language or ideas needed for the discussion task.

\*\*\* Operational criteria:

1. The speaker explicitly reports that their behaviour was problem-based or goal-directed attempts to give help to group members with either the language or the content of the discussion.
2. The speaker shows awareness of the importance of giving help, and talks about the need to give help during the pre-discussion preparation in Cantonese.
3. The speaker explicitly reports helping group members understand the upcoming discussion task during the pre-discussion preparation in Cantonese.
4. The speaker explicitly reports helping others by directly supplying the word(s) or ideas(s) needed by another speaker during the English discussion.
5. The speaker reports that he/she explicitly stated his/her intention of giving help during the English discussion.

\*\*\* RECALL Examples:

1. /At that time, I was helping my neighbour because he seemed to be having problems in expressing himself. So I said 'that could change our life' em to help him./ (criteria 1, 4, 5)
2. /I thought that if anyone didn't understand, then I would help to explain./ (criteria 1, 2)
3. /Well, I couldn't think of what to do during that part. So I thought that others might have better ways to prepare for the discussion. You know others might have some ideas which you don't know. So by asking

- you will benefit. We all have different ways of thinking and so we might help each other./ (criteria 1, 2)
4. /I said 'guess the meaning' of the word 'jealous'. I knew what it meant from the context. Also I didn't want them to waste any more time checking the dictionary during the preparation time. So I pointed at the paper and told them what I thought the word 'jealous' meant straight away./ (criteria 1,3)
  5. /Here I felt that I was in a very difficult position. I knew that they couldn't think of any comments. So I was trying hard to help her, thinking and thinking hard of some reasons./ (criteria 1,5)

\*\*\*\*\*

Strategy: Relax and think positive

Code: (3 5) /relax /

\*\*\* The definition:

The speaker reports using relaxation techniques to encourage himself/herself or maintain an optimal atmosphere conducive to the discussion task.

\*\*\* Operational criterion:

1. The speaker explicitly suggests during the preparation in Cantonese that the strategy 'relax and think positive' be used.
2. The speaker explicitly reports using relaxation techniques (e.g. positive self-talk) during the discussion task.

\*\*\* RECALL examples:

1. /I said we should 'breathe deeply' em I thought that could help us relax a bit./ (criterion 1)
2. /Relax and think positive. Actually .. I had thought of the strategy very earlier in that session./ (criterion 1)
3. /I just wanted to crack some jokes to make people happy. Em I felt that my suggestions were not as constructive and relevant as theirs. So I just cracked some jokes. I just let them give their suggestions. I preferred to say little./ (criterion 2)

### *Strategies not targeted in the preparatory talks in Cantonese*

(4 6) /resou / (resourcing)

\*\*\* Definition:

The speaker reports thinking of using some resources to help them cope with the upcoming English task.

### Preparatory talk in Cantonese

\*\*\* Operational criterion:

1. The speaker reports that he/she was thinking of using the notes/dictionary to help with ideas or language needed for the upcoming English discussion.

\*\*\* RECALL Examples:

1. /I was reading the bottom part of the first page of the notes. There some questions there. I thought that if I knew how to answer the questions, that might help me in the upcoming discussion./ (criterion 1)

### English discussion

Same as 'Resourcing' defined under direct strategy targeted in the training.

\*\*\*\*\*

(5 3) /probidentaskknow/ (Enhancing task knowledge)



\*\*\* Definition

The speaker reports trying to understand the knowledge or skills required of the English discussion task.

Preparatory talk in Cantonese

\*\*\* Operational criteria:

1. The speaker reports trying to understand the meaning of words in the instruction sheets at the preparation stage.
2. The speaker reports trying to understand or remember the body parts to be ranked or the functions of body parts indicated in the instruction sheets so as to facilitate the upcoming English task.

\*\*\* RECALL examples:

1. /I was checking the meaning of some difficult words. I wanted to understand the meaning of all the key words in the notes first. The we would be able to know how to rank the body parts later./ (criterion 1)
2. /I was also reading page one of the notes because I believed that it might be helpful. I had forgotten the body parts that needed to be ranked./ (criterion 2)
3. /I was reading the notes to check again the names of the different body parts such as 'super strong bones', 'x ray eyes', and so on. I was worried that my memory might fail me./ (criterion 2)

English discussion

\*\*\* Operational criterion:

The speaker reports trying to understand the meaning of words in the instruction sheets while the task was in progress.

RECALL example:

1. /I was thinking about the meaning of some words in the task sheet. I wanted to know what they meant./

\*\*\*\*\*  
(5 9) /rehearse/ (rehearsing)

\*\*\* Definition:

The speaker reports doing the ranking once in Cantonese during the pre-discussion preparation session.

\*\*\* Operational criterion:

1. The speaker reports considering ranking as a means to get him or her familiarised with the upcoming English discussion.
2. The speaker reports thinking, believing, agreeing, suggesting, etc that the group should rank the items in Cantonese first.

RECALL Examples:

1. /I was trying to rank the items first in Cantonese, then I wouldn't feel so nervous during the upcoming English discussion task./ (criterion 1)
2. /We're ranking the body parts right from the beginning so that we might be able to remember the order in the English discussion. But during the upcoming discussion, I was so nervous that I forgot all about the order./ (Criterion 1)
3. /There, I was thinking that we should rank the less important items on the list first./ (criterion 2)
4. /I was thinking that the most important for the group to do was to rank the first few items in Cantonese./ (criterion 2)

\*\*\*\*\*  
(5 20) /Nontarget/moncon (Monitoring contributions)

\*\*\* Definition:

The speaker reports considering the monitoring of the participation of members including his or her own during the preparatory talk in Cantonese or during the upcoming English task.

\*\*\*Operational criteria:

1. The speaker reports thinking about how members should contribute in the upcoming English task.
2. The speaker reports thinking about how members should contribute during the preparatory talk in Cantonese.

RECALL examples:

1. /I was saying and in fact hinting to Stephanie and Sun that they should speak more in the English discussion. Very often, only Vicky and I speak a lot in classroom activities. So I was worried that we might take away their chances of speaking./ (criterion 1)
2. /At that time both Kwan and I were talking a lot and so we stopped for a while for Leung to say something because he said very little./ (criterion 2)

\*\*\*\*\*

(5 21) /Nontarget/taketurn (Suggesting turn-taking tactics)

\*\*\* Definition:

The speaker reports thinking about the conducting of the group task.

Preparatory talk in Cantonese

Operational criterion:

1. The speaker reports thinking about turn-taking tactics for the group to adopt during the English discussion.

RECALL examples:

/I felt that it would be very slow if we took turns to say. Also, if I wanted to give some opinions I couldn't do it right away because I had to wait for my turn. So I disagreed; I didn't think it was a good suggestion. I thought that it would be better if everyone could discuss together instead of taking turns. So I gave my suggestion./

/I was asking how we should organize ourselves in the upcoming discussion. Em I wanted to start right away by doing some kind of organization. I mean I wanted to discuss who should speak first and next and so on./

\*\*\*\*\*

(5 18) /Nontarget/facprep Facilitating progress)

\*\*\* Definition: The speaker reports trying to monitor the conduct of the preparation talk or the upcoming English task.

Preparatory talk in Cantonese

\*\*\* RECALL examples:

1. /I felt that the preparation time was for us to discuss how to prepare for the upcoming English discussion. So I was reminding them of what we should do to prepare for the discussion./
2. /I was reminding them not to say any more nonsense. They weren't really discussing the meaning of the word 'smart'. So I wanted them to be on the track again to discuss the content of the notes.
3. /Actually I was worried that they would be doing the "wrong" thing during that part. We were supposed to discuss how we should prepare for the discussion, not to start ranking or doing the task. I asked them what they were doing, implying that they might be doing the 'wrong' thing. We're not supposed to start ranking during the preparation time. We might be 'jumping the gun'./

English discussion

\*\*\* Definition: The speaker reports facilitating the conduct of the English discussion.

\*\*\* RECALL examples:

/There I was saying that we had sixteen items to rank. So if we let one item drag on for too long, it would hold up the whole discussion. I felt that we should move the discussion faster./

\*\*\*\*\*

### *Strategies targeted in the English tasks*

Strategy: Non strategy

Code (1) /x/

\*\*\* Definition:

The speaker does not identify the use of any strategies.

\*\*\* Operational definition:

The speaker simply recounts what happened during the task without reporting any strategy use.

\*\*\* RECALL Examples:

1. /At that point, I said 'the extra bone last forever'. I was asked which one should come first. So I just ranked 'extra bone'./
2. /There I said 'woman is too weak'. Em I had some difficulties there because I didn't know how to describe some personality traits of women like 'fragile'./
3. /He said something about 'powerful legs'. There, I was responding to what he was saying about 'powerful legs'. Nothing special./

\*\*\*\*\*

Strategy: Resourcing

(4 6) /resou / (resourcing)

\*\*\* Definition:

The speaker reports using the student notes or dictionary to help with understanding the discussion task, with speech production or with understanding what the others were talking about during the discussion task.

*(N.B. If the speaker reports trying to understand the notes, that will not be counted. That is considered different from using the notes to help prepare for or understand the upcoming task. Understanding the notes as such is different from using them to prepare for or understand or cope with a task.)*

\*\*\* Operational criteria:

1. The speaker explicitly reports that he/she was referring to the notes/dictionary to help with ideas or language needed for the discussion.
2. The speaker reports reading aloud or directly using some of the words, phrases, structures or ideas suggested in the student notes during the English discussion.
3. The speaker reports using the student notes to help him/her understand or think about what the interlocutors were talking about during the discussion.

\*\*\* RECALL Examples:

1. /I was reading the bottom part of the first page of the notes. There some questions there. I thought that if I knew how to answer the questions, that might help me in the upcoming discussion./ (criterion 1)
2. /This time the notes had more useful information. For example we were given not only 'powerful legs' but also that 'they could help me walk as fast as a car'. This helped me think of other things beyond the

confines of the discussion. So I was able to think of 'pollution' here because of the word 'car' you see./ (criterion 1)

3. /I said 'hear', 'beautiful' er again and was thinking about how to say these words. I could think of 'beautiful' and "hear' and so uttered the words. Yes, I was reading the notes to see how to read aloud the next item. I mean I could refer to the notes and then read the words aloud to help me. Otherwise, I wouldn't have known how to say that./ (criterion 2)
4. /I was actually using the notes to help me think about what the others were talking about./ (criterion 3)

\*\*\*\*\*

Strategy: Paraphrasing

(4 2) /para/

\*\*\* Definition:

The speaker reports using similar words or phrases when not knowing the intended expressions to convey meaning during the English discussion.

\*\*\* Operational criteria:

1. The speaker explicitly acknowledges using it as a problem-based or goal-directed attempt to solve communication problems.
2. The speaker explicitly reports using or trying to use simpler words to replace what he/she originally wanted to say during the English discussion.
3. The speaker explicitly reports using or trying to use some examples to express meaning which he/she originally wanted to say during the English discussion.

\*\*\* RECALL examples:

1. /I was trying to use simpler words to replace what I had originally wanted to say./ (criterion 1)
2. /At that moment, I couldn't think of the word 'public transport' em then I used some examples such as 'taxi, car and aeroplane' to explain 'public transport'./ (criteria 1, 2)
3. /Em I couldn't think of the word 'metabolism' in English. I didn't know how to use it. So I said 'er make some change in our body instead./ (criteria 1, 3)

\*\*\*\*\*

Strategy: Using fillers

(4 18) /filler/

\*\*\* Definition:

The speaker reports using fillers, hesitation devices, empty words etc. just to fill silence or gap when not knowing what to say.

\*\*\* Operational criteria:

1. The speaker explicitly reports that his/her behaviour was a problem-based or goal-directed attempt to fill a gap or silence at some point in the English discussion and feels the need to think of something to bridge the gap as a stop-gap measure.
2. The speaker explicitly reports his/her intention to stall, gain time or fill the silence during the English discussion task,
3. The speaker explicitly reports stalling or using stalling strategies such as using fillers during the English discussion task.

\*\*\* RECALL Examples:

1. /Here I said 'um', 'well', 'you know' to gain time./ (criterion 2)

2. /Er I used fillers such as 'well', 'you know', and 'let me think' to stall./ (criterion 3)
3. /Very difficult here. I didn't know what to say. I doubted if others understand what I was saying. I was just trying to stall, gain time to fill the silence./ (criteria 1,2,3)
4. /At that moment, what they asked me to talk about was not what I wanted to choose. So I just said something to fill the gap./ (criteria 1,2)

\*\*\*\*\*

Strategy: Self correction

Code (4 3)

\*\*\* Definition:

The speaker reports hearing himself/herself making mistakes in terms of language aspects and fixing them immediately afterwards.

\*\*\* Operational criteria:

1. The speaker reports 'self-correcting' or trying to 'self correct'.
2. The speaker explicitly reports using 'self correction' as a strategy.

\*\*\* RECALL examples

1. /I was trying all my best to explain this and that and to try out some strategies like 'self correction' to make up for what I felt was problematic. I mean I was trying to self-correct./ (criterion 1)
2. /There, I realised that my grammar wasn't that correct. I wanted to self correct./ (criterion 2)

\*\*\*\*\*

Strategy: Seeking repetition

Code (4 4) /seekrep/

\*\*\* Definition:

The speaker reports asking his/her interlocutor(s) to repeat in order to address a communication problem.

\*\*\* Operational criterion:

The speaker reports not having heard or understood his/her interlocutor(s) clearly and hence asking for repetition.

\*\*\* RECALL example

e.g. /I couldn't hear what she said and I thought that I should ask. So I said, 'pardon?'/

\*\*\*\*\*

Strategy: Seeking confirmation

(4 5) /seekconfirm/

\*\*\* Definition:

The speaker reports asking his/her interlocutor to confirm the meaning in order to address a communication problem.

\*\*\* Operational criterion:

The speaker reports intending to seek confirmation of meaning from his/her interlocutor(s).

\*\*\* RECALL example

/There at last I knew what they're talking about and so I added "you mean keyboard". And they said 'yeah'. I wanted to confirm with them what they had meant because I wasn't quite sure./

\*\*\*\*\*

Strategy: Using self repetition (1)

(4 19) /selfrep/

\*\*\* Definition:

The speaker reports repeating his/her own words to address a communication problem.

\*\*\* Operational criterion:

The speaker reports intending to repeat what he/she said in order to gain time to think of how to express his/her ideas.

\*\*\* RECALL example

/I was trying to say it again when realizing that there were some problems with my expression./

\*\*\*\*\*

Strategy: Seeking clarification (1)

(4 1) /seekclarif/

\*\*\* Definition:

The speaker reports asking his/her interlocutor to clarify his or her meaning in order to address a communication problem.

\*\*\* Operational criterion:

The speaker reports intending to seek clarification of meaning from his or her interlocutor(s) when not understanding the message.

\*\*\* RECALL example

/There, I had to ask 'what do you mean?' because I didn't quite catch her meaning./

\*\*\*\*\*

***Strategies not targeted in the English tasks***

(4 1) /seekmean/ (Seeking meaning)

\*\*\* Definition:

The speaker reports asking reasons during the English discussion.

\*\*\* RECALL examples:

/I wanted to know why she thought my choice of 'strong legs' wasn't that good. So I asked her./

\*\*\*\*\*

(5 5) /repair/ (Repairing)

\*\*\* Definition:

The speaker reports realizing the mistake made by others and repairing it.

\*\*\* RECALL Example:

/At that time, Chan asked if you would be angry if you had no hair. I felt that he didn't seem to ask in a very appropriate way. So Lucy didn't understand him because she always couldn't understand very fast. So I asked Lucy "what her feeling" was if she had no hair./

\*\*\*\*\*

(5 6) /Elab/ (Elaborating)

\*\*\* Definition

The speaker reports supplementing what his/her interlocutor has just said in order to resolve problems.

RECALL example

/At that time, I didn't know what I was thinking about. I simply couldn't focus my attention. So I depended on Lucy. She said a few words and then I supplemented them with my own./

\*\*\*\*\*

(5 8) /foctask (Focusing on task)

\*\*\* Definition:

The speaker reports thinking about others' ideas, phrases, structures, pronunciation, etc. used in the discussion.

\*\*\* Operational criterion

The speaker explicitly reports focusing on and/or analysing others' ideas during the English discussion.

\*\*\* RECALL example

/At that time I heard her saying that nose could smell danger. And so I thought that if that was the case, it could help us avoid danger. I was listening and analysing as well./

\*\*\*\*\*

(5 11) /seekview/ Seeking views

\*\*\* Definition: The speaker reports asking the views of others as a means to achieve task goals.

\*\*\* RECALL example

/I thought that in discussion, there should be initiation and response between members. I felt that I should ask my group-mates what they thought about my idea. I mean whether they agreed or disagreed./

\*\*\*\*\*

(5 15) /seekagree/ Seeking agreement

\*\*\* Definition: The speaker reports trying to seek agreement from group mates to achieve task goals.

\*\*\* RECALL example

/There I was trying to convince her to accept my reasons. That way, we could achieve consensus./

\*\*\*\*\*

(5 2) /takrisk/ (Taking risks)

\*\*\* Definition:

The speaker reports trying his/her best to say something regardless of difficulty.

\*\*\* RECALL Example:

/I was thinking that whenever I had something in mind, I should seize the opportunity to say them out without waiting or stalling./

\*\*\*\*\*

(5 16) /actback (Activating background knowledge)

\*\*\* Definition:

The speaker reports activating relevant background knowledge or relating the current discussion task to similar, previous experiences.

\*\*\* Operational criteria:

1. The speaker explicitly reports thinking about previous experiences in doing the discussion task.
2. The speaker explicitly reports remembering that he/she had used or learnt similar words, phrases, structures, etc. in other lessons.

\*\*\* RECALL examples:

1. /Somehow I knew that Stephen would put forward that point because I remembered we had discussed that in our last discussion./ (criterion 1)
2. /I had seen the sentence structure in the IS lessons so I decided to use it again./ (criterion 2)

\*\*\*\*\*

(5 4) /gesture/ (Using gestures)

Definition: The speaker reports using gestures to help with or enhance the expression of meaning.

\*\*\* Operational criteria:

1. The speaker explicitly reports that his/her behaviour was a problem-solving or goal-directed attempt to express his/her meaning in the English discussion.
2. The speaker explicitly reports using the strategy 'using gestures'.

\*\*\* RECALL examples

1. /I was trying to think of the word 'activity' such as 'action' but the word skipped my mind at that moment. So I was using some gestures to indicate some kind of 'action' while trying to retrieve the right word./ (criteria 1,2)

\*\*\*\*\*

(5 1) /Mesadjust (Adjusting messages)

\*\*\* Definition:

The speaker reports reducing or even abandoning an intended message.

\*\*\* Operational criterion:

1. The speaker explicitly reports using it as a problem-based or goal-directed attempt to simplify, abandon messages, or switch topics because of language problems in communicating an intended idea.

\*\*\* RECALL examples

1. /Originally I wanted to say all these. But it was too difficult. So I just said 'no hair' instead./
2. /I thought of many ideas but didn't know how to accurately express them in English. So I just said 'test', and 'exam', you know, things which were not so important to fill the gap. I couldn't express all my ideas. So I just said other less important things instead./

\*\*\*\*\*

(5 24) Facatmos (Facilitating atmosphere)

\*\*\* Definition:

The speaker reports that he/she was trying to enhance the cohesiveness or atmosphere of group work.

\*\*\* RECALL example

/I wanted to establish some kind of rapport with them. And it was short and simple and easy to understand. No problem at all. I said 'me too me too' because I thought that could help us feel closer and more friendly. It was simple enough to make others understand. So I said 'me too me too'./

\*\*\*\*\*



## Appendix 17      A coded sample of stimulated recall interview (SRI data)

### Preparatory talk in Cantonese

#### Episode 1

RECALL      /I was asking how we should organize ourselves in the upcoming discussion. Em I wanted to start right away by doing some kind of organization. I mean I wanted to discuss who should speak first and next and so on./  
(5 21)              /Nontarget/taketurn

#### Episode 2

RECALL      /There I didn't quite agree to what they had suggested and so raised another point to refute them./  
(1)              /x

#### Episode 3

RECALL      /I was thinking that we should suggest one important body part for discussion first. At least, we had some concrete ideas before the task began /  
(3 1)              /Indirect/planide

#### Episode 4

RECALL      /There I was saying that we had sixteen items to rank. So if we let one item drag on for too long, it would hold up the whole discussion. I felt that we should move faster./  
(5 19)              /Nontarget/facprog

#### Episode 5

RECALL      /There I was thinking .... Em I was just listening to their views./  
(1)              /x

#### Episode 6

RECALL      /At the back of my mind, I was thinking and ranking the sixteen body parts./  
(5 9)              /Nontarget/rankrehearse

#### Episode 7

RECALL      /I was asking because I felt that the whole group should reach a consensus regarding the ranking of the sixteen items. It's not a good idea for each member to have his/her own ranking preference. That wasn't the point of the task./  
(3 3)              /Indirect/probidenreq

#### Episode 8

RECALL      /I felt that we might want to think about the points or ideas during that preparation stage and then we could say the ideas out in the English discussion./  
(3 1 2)              /Indirect/planide

### English discussion

## Episode 9

RECALL /There I was disagreeing to her suggestion about bones. I was saying that bones were not that useful after you died. But super-skin was more useful because it could protect myself. So I raised the point that skin was useful. um I could say that .... What?... um plan .. planning ideas in advance. At that time, Um I was using planning ideas in advance to help me think about whether her idea was good enough or not or what I could say to refute her point. I was looking for some items that might be better than bones./

(3 1) /Indirect/metaplanide

## Episode 10

RECALL /At that point, there were a few items left. 'Muscles' and er I don't remember the other one. Then I thought that muscle was more important than the other one. So I chose muscle but they disagreed and it seemed that they ranked 'muscles' the very last.

(1) /x/

### An example of coded stimulated recall interview (English discussion)

## \*Episode 1

RECALL /There, I knew she was struggling with a word. So I said something to sort of fill the gap and help her. I knew what I had suggested was not the word she wanted. But it's better than letting her pause or say 'er', 'er', so I said one word to replace the word which she couldn't think of./

(3 11) /givehelp/ (criteria 1,4,5)

## \*Episode 2

RECALL /I said 'the second one' but forgot what the second one should be. I also wouldn't find the paper strip 'nose'. Actually I wanted to say what the second one was but forgot what it was. We had talked about the item briefly during our preparation stage but I forgot about it at that point. So I was just stalling./

(5 6) /filler/ (criteria 1,2)

## \*Episode 3

RECALL /I was suggesting what number six should be because I was thinking of the suggestion in the Cantonese session. I mean we had decided that the body part should either be five or six. So I just said it out./

(3 1) /planide/ (criterion 3)

## \*Episode 4

RECALL /We began to have nothing much to say (giggling). We're doing the same topic and I forgot what I had said in the previous discussion. So I just thought of what to say on the spot. I didn't plan for anything since we had done the discussion already. I didn't think in advance what I wanted to say./

(1) /x/

## \*Episode 5

RECALL /I was practising the ranking of the body parts but forgot whether we had ranked the item or not. We didn't mark down or display the paper strips on the desk to help us remember what items we had ranked and how they had been ranked./  
 (5 9) /rehearse/ (criteria 1,4)

\*Episode 6

RECALL /Well There I remember borrowing words from the notes. I meant to read the whole sentence from the notes but it seemed a bit cumbersome to read out everything. They sort of knew what I wanted to say when I was half way through my reading aloud anyway. So I just read some part from the notes. I didn't read out everything./  
 (4 6) /resou/ (criteria 1,2)

\*Episode 7

RECALL /I thought that a healthy body was important after they said 'stomach'. I was listening mostly. When I had anything I wanted to say, I tried to say them./  
 (5 2) /takrisk/

\*Episode 8

RECALL /At that point, we're mentioning several body parts all in one go but didn't really put them into strict order. Because I thought that I needed to know how many were yet to be ranked. So I asked what the number should be. I thought that we needed to know which position we were ranking and how many items were yet to be ranked./  
 problemgoal

\*Episode 9

RECALL /Many things should be ranked last and so I didn't have much to say. We didn't really know how to rank them as the items left were quite useless in general./  
 (1) /x/

\*Episode 10

RECALL /At that moment, I disagreed with him. He was saying something about 'strong hands' and I said something about 'computer' which might render 'strong hands' redundant in the year three thousand. I think that in the whole discussion, that was the longest and most complete sentence I could utter. On the other occasions, I could only utter a few short phrases./  
 /x/

\*Episode 11

RECALL /I remember at that point that the items left were mostly useless. In fact, I was just saying something to stall because tThere were not many useful items left for ranking. Most of the body parts left at that point were useless./  
 (5 6) /filler/ (criteria 1,2)

\*Episode 12

/At that time, I felt that uttering one or two words wasn't that good. I always produced one or two words, very few complete sentences. I knew it wasn't good enough but I couldn't think of anything else to say. So I decided to give up what I had wanted to say./  
 (1) /abanmes/

## Appendix 18 Details of the questionnaire findings

### Target, Direct Strategies

*A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Self-perceptions of Use of Target, Direct Strategies*

	E1 (N=15)		C (N=12)		Size of Effect of Training *
	Proportion	%	Proportion	%	Difference in % between E1 and C #
Direct strategy	8/15	53	2/12	17	+36
Resourcing	11/15	73	5/12	42	+31
Using self repetition	9/15	60	5/12	42	+18
Asking for repetition	4/15	27	2/12	17	+10
Seeking confirmation	6/15	40	4/12	33	+7
Self monitoring	3/15	20	2/12	17	+3
Paraphrasing	5/15	33	4/12	33	0
Seeking clarification	3/15	20	4/12	33	-13
					<b>+92</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Target, direct Strategies*

	E1		C		Size of Effect of Training *
	Proportion	%	Proportion	%	Difference in % between E1 and C #
Direct strategy	4/15	27	5/12	42	+15
Resourcing	6/15	40	6/12	50	+10
Seeking confirmation	4/15	27	4/12	33	+6
Paraphrasing	3/15	20	3/12	25	+5
Using self repetition	1/15	7	1/12	8	+1
Using fillers	7/15	47	5/12	42	-5
Seeking clarification	7/15	47	5/12	42	-5
Asking for repetition	9/15	60	6/12	50	-10
Self monitoring					<b>+17</b>

	Gain in INCREASE	Gain in DECREASE	Total difference in % between E1 and C
Resourcing	36	15	+51
Using fillers	31	1	+32
Using self repetition	18	5	+23
Seeking confirmation	7	10	+17
Paraphrasing	0	6	+6
Asking for repetition	10	-5	+5
Self monitoring	3	-10	-7
Seeking clarification	-13	-5	-18
			<b>+109</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Perceptions of Effectiveness of Target, direct Strategies*

	E1 (N=15)		C (N=12)		Difference in %
	Proportion	%	Proportion	%	
Direct strategy	8/15	53	2/12	17	36
Using fillers	5/15	34	0	0	34
Asking for repetition	9/15	60	4/12	33	27
Paraphrasing	10/15	67	6/12	50	17
Using self repetition	5/15	33	2/12	17	16
Self monitoring	4/15	27	2/12	17	10
Seeking confirmation	3/15	20	3/12	25	-5
Seeking clarification	2/15	13	4/12	33	-20
Resourcing					<b>+115</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Target, Direct Strategies*

	E1		C		Difference in %
	Proportion	%	Proportion	%	
Direct strategy	3/15	20	6/12	50	30
Seeking clarification	5/15	33	7/12	58	25
Seeking confirmation	5/15	33	5/12	42	9
Self monitoring	0/15	0	1/12	8	8
Using self repetition	3/15	20	3/12	25	5
Paraphrasing	2/15	13	1/12	8	-5
Using fillers	6/15	40	3/12	25	-15
Asking for repetition	8/15	53	2/12	17	-36
Resourcing					<b>+21</b>

	Gain in INCREASE	Gain in DECREASE	OVERALL gain in %
Seeking confirmation	10	25	35
Paraphrasing	27	5	32
Using fillers	36	-5	31
Self monitoring	16	9	25
Using self repetition	17	8	25
Seeking clarification	-5	30	25
Asking for repetition	34	-15	19
Resourcing	-20	-36	-56
			<b>+136</b>

### Non-target, Direct Strategies

*A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Self-perceptions of Use of Non-target, Direct Strategies*

Direct, non-target strategy	E1 (N=15)		C (N=12)		Gain in INCREASE
	Proportion	%	Proportion	%	%
1	7/15	47	0/12	0	47
9	9/15	60	2/12	17	43
12	10/15	67	5/12	42	25
3	6/15	40	3/12	25	15
7	4/15	26	3/12	25	1
14	5/15	33	4/12	33	0
					<b>+131</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Non-target, Direct Strategies*

Direct, non-target strategy	E1		C		Gain in DECREASE
	Proportion	%	Proportion	%	%
9	4/15	27	6/12	50	23
3	4/15	27	5/12	42	15
1	3/15	20	4/12	33	13
12	2/15	13	1/12	8	-5
14	7/15	47	4/12	33	-14
7	6/15	40	3/12	25	-15
					<b>+17</b>

Direct, non-target strategy	Gain in INCREASE	Gain in DECREASE	Overall GAIN in %
9	43	23	66
1	47	13	60
3	15	15	30
12	25	-5	20
14	0	-14	-14
7	1	-15	-14
			<b>+148</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Perceptions of the Effectiveness of Non-target, Direct Strategies*

Direct, non-target strategy	E1 (N=15)		C (N=12)		Gain in INCREASE
	Proportion	%	Proportion	%	Difference in %
12	6/15	40	1/12	8	32
7	6/15	40	2/12	17	23
1	7/15	47	3/12	25	22
3	4/15	27	1/12	8	19
9	7/15	47	4/12	33	14
14	6/15	40	4/12	33	7
					<b>+117</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Non-target, Direct Strategies*

Direct, non-target strategy	E1		C		Gain in DECREASE
	Proportion	%	Proportion	%	Difference in %
9	3/15	20	6/12	50	30
1	3/15	20	4/12	33	13
7	5/15	33	4/12	33	0
12	4/15	27	3/12	25	-2
14	6/15	40	4/12	33	-7
3	8/15	53	5/12	42	-11
					<b>+23</b>

Direct, non-target strategy	Gain in INCREASE	Gain in DECREASE	OVERALL gain in %
9	14	30	44
1	22	13	35
12	32	-2	30
7	23	0	23
3	19	-11	8
14	7	-7	0
			<b>+140</b>

## Target, Indirect Strategies

*A Comparison of E2 and C Groups in Terms of the Proportion of INCREASE in Self-perceptions of Use of Target, Indirect Strategies*

Indirect strategy	E2 (N=17)		C (N=12)		Gain in INCREASE
	Proportion		%		Proportion
6	12/17	71	1/12	8	63
8	11/17	65	4/12	33	32
11	8/17	47	2/12	17	30
1	9/17	53	4/12	33	20
13	7/17	41	4/12	33	8
5	5/17	29	3/12	25	4
10	9/17	53	6/12	50	3
					<b>160</b>

*A Comparison of E2 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Target, Indirect Strategies*

Indirect strategy	E2		C		Gain in DECREASE
	Proportion	%	Proportion	%	Difference in %
8	4/17	24	5/12	42	18
6	2/17	12	3/12	25	13
10	3/17	18	3/12	25	7
1	4/17	24	3/12	25	1
5	7/17	41	5/12	42	1
13	6/17	35	3/12	25	-10
11	6/17	35	3/12	25	-10
					<b>20</b>

	Gain in INCREASE	Gain in DECREASE	OVERALL gain in %
6	63	13	76
8	32	18	50
1	20	1	21
11	30	-10	20
10	3	7	10
5	4	1	5
13	8	-10	-2
			<b>180</b>

*A Comparison of E2 and C Groups in Terms of the Proportion of INCREASE in Perceptions of the Effectiveness of Target, Indirect Strategies*

Indirect strategy	E2 (N=17)		C (N=12)		Gain in INCREASE
	Proportion		%		Proportion
6	11/17	65	5/12	42	23
8	8/17	47	3/12	25	22
5	8/17	47	4/12	33	14
13	6/17	35	3/12	25	10
1	6/17	35	3/12	25	10
11	4/17	24	2/12	17	7
10	6/17	35	7/12	58	-23
					<b>63</b>

*A Comparison of E2 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Target, Indirect Strategies*

Indirect strategy	E2		C		Gain in DECREASE
	Proportion	%	Proportion	%	Difference in %
8	1/17	6	6/12	50	44
6	3/17	18	4/12	33	15
5	4/17	24	4/12	33	9
13	5/17	29	3/12	25	-4
1	3/17	18	1/12	8	-10
10	5/17	29	2/12	17	-12
11	8/17	47	3/12	25	-22
					<b>20</b>

	Gain in INCREASE	Gain in DECREASE	OVERALL gain in %
8	22	44	66
6	23	15	38
5	14	9	23
13	10	-4	6
1	10	-10	0
11	7	-22	-15
10	-23	-12	-35
			<b>83</b>

## Non-target, Indirect Strategies

*A Comparison of E2 and C Groups in Terms of the Proportion of INCREASE in Self-perceptions of Use of Non-target, Indirect Strategies*

Indirect strategy	E2 (N=17)		C (N=12)		Gain in INCREASE
	Proportion	%	%		Proportion
2	7/17	41	3/12	25	16
7	8/17	47	4/12	33	14
4	8/17	47	4/12	33	14
14	7/17	41	4/12	33	8
12	5/17	29	3/12	25	4
3	6/17	35	4/12	33	2
9	4/17	24	3/12	25	-1
					<b>57</b>

*A Comparison of E2 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Non-target, Indirect Strategies*

Indirect strategy	E2		C		Gain in DECREASE
	Proportion	%	Proportion	%	Difference in %
14	4/17	24	5/12	42	18
9	6/17	35	6/12	50	15
12	7/17	41	6/12	50	9
4	3/17	18	3/12	25	7
2	5/17	29	4/12	33	4
3	6/17	35	4/12	33	-2
7	6/17	35	3/12	25	-10
					<b>41</b>

	Gain in INCREASE	Gain in DECREASE	Overall GAIN in %
14	8	18	26
4	14	7	21
2	16	4	20
9	-1	15	14
12	4	9	13
7	14	-10	4
			<b>97</b>

*A Comparison of E2 and C Groups in Terms of the Proportion of INCREASE in Perceptions of the Effectiveness of Non-target, Indirect Strategies*

Indirect strategy	E2 (N=17)		C (N=12)		Gain in INCREASE
	Proportion	%	%		Proportion
7	9/17	53	4/12	33	20
4	8/17	47	4/12	33	14
9	5/17	29	4/12	33	-4
2	6/17	35	5/12	42	-7
3	4/17	24	4/12	33	-9
14	3/17	18	4/12	33	-15
12	4/17	24	6/12	50	-26
					<b>-27</b>

*A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Non-target, Indirect Strategies*

Indirect strategy	E2		C		Gain in DECREASE
	Proportion	%	Proportion	%	Difference in %
9	4/17	24	5/12	42	18
12	4/17	24	3/12	25	1
2	3/17	18	2/12	17	-1
4	2/17	12	1/12	8	-4
7	5/17	29	3/12	25	-4
3	8/17	47	5/12	42	-5
14	10/17	59	3/12	25	-34
					<b>-29</b>

	Gain in INCREASE	Gain in DECREASE	OVERALL gain in %
7	20	-4	16
9	-4	18	14
4	14	-4	10
2	-7	-1	-8
3	-9	-5	-14
12	-26	1	-25
14	-15	-34	-49
			<b>-56</b>

Appendix 19 Effects matrix: Annie's reported use of target and non-target strategies across phrases (case 1)

Target (direct) strategies		
Phase 1	Phase 2	Phase 3
<p><b>Resourcing (1)</b> I was reading the notes to help me think about what he was saying about 'skin'. While he was speaking, I was thinking that 'skin' was really important because it could protect ourselves.</p>	<p><b>Resourcing (3)</b> After saying 'er' 'em' 'urh', I immediately started thinking about other body parts to see what to rank next and why. So I suggested 'super skin' for the group to consider. I was also reading the notes and felt that the information given in the notes was rich. I like referring to the notes because it helps me when I can't think of what to say. <i>The ideas on the second page were useful.</i> Actually Penny also referred to the information in the notes to help her, I noticed. I like holding a lot of information in my hand. It makes me feel good and secure.</p>	<p><b>Resourcing (1)</b> Um this time the notes had more useful information. For example we were given not only 'powerful legs' but also that 'they could help me walk as fast as a car'. <i>This helped me think of other things beyond the confines of the discussion.</i> So I was able to think of 'pollution' here because of the word 'car' you see.</p>
<p><b>Paraphrasing (1)</b> Yes. I was talking about 'super ears'. At that point, I wanted to say that our personal privacy would be intruded upon. But I couldn't think of the English words to express this idea. So I used simpler words like 'no secrets' to replace 'no privacy'.</p>	<p><b>Paraphrasing (0)</b> /</p>	<p><b>Paraphrasing (2)</b> I didn't know how to express some ideas in English. I was able to think of trying out some strategies. I was trying to use a simple word to replace what I had originally wanted to say.</p>
<p><b>Using fillers (0)</b> /</p>	<p><b>Using fillers (2)</b> Then I thought of the strategies that Miss Li taught us and found that they were really effective. At least I didn't have to pause for too long. Er... I used fillers such as er 'well', 'you know' and 'let me think'.</p>	<p><b>Using fillers (1)</b> I believe that if the discussion had been in Cantonese, it would have sustained much longer. Here I just said "um", "er", "ok", "actually" to gain time since I was using English and I found it difficult to say more.</p>
<p><b>Self correction (0)</b> /</p>	<p><b>Self correction (0)</b> /</p>	<p><b>Self correction (1)</b> I was trying all my best to explain this and that you know and was trying some strategies like self correction to make up for what I felt was problematic. I was trying to self correct.</p>
<p><b>Self repetition (0)</b> /</p>	<p><b>Self repetition (0)</b> /</p>	<p><b>Self repetition (1)</b> ...or trying to say it again.</p>
<p><b>1<sup>st</sup> Total</b> 2/13 (15.4%)</p>	<p><b>5/18 (27.8%)</b></p>	<p><b>6/10 (60%)</b></p>

<1<sup>st</sup> total> denotes the frequency and (proportional frequency %) of target strategies reported per phase  
 <2<sup>nd</sup> total> denotes the frequency and (proportional frequency %) of non-target strategies reported per phase  
 </ > denotes nil occurrences of reported strategy use



Non-target strategies		
Phase 1	Phase 2	Phase 3
<p><b>Seeking meaning (2)</b> I was thinking why he didn't think that 'super nose' was important if he considered that 'super ears' were important. So I asked him 'why'.</p> <p><b>Planning ideas (1)</b> I started teasing him already at this point. Actually I had thought of how to tease him before speaking. I knew what Stephen would say about ears and he said exactly what I had anticipated. (Laughter) As I had already prepared my arguments to refute him, so I didn't have much difficulty here. He fell into my 'trap'.</p>	<p><b>Seeking meaning (0)</b> /</p> <p><b>Planning ideas (1)</b> Yes I had planned what to say to convince Stephen. I had been thinking and organizing my ideas. I had been waiting for the moment to say my points. Somehow I knew that Stephen would put forward that point because I remembered we had discussed that in our last discussion.</p>	<p><b>Seeking meaning (0)</b> /</p> <p><b>Planning ideas (1)</b> But here I was prepared you know. I was telling myself that it's better to think of some ideas or reasons before my turn to speak. If not, I could have said "no no reason that's it." So I had prepared what to say before I spoke about 'handsome face'. I mean I had prepared for some arguments to support my stance. I felt that it was more effective at this point because I had prepared more reasons for 'handsome or pretty face". At least I felt that I had prepared what to say regardless of whether the others would agree or not. It's up to them to agree or disagree and then I would respond to their views.</p>
<p><b>Evaluation (0)</b></p>	<p><b>Evaluation (2)</b> It seemed that we had finished but in fact I felt that we hadn't really discussed it thoroughly. I felt that we were a bit disorganized. Sometimes we just paused and had silence. Sometimes we argued half way through without really reaching any consensus. I had the feeling that our arguments were not that substantial though we had finished the ranking. I thought that perhaps by checking or running through the items again we might want to change the ranking or change or strengthen our arguments to substantiate our ranking.</p>	<p><b>Evaluation (0)</b> /</p>
<p><b>Monitoring contribution (1)</b> Em everyone was giving their opinions quite readily but Penny didn't say anything. I was sure everyone had some opinions. So at that time, I wanted to know how she felt.</p> <p><b>Turn taking (1)</b> I originally wanted to say that 'muscles is not very important' but felt that Stephen had something to say at that point. So I stopped and let him come in.</p>	<p><b>Monitoring contribution (1)</b> Yes, at that moment, it seemed that Penny wanted to say something. We all had a lot to say but Penny didn't say much. So I decided to give her a chance to speak. Somehow I had the feeling that she might have something to say.</p> <p><b>Turn taking (3)</b> I was thinking of what to say. Stephen seemed to be making a valid point but I didn't know what to say. I could only say 'er' 'em' (giggling). I said 'I don't know'. I didn't find x ray eyes very useful and wanted to voice my opinions. While I was in the middle of my argument, Stephen came in and took the turn. Since I felt that his point was quite true, so I just gave up my turn and let him speak.</p>	<p><b>Monitoring contribution (0)</b> /</p> <p><b>Turn taking (0)</b> /</p>
<p><b>Simplification (1)</b> We originally decided that 'hair' was more important than 'handsome face' in the preparation session. But then at that time, I felt that 'handsome face' was more important. I thought that you could see that many people were bald and it seemed OK. But if you looked ugly, that might be really a problem. I had no intention of saying all these. Too difficult to express in English. I just said 'nowadays we can see many people without hair'.</p>	<p><b>Switching topics (2)</b> I wanted to rank handsome/ pretty face higher and gave my reasons. I believed that appearance could help one's career and so on. But I felt that Stephen's points were quite good too. I quite agreed with him that as long as you had a smart brain to earn money it didn't really matter whether you were handsome or not. So I sort of rounded off the point by saying 'how about strong hands' so that we could switch topics.</p>	<p><b>Simplification (0)</b> Switching topics (0) /</p>
<p><b>2<sup>nd</sup> Total</b> 6/13 (46.2%)</p>	<p>9/18 (50%)</p>	<p>1/10 (10%)</p>

Appendix 20 Effects matrix: Cynthia's reported use of target and non-target strategies across phrases (case 2)

Target strategies		Phase 2	Phase 3
Phase 1			
Resourcing (0)		<b>Resourcing (3)</b> I believed that 'power legs were more important' because they had mentioned one body part which I didn't quite agree at that moment. So I presented my own reasons and didn't have much difficulty em because I referred to the suggestions in the notes to help me.	<b>Resourcing (1)</b> Um... (giggling).. I don't remember much about this .. but .. er yes Stephen was saying something and so I was referring to the notes and then said them out. I wanted to respond to his ideas.
Using self correction (0)		<b>Using self correction (1)</b> He was talking about x ray eyes. I felt that my grammar wasn't right. I was sure that my grammar was wrong em I said 'it it doesn't .. isn't useless'. So I corrected it.	<b>Using self correction (0)</b> /
Paraphrasing (0)		<b>Paraphrasing (0)</b> /	<b>Paraphrasing (1)</b> Um all of a sudden I forgot a word. Um I didn't agree with Annie so I used the word 'heart' as it had similar meaning to the exact word... Um but I don't remember which word I had wanted to use.
1 <sup>st</sup> Total	0/9 (0%)	4/12 (33.337%)	2/8 (25%)

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase  
 <2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase  
 </ > denotes nil occurrences of reported strategy use

Non-target strategies		
Phase 1	Phase 2	Phase 3
<b>Planning ideas (0)</b>	<b>Planning Ideas (1)</b> I was also thinking of what other reasons to give, em to prepare for my turn to say something.	<b>Planning ideas (0)</b>
<b>Facilitating progress (1)</b> I asked 'what's the third one?' ..em because I didn't want any dead silence.	<b>Facilitating progress (1)</b> We had nothing to say. Er so I suggested 'strong heart'.	<b>Facilitating progress (0)</b>
<b>Asking for help (1)</b> I didn't know what it meant so I asked but I don't remember which word it was.	<b>Asking for help (0)</b>	<b>Asking for help (0)</b>
<b>Turn taking (1)</b> I wanted to explain that the item was important because of something you know... I somehow paused for a while because it seemed that someone wanted to say something.	<b>Turn taking (0)</b>	<b>Turn taking (0)</b>
<b>Taking risks (1)</b> A bit difficult here. I wasn't sure whether the grammar was correct or not. I mean it might be easier to rank the less important items first. I was trying to say something to see if they could understand me.	<b>Taking risks (0)</b>	<b>Taking risks (0)</b>
<b>Using gesture (1)</b> I was trying to think of the word 'activity' such as 'action' but it skipped my mind at that moment. So I was using some gestures to indicate some kind of 'action' while trying to retrieve the right word. Very quickly, the word 'activity' came to my mind.	<b>Using gesture (0)</b>	<b>Using gesture (0)</b>
<b>Abandoning messages (1)</b> em I'm a bit nervous. I didn't feel at ease with myself because of the video camera. So I didn't say a lot. I had some difficulty in thinking of what ideas to offer. Er I wasn't sure if the grammar or structure was right. So at times I didn't say out what was on my mind.	<b>Abandoning messages (0)</b>	<b>Abandoning messages (0)</b>
<b>Focusing on task (0)</b>	<b>Focusing on task (1)</b> They were arguing and so I was listening attentively to them and to think about what they're talking about.	<b>Focusing on task (3)</b> I was mostly listening to my group members. Yeah, I was listening attentively to their explanations and reasoning. I was analysing what Stephen was saying. Um Yeah and I agreed to what Stephen was saying.
<b>Monitoring contribution (0)</b>	<b>Monitoring contribution (1)</b> I was thinking that Penny didn't say anything and only Stephen and Annie were talking. As Stephen was asking her, so I was asking Penny to say something.	<b>Monitoring contributions (4)</b> Um .. at that time I felt that nobody responded to Annie.. So I joined her in asking, "Yes, what do you think?"
<b>Seeking views (0)</b>	<b>Seeking views (1)</b> Er let me think (pause) I felt that Stephen didn't seem to agree with me and so I was trying to convince him. I asked him so that I could know what he wanted and whether he wanted to live till one thousand years old.	<b>Activating background knowledge (5)</b> Er I didn't have much difficulty here. I was just voicing my opinion. I didn't agree with Annie. Then I was thinking of a friend who had similar personality. She didn't express herself much. So I said that this kind of friend might know how to comfort others even though they didn't know how to express themselves.
<b>2<sup>nd</sup> Total</b>	<b>6/9 (66.67%)</b>	<b>3/8 (37.5%)</b>

Appendix 2/ Effects matrix: Kwok's reported use of target and non-target strategies across phrases (case 3)

Target strategies	Phase 1	Phase 2	Phase 3
Paraphrasing (2) At that time, I wanted to say that the hands could hold things, but I used the wrong word. The right word was not so difficult, but I just forgot it at that time. I forgot the word "hold", so I said "to keep something" instead.	Paraphrasing (1) I could only think of the word 'cut' to explain that teeth could be used to grind food. I couldn't think of another more appropriate word though I felt that 'cut' might not be very accurate. So I just used a simple word 'cut' instead of 'grind' here.	Paraphrasing (2) (Pause) um what was I talking about? Um .... (pause) Yeah I know ...it was about your appearance ... 'do not like you'... I was using a simple way to say that there might be someone who didn't like you and so I used 'do not like you'. It was simple and I couldn't think of any other words to express myself.	Using Fillers (1) At that point again we could think of nothing else to say. Actually only Lucy and I had more to say than the other two. I didn't know what else to say. So I just said "um" "well" so that we could move on to discuss the next one.
Using Fillers (0) \	Using Fillers (1) Um I really couldn't think of saying any more in English. So I said 'er', 'um', 'well' to stall (giggling).	Using Fillers (1) At that point again we could think of nothing else to say. Actually only Lucy and I had more to say than the other two. I didn't know what else to say. So I just said "um" "well" so that we could move on to discuss the next one.	Using Fillers (1) At that point again we could think of nothing else to say. Actually only Lucy and I had more to say than the other two. I didn't know what else to say. So I just said "um" "well" so that we could move on to discuss the next one.
Resourcing (0) \	Resourcing (0) \	Resourcing (3) Here I said, "I don't think so". Actually I was referring to the phrases from the notes again. There were three different expressions suggested in the notes for us to use. So I chose "I don't think so". At that point, the two body parts were not that important. So I chose "I don't think so" to change the order of the last two body parts.	Resourcing (3) Here I said, "I don't think so". Actually I was referring to the phrases from the notes again. There were three different expressions suggested in the notes for us to use. So I chose "I don't think so". At that point, the two body parts were not that important. So I chose "I don't think so" to change the order of the last two body parts.
Using Self Correction (0) \	Using Self Correction (0) \	Using Self Correction (1) I said "like ghost in the night". Actually I felt that it wasn't very accurate. You know if you had no hair it shouldn't mean that you looked like ghost. I tried to self-correct (giggling). I mean I tried to correct ... um the grammar at that moment but I couldn't. I didn't know how to say what I had intended.	Using Self Correction (1) I said "like ghost in the night". Actually I felt that it wasn't very accurate. You know if you had no hair it shouldn't mean that you looked like ghost. I tried to self-correct (giggling). I mean I tried to correct ... um the grammar at that moment but I couldn't. I didn't know how to say what I had intended.
1 <sup>st</sup> Total 2/8 (25%)	2/8 (25%)	7/13 (61.5%)	7/13 (61.5%)

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase  
 <2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase  
 < \ > denotes nil occurrences of reported strategy use

Non-target strategies		
Phase 1	Phase 2	Phase 3
<p><b>Activating Background Knowledge (4)</b> I remembered that I had learnt the words "breathe air" in the Integrated Science lesson, so when we were talking about breathing, I could say these words easily and naturally.</p>	<p><b>Activating Background Knowledge (2)</b> At that time, um ... last time we had also discussed the same thing. This time I couldn't think of anything new to say. I couldn't find any new things to say. So I just said similar things about the 'hands' as what I had said last time. I could say that hands helped us do many things. Other than this, I couldn't think of other new ideas.</p>	<p><b>Activating Background Knowledge (0)</b> \</p>
<p><b>Giving Help (1)</b> I was offering the word 'attract' to him. He's dragging on for a while. It seemed that he couldn't express himself.</p>	<p><b>Giving Help (0)</b> \</p>	<p><b>Giving Help (0)</b> \</p>
<p><b>Elaborating (0)</b> \</p>	<p><b>Elaborating (1)</b> At that time, I didn't know what I was thinking about. I simply couldn't focus my attention. So I depended on Lucy. She said a few words and then I supplemented them with my own.</p>	<p><b>Elaborating (0)</b> \</p>
<p><b>Facilitating Atmosphere (0)</b> \</p>	<p><b>Facilitating Atmosphere (1)</b> Here they had nothing much to say. So I sort of cheered up the atmosphere by making some light-hearted remarks (giggling).</p>	<p><b>Facilitating Atmosphere (0)</b> \</p>
<p><b>Taking Risks (0)</b> \</p>	<p><b>Taking Risks (0)</b> \</p>	<p><b>Taking Risks (1)</b> Here again we had nothing to say at this point. I couldn't think of any more to say about the nose. Then I said that we could smell some delicious food. Then again I was thinking what to say. Actually I just said that to fill the gap even though I wasn't sure whether it would work or not.</p>
<p><b>Monitoring Contributions (0)</b> \</p>	<p><b>Monitoring Contributions (0)</b> \</p>	<p><b>Monitoring Contributions (2)</b> At that time, I was using eye contact to signal to my group mates to speak more. I felt that they should say something.</p>
<p><b>Repairing (0)</b> \</p>	<p><b>Repairing (0)</b> \</p>	<p><b>Repairing (1)</b> At that time, Chan asked if you would be angry if you had no hair. I felt that he didn't seem to ask in a very appropriate way. So Lucy didn't understand him because she always couldn't understand very fast. So I asked Lucy what her feeling was if she had no hair.</p>
<p><b>2<sup>nd</sup> Total</b>      5/8 (62.5%)</p>	<p><b>4/8 (50%)</b></p>	<p><b>4/13 (38.5%)</b></p>

Appendix 22 Effects matrix: Ng's reported use of target and non-target strategies across phrases (case 4)

Target strategies	Phase 2	Phase 3
Phase 1	Phase 2	Phase 3
Resourcing (0)	Resourcing (5) I said 'hear', 'beautiful' er again and was thinking about how to say these words. I could think of 'beautiful' and 'hear' and so uttered the words. Yes I was reading the notes to see how to read aloud the next item. I mean <i>I could refer to the notes and then read the words aloud to help me. Otherwise, I wouldn't have known how to say that.</i>	Resourcing (0) \
1 <sup>st</sup> Total	0% (5/10) 50%	0%
Non-target strategies		
Phase 1	Phase 2	Phase 3
Abandoning Messages (2) ..... (long pause) <i>I couldn't organise the English words I needed to express myself. So I just gave up expressing the idea altogether. Er ..... (pause)</i>	Abandoning Messages (2) I wanted to say that you could breathe if you had lungs. But I didn't know how to say it in English. I said a short phrase only. That's all I could say in English. I gave up the idea and didn't try to say the rest.	Abandoning messages (2) There, I said one sentence only. <i>I felt that my organization was not right at all. No one understood me. ... em em also my expression was very unclear.</i> Then I didn't dare to continue because I felt that what I was saying was totally incomprehensible anyway. So I just gave up the rest of the message.
Asking For Help (2) <i>I didn't understand the meaning of the words and didn't know how to pronounce them. So .... (pause) I just quietly asked my neighbour for help.</i>	Asking For Help (2) "I was asking them ... (long pause) because I didn't know how to pronounce the words."	Asking For Help (0) \
2 <sup>nd</sup> Total	4/10 (40%)	2/3 (66.7%)

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase  
 <2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase  
 < / > denotes nil occurrences of reported strategy use

Appendix 23 Effects matrix: Vicky's reported use of target and non-target strategies across phases (case 5)

Target strategies		
Phase 1	Phase 2	Phase 3
<p><b>Planning ideas in advance (1)</b> I was thinking what in general I was going to say in the discussion. You know <i>after you have got the general idea, you will be able to express freely during the discussion. If you don't try to familiarize yourself with the content of the discussion before it starts, then you may get stuck in the middle.</i></p>	<p><b>Planning ideas in advance (0)</b> /</p>	<p><b>Planning ideas in advance (0)</b> /</p>
<p><b>Problem identification (2)</b> At that moment, we couldn't think of any concrete ways to prepare for the discussion. I felt that the only thing to do was to read the instruction sheet carefully to see whether we understood it and what we were <i>required to do in the task.</i></p>	<p><b>Problem identification (3)</b> <i>Well we had learnt about 'Problem Identification' and I found it useful. As we had to make use of the time to prepare for the upcoming discussion, I felt that we had to know the purpose of the discussion and what we were supposed to do. So I was thinking about what we were required to do in the discussion.</i></p>	<p><b>Problem identification (5)</b> Here I was thinking about the content of the notes, the purpose of the discussion and the requirements of the task. Then I asked them about the purpose of the discussion, I also asked them what else we were supposed to do during the discussion. Sun told me that we had to rank the body parts and give reasons. I then asked her how many reasons we had to give. She said 'two'.</p>
<p><b>Functional planning (0)</b> /</p>	<p><b>Functional planning (3)</b> <i>I knew what the words 'digest' and 'nutrients' meant but wasn't sure how to pronounce them. I knew that in the upcoming discussion I would need to say them out. So I checked the dictionary because I didn't know how to say them.</i></p>	<p><b>Functional planning (0)</b> /</p>
<p><b>Giving help (0)</b> /</p>	<p><b>Giving help (0)</b> /</p>	<p><b>Giving help (1)</b> I was thinking that if anyone didn't understand, then I would help to explain. That way, we wouldn't have to waste a lot of time explaining and discussing the purpose during the discussion.</p>
<p><b>Asking for help (1)</b> Well at that time I couldn't think of what else to do during the preparation time. And I thought the others might have better ways to prepare for the discussion. So I asked them. Because you know the others might have better ideas which you don't have. So <i>by asking you will benefit.</i> We all have different ways of thinking and so we might help each other.</p>	<p><b>Asking for help (0)</b> /</p>	<p><b>Asking for help (0)</b> /</p>
<p><b>Positive self talk (0)</b></p>	<p><b>Positive self talk (1)</b> At that time, I felt that "think positive" might be helpful so I suggested trying it.</p>	<p><b>Positive self talk (0)</b> /</p>
<p><b>1<sup>st</sup> total:</b></p>	<p><b>4/15 (26.7%)</b></p>	<p><b>6/15 (40%)</b></p>

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase

Non-target strategies		
Phase 1	Phase 2	Phase 3
<p><b>Enhancing task knowledge (6)</b> There I asked what words we didn't understand. I thought that <i>if we didn't check our understanding of the words during that preparation time but waited till the English discussion started, then it would waste a lot of our time</i>. I was thinking that we should make the best use of our preparation time to check all unfamiliar words.</p>	<p><b>Enhancing task knowledge (4)</b> I was finding out if there were any words which I didn't know about the meaning or pronunciation.</p>	<p><b>Enhancing task knowledge (1)</b> Here I asked them if there were any words we didn't know. I remember that every time during that part I was checking if there were any words I didn't understand. I mean, if I didn't understand some words in the notes, I thought I might have to stop in the middle of trying to express myself. So every time during the pre-discussion part, I checked if there were any words that I didn't understand to make sure that I wouldn't get stuck during the upcoming discussion in English.</p>
<p><b>Resourcing (1)</b> So I was thinking it's better to get a general idea as to what I needed to say or what words in the notes I was going to use in the discussion.</p>	<p><b>Resourcing (0)</b> /</p>	<p><b>Resourcing (0)</b> /</p>
<p><b>Monitoring contributions (0)</b> /</p>	<p><b>Monitoring contributions (0)</b> /</p>	<p><b>Monitoring contributions (1)</b> Then I was suggesting we should all contribute in an equitable way to the discussion. I wanted everybody to participate actively.</p>
<p><b>Suggesting turn taking tactics (1)</b> She asked me what we should do to prepare for the discussion. I was thinking about taking turns to discuss one item at a time.</p>	<p><b>Suggesting turn taking tactics (0)</b> /</p>	<p><b>Suggesting turn taking tactics (2)</b> I was also thinking that we should take turns to say something during the English discussion.</p>
<p><b>Facilitating progress of preparation talk (2)</b> There I wanted to check what I should do to prepare for the discussion. There were quite a few things for me to do to prepare for the discussion during the preparation time.</p>	<p><b>Facilitating progress of prep talk (2)</b> I was thinking that we should discuss how we could prepare for the English discussion during that Cantonese part so that the task could be facilitated when it started.</p>	<p><b>Facilitating progress of prep talk (3)</b> Even I knew the purpose, I thought that it was necessary to make sure that everybody knew what to do during the preparation time. I remembered that there were several strategies we could use, so I was trying to see if I could use them to help me with the discussion.</p>
<b>2<sup>nd</sup> total:</b>	<b>10/15 (66.7%)</b>	<b>7/15 (46.8%)</b>

<2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase  
</ > denotes nil occurrences of reported strategy use



Target strategies	
<b>Phase 1</b>	<b>Phase 2</b>
<b>Problem identification (0)</b>	<b>Problem identification (2)</b>
/	I was explaining to her what 'Problem Identification' was about while I was doing it with the group. I was thinking about the purpose and requirements of the task. She forgot about them.
<b>Planning ideas in advance (0)</b>	<b>Planning ideas in advance (1)</b>
/	I was thinking of what I could say during the upcoming English discussion. I was worried that I would have nothing to say like what I experienced in the previous discussion.
<b>Functional planning (0)</b>	<b>Functional planning (1)</b>
/	I was thinking about the word 'digest' I meant how to pronounce it.
<b>1<sup>st</sup> total:</b>	<b>4/15 (26.67%)</b>
<b>Non-target strategies</b>	
<b>Phase 1</b>	<b>Phase 2</b>
<b>Enhancing task knowledge (2)</b>	<b>Enhancing task knowledge (2)</b>
I was still thinking about the meaning and special functions of the different body parts on the first page. Say for instance, the notes described the function of 'super ear'. So I referred to it to get a better understanding of the body part.	I'm spending most of the time with them trying to understand the functions and meanings of the different body parts. At that time, we're discussing the meaning of the word 'jealous'.
<b>Resourcing (0)</b>	<b>Resourcing (1)</b>
/	At that point, I found the three questions at the bottom of page one. I thought we could follow them to help us in the upcoming discussion.
<b>Taking risks (0)</b>	<b>Taking risks (1)</b>
/	I was thinking that whenever I had any ideas in mind, I should just say them out without waiting or stalling. I should seize the right time to speak.
<b>2<sup>nd</sup> total:</b>	<b>4/15 (26.67%)</b>

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase

<2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase

</> denotes nil occurrences of reported strategy use

**Phase 3 (No strategies were identified at Phase 3 and the following remark was made by the student in the SRL.)**

/ At that time, I was wondering when this session would end um because it seemed that we had nothing to talk about. I felt bored talking about the same kind of strategies like 'problem identification'. We understood the task very well already, you know. We had done it twice. Um at that time I would say that we're just filling up the time. I felt bored and didn't know how to fill up the six minutes. So we just brainstormed some ideas. Nothing special to talk about, really. /

Target strategies		Phase 2		Phase 3	
Phase 1		Phase 2		Phase 3	
Asking for help (1) I was thinking that we should ask for help if needed and should not feel shy during the task.		Asking for help (1) He suggested that we should interpret the meaning of all the words on page two one by one. But what actually happened at first was that we read aloud each phrase on the list one by one. I found the reading aloud quite odd. I couldn't help giggling. (giggling) I didn't think that would be useful. So I suggested that we should ask for help while the English discussion was in progress.		Asking for help (0) /	
Problem identification (0)		Problem identification (2) I was doing 'Problem identification'. Um I was finding out the purpose of the task and what we're supposed to do in the task.		Problem identification (3) At that moment I felt that we had to find out what we had to do in the upcoming discussion. We had to know what we're supposed to do in the discussion. So I suggested doing 'Problem identification'.	
Functional planning (0)		Functional planning (2) I said 'planning' and 'language'. I thought that we should make the best use of our time there to plan for the words, phrases or structures we might need in the discussion. Since we're talking about the second page of the notes at that time, so I suggested 'planning language'. I felt that we should use only phrases that we could understand like 'funny' or 'happy'. That would make the talk easier in the English task.		Functional planning (1) Here I suggested discussing something about grammar; I mean the second page of the notes. I felt we had to know the structures, phrases, grammar as well.	
Planning ideas in advance (0)		Planning ideas in advance (0) /		Planning ideas in advance (1) At that point, we had finished discussing the purpose and understood what body parts to choose and rank. I suggested we should think about what body parts were important and the ideas about them. <i>Em I mean 'I wanted to do Planning ideas in advance' for the upcoming discussion you know. So we sort of took turns to talk about each body part.</i>	
1 <sup>st</sup> total:	1/13 (7.69%)		5/8 (62.50%)	5/8 (62.50%)	
Non-target strategies					
Phase 1					
Enhancing task knowledge (8) I was saying that we had to understand the functions of every body part. I thought that we needed to know the functions of all the body parts because the whole point of the discussion was to buy useful items. I thought that I needed to know the function of the items before we could decide whether we should buy them or not.		Enhancing task knowledge (3) I was reading the notes to check again the names of the different body parts such as 'super strong bones', 'x ray eyes' and so on. I was worried that my memory would fail me when we're doing the task.		Enhancing task knowledge (2) At that point, we had almost finished discussing what we could do to facilitate the upcoming discussion. We still had time left. So I was thinking about the words or phrases and wanted to know if they understood them.	
Resourcing (1) After understanding the meaning of all the difficult words, I then realized that I had forgotten to read the questions that followed the items. I thought that the questions might help me know what to discuss.		Resourcing (0) /		Resourcing (0) /	
Facilitating the preparatory talk (1) I also remembered you had told us to use the time to discuss how to prepare for the upcoming English discussion. So I was reminding them and asked them what we should do to prepare for the discussion.		Facilitating the preparatory talk (0) /		Facilitating the preparatory talk (0) /	
2 <sup>nd</sup> total:	10/13 (76.92%)		3/8 (37.50%)	2/8 (25.00%)	

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase

<2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase

</> denotes nil occurrences of reported strategy use

Target strategies		Phase 2	Phase 3
<b>Phase 1</b>		<b>Functional planning (0)</b>	<b>Functional planning (0)</b>
	I was reading the teacher's notes er about the 'handsome face' and er er thinking of <i>how to say it</i> .	/	/
	<b>Problem identification (0)</b>	<b>Problem identification (1)</b> I was thinking about the task and <i>reminding them that</i> when we were making any suggestions for prioritization, he had to explain 'why'.	<b>Problem identification (0)</b>
	/	/	/
	<b>Planning ideas in advance (0)</b>	<b>Planning ideas in advance (2)</b> I wanted the group to share our ideas together before the discussion. We shouldn't just think about our own points in our mind. <i>We should penny out our thoughts together, bringing out any problems for the whole group to consider.</i>	<b>Planning ideas in advance (0)</b>
	/	/	/
	<b>Asking for help (0)</b>	<b>Asking for help (2)</b> I was thinking that we should get help from each other if necessary. They didn't seem to remember that.	<b>Asking for help (0)</b>
	/	/	/
	<b>Relax and think positive (0)</b>	<b>Relax and think positive (1)</b> I said we should 'breathe deeply' em I thought that <i>could help us relax</i> a bit in the discussion.	<b>Relax and think positive (0)</b>
	/	/	/
	<b>1<sup>st</sup> total:</b>	<b>1/8 (12.50%)</b>	<b>6/10 (60%)</b>
	<b>Non-target strategies</b>		
	<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>
	<b>Enhancing task knowledge (3)</b>	<b>Enhancing task knowledge (3)</b> <i>I asked them and checked if they knew</i> the meaning of the words. I was worried that they might not understand the meaning very well.	<b>Enhancing task knowledge (1)</b> Em... here I was reading the notes to see if there were any words I didn't know.
	I was mostly reading the notes to see what the words and sentences meant.		
	<b>Facilitating preparatory talk (0)</b>	<b>Facilitating preparatory talk (1)</b> I was reminding them not to say any more nonsense. They weren't really discussing the meaning of the word 'smart'. <i>So I wanted them to be on the track again</i> ...um ..to discuss again the content of the notes.	<b>Facilitating preparatory talk (0)</b>
	/	/	/
	<b>2<sup>nd</sup> total:</b>	<b>3/8 (37.5%)</b>	<b>1/2 (50%)</b>

<1<sup>st</sup> total> denotes the total number of target strategies reported per phase

<2<sup>nd</sup> total> denotes the total number of non-target strategies reported per phase

</> denotes nil occurrences of reported strategy use

## Appendix 27 Comparison of Findings from Different Research Methods (Direct strategy use)

### Effects of strategy training on observable strategy use/ reported strategy use/ perceived strategy effectiveness

#### Observable Use in English Group Discussions (Audio Recordings)

##### *Whole Sample of Target Strategies (By treatment)*

Analysis by treatment indicates that E1, the target group, maintained strategy use at more or less the same level across times with a slight rise in Phase 2. In contrast, for C and E2, there were much greater fluctuations with the 'Fall-rise' and 'Rise-fall' trends respectively across Phases 1, 2 and 3. *The results suggest that training in the use of direct strategies might have enabled E1 to maintain the use of direct strategies while a lack of such training had rather random effects on C and on E2 in their use of direct strategies.*

##### *Individual Target Strategies*

Analysis by treatment indicates that the aggregated number of types of direct strategies employed by E1 was on the increase over time. In contrast, there was a tendency for E2 to use fewer types and for the C group to maintain using all strategy types at all time points. *The findings suggest that strategy training might have raised the general strategic awareness of E1, resulting in their trying out more target strategies.*

Analysis by treatment also shows that, for E1, there was a clearly upward trend in the use of *Resourcing*. In contrast, both the C and E2 groups did not show such consistently increasing patterns across Phases 1, 2 and 3. Other than *Resourcing*, there were no discernible consistent patterns evident in the use of the other target strategies by E1 as compared with C and E2. *The results suggest that strategy training had an impact on*

#### Reported use (Stimulated Recall Interviews)

##### *Whole Sample of Target Strategies (By treatment)*

Analysis by treatment indicates that for E1, the target group, there were consistent and dramatic increases in the reporting of the target strategies across Phases 1, 2 and 3. In contrast, for the C group, there was a 'Fall-rise' trend across Phases 1, 2 and 3.

*The findings suggest that, for E1, strategy training brought about increased reporting of the target strategies in the predicted direction.*

##### *Individual Target Strategies*

Analysis by treatment shows that, in terms of the variety of reported strategy use, E1 showed a clear and consistent tendency to identify more strategy types while C displayed a downward trend across Phases 1, 2 and 3. *The findings suggest that, for E1, strategy training motivated students to identify more types of target strategies.*

Analysis by treatment also shows that, for E1, there were big increases in the identification of *Resourcing* whereas none of the students in C reported its use at any time point. Other than *Resourcing* and *Paraphrasing*, the reporting of the other target strategies remained sparse across Phases 1, 2 and 3. *The results suggest that, for E1, strategy training had an impact on raising students' awareness and reporting of "Resourcing". The training, however, did not bring about any effects on the students' reporting of the other target strategies.*

#### Reported use and perceived strategy effectiveness (Questionnaires)

##### *Whole Sample of Target Strategies*

Analysis by treatment indicates that, regarding reported use, there were overall gains in favour of E1 in 6 out of 8 target strategies. Similarly, regarding perceptions of effectiveness, there were gains in favour of E1 in 7 out of 8 target strategies. *The results suggest that strategy training had effects both on the reported use and perceptions of effectiveness in the predicted direction.*

##### *Individual Target Strategies*

Analysis by treatment indicates that there were varying degrees of gains of E1 over C across strategies.

In terms of self-perceived use,

- 'Resourcing' (+51%)  $p=0.058$

Apart from this, the gains of other strategies are not statistically significant.

In terms of perceived effectiveness of the strategies, the effect sizes in order of significant differences are as follows:

- Using fillers (+31%)  $p=0.058$
- Asking for repetition (+19%)  $p=0.037$
- Resourcing (-56%)  $p=0.058$
- Using pauses to gain time to think (+20%)  $p=0.075$

students' use of Resourcing. Other than this one, there was no evidence that the training brought about increases in the use of other target, direct strategies.

**Whole Sample of Non-target Strategies**

Analysis by treatment indicates that for both the E1 and E2 groups, they displayed a 'Rise-fall' pattern over time whereas for the C group, there were steady increases over time. The findings suggest that strategy training did not have any consistent effect on the use of non-target strategies whereas a lack of strategy training might have resulted in steady increases in their use over time.

**Individual Non-target Strategies**

Analysis by treatment indicates that, for all groups (C, E1 and E2), the numbers of 'Rise-fall' or 'Fall-rise' patterns across Phases 1, 2 and 3 remain substantially high for all groups. The results suggest that strategy training did not seem to have much effect on E1 or E2 in their use of non-target strategies in any predicted direction.

**Whole Sample of Target Strategies (By proficiency)**

Analysis by proficiency level shows that, for the E1 group, only the high-ability students slightly and consistently increased in their use of direct strategies in the predicted direction across the three phases whereas the low-ability students showed a rise at Phase 2 but dropped back to a level

**Whole Sample of Non-target Strategies**

Analysis by treatment shows that, for E1, there was decreased reporting of the non-target strategies across Phases 1, 2 and 3 whereas the C group again displayed a 'Rise-fall' pattern over time. The findings suggest that, for E1, strategy training brought about decreased reporting of non-target strategies over time.

**Individual Non-target Strategies**

Analysis by treatment indicates that, for the C and E1 groups, the frequency counts of 'Rise-fall' and 'Fall-rise' reporting patterns across Phases 1, 2 and 3 were 10 and 12 respectively out of a total of 20 strategies. The results suggest that strategy training did not seem to have much effect on E1 in their reporting of non-target strategies in any predicted direction.

**Whole Sample of Target Strategies (By proficiency)**

Analysis by proficiency level revealed largely similar patterns. That is, for E1, both the high-ability and the low-ability subgroups followed similar tendencies to consistently identify more direct strategies over time. The low-ability subgroup, however, was more active than its high-ability

**Whole Sample of Non-target Strategies**

Analysis by treatment indicates that, regarding reported use, there were gains in favour of E1 in 4 out of 6 non-target strategies. Regarding perceptions of effectiveness, there were gains of E1 over C in 5 out of 6 non-target strategies. The results suggest that strategy training brought about increases both in the reported use and perceived effectiveness of the majority of non-target strategies.

**Individual Non-target strategies**

In terms of self-perceived use, there were two strategies that had the highest gains and were statistically significant:

- 'Attentive listening rather than seeking clarification (+66%) p=0.028
- 'Paying more attention to content than language' (+60%) p=0.007

The gains of the other strategies are not statistically significant.

In terms of perceived effectiveness of strategies, there were no significant gains of any of the target strategies.

Analysis by proficiency level is not applicable.

lower than that at Phase 1. The scores of the L subgroup were higher than those of their respective H counterparts at all times.  
*The findings suggest that, for E1, strategy training might have resulted in consistent increases (albeit modest) in the use of direct strategies by the high-ability students only. That is, proficiency level seemed to be factor affecting the effects of strategy training.*

**Individual Target Strategies**

Analysis by proficiency level reveals that, for the E1 group, while both high-ability and low-ability subgroups showed consistent increases in the uptake of 'Resourcing' over time, the latter showed a much more dramatic increase than the former at Phase 3.

*The findings suggest that, for E1, strategy training appeared to have activated the low-ability students more than the high-ability students. That is, proficiency level seemed to make a difference to the effects of training.*

**Whole Sample of Non-target Strategies**

Analysis by proficiency level reveals, however, that the low-ability students of E1 showed steadily increasing use of non-target strategies over time whereas their high-ability counterparts did not. Moreover, for the L-subgroup of E1, while its use of non-target strategies was lower than its H-ability subgroup at Phase 1, the use was higher than that of its H-ability counterpart at Phases 2 and 3. In contrast, this pattern is not evident in other subgroups of C or E2.  
*The results suggest that, for E1, strategy training activated the low-ability students but not the high-ability students in using non-target strategies. That is, proficiency level made a difference.*

counterpart in the sense that low-ability students reported higher proportions of the target strategies at all time points.  
*The results suggest that proficiency level did not seem to make a difference to the effects of strategy training.*

**Individual Target Strategies**

Analysis by proficiency level reveals that, for E1, the low-ability subgroup always had strikingly higher proportions of reported uses of *Resourcing* and *Paraphrasing* as compared with the high-ability subgroup. Moreover, the low-subgroup showed consistent increases across Phases 1, 2 and 3 in the identification of both *Resourcing* and *Paraphrasing* but the high-ability subgroup did not.

*The findings suggest that, for E1, strategy training had a more consistent and greater impact on the low-ability students than on their high-ability counterparts in the reporting of 'Resourcing' and 'Paraphrasing'. That is, proficiency level seemed to make a difference to the effects of training.*

**Whole Sample of Non-target Strategies**

Analysis by proficiency level revealed that both the high- and low-subgroups of E1 displayed a broadly similar trend of decreased reporting across phases. However, there was evidence that the low-ability subgroup identified higher proportions of non-target strategies than its high-ability subgroup at all phases.

*The results suggest that, for E1, the low-ability students were more activated than their high-ability counterparts in identifying non-target strategies. That is, proficiency level might make a difference to the effects of strategy training.*

**Individual Non-target Strategies**  
 Analysis by proficiency level unveils an interesting finding. That is, for the L-subgroup of E1, there were steady increases in the use of 8 out of 15 non-target strategies across Phases 1, 2 and 3 as compared with only 2 out of 15 for the H-subgroup. In contrast, the L-subgroups of C and of E2 did not show similar increases.  
*The findings suggest that, for E1, the training in the use of direct strategies activated low-ability students more than their high-ability counterparts to consistently increase their use of non-target strategies over time.*

**Individual Non-target Strategies**  
 Analysis by proficiency level reveals that, in terms of the number of comparisons in which the L subgroup shows higher reported use than its respective H subgroup, the C group showed a downward trend whereas the E1 group displayed an upward trend across Phases 1, 2 and 3.  
*The findings suggest that, for E1, strategy training resulted in the low-ability students being more activated than their high-ability counterparts in the reporting of non-target strategies over time.*

**Effects of Training in the Use of Direct Strategies on Task Performance (Group Discussions)**

**Pre-post gains in mean ratings (on a 6-point scale)**

	High and low groups combined		High-ability groups only		Low-ability groups only	
	C	E1	C	E1	C	E1
Whole class task	- 0.05	- 0.05	- 0.08	- 0.75	0.00	+ 1.00
	+ 0.45	+ 0.55	0.00	+0.17	+ 1.13	+ 1.13
Pull-out group task	0.00	+ 0.50	+ 0.50	+ 0.75	- 0.50	+ 0.25
	- 0.38	+ 0.25	+ 0.25	+ 0.00	- 1.00	+ 0.50

- Overall, it had higher pre-post gains than C on 3 out of 4 comparisons.
- The L-subgroups had higher gains than their counterparts in C on 3 out of 4 comparisons and the H-subgroups on 2 out of 4 comparisons.
- The L-subgroups had higher pre-post gains than the H-subgroups on 3 out of 4 comparisons.
- The L-subgroups had higher pre-post gains than their C counterparts on 'English' scores on both the whole class task and the 'pull-out' group task.
- The L-subgroups had the highest pre-post gains in the 'English' score among all L-subgroups across the E1, E2 and C groups.

## Appendix 24 Comparison of Findings from Different Research Methods (Indirect strategy use)

Effects of strategy training on observable strategy use/ reported strategy use/ perceived strategy effectiveness		
<p><b>Observable Use in Cantonese Preparatory Talks (Audio Recordings)</b></p> <p><i>Whole Sample of Target Strategies (By treatment)</i></p> <p>Analysis by treatment conditions indicates that, for the C group, there was a big "Fall-rise" pattern in terms of the frequency of use of the target, indirect strategies across Phases 1, 2 and 3. For the E1 group, there were consistent increases in the use of target, indirect strategies for E1. Finally, for E2, the target group, there was a dramatic rise at Phase 2 and a drop back to a level similar to that at Phase 1. In addition, results from <u>English group discussions</u> provide further evidence that there was a dramatic increase in the use of indirect strategies at Phase 2 but not Phase 3.</p> <p><i>The results suggest that the teaching of direct strategies might have an impact on the use of indirect strategies too. For E2, the target group, the novelty effect of strategy training could have resulted in a noticeable effect in the predicted direction at Ph2.</i></p> <p><b>Individual Target Strategies</b></p> <p>Analysis by treatment indicated that for both C and E1, the use of target strategies was limited to basically one strategy. In contrast, E2, the target group, displayed a wider range of strategy use at both Phases 2 and 3. <i>The results indicate that the training in the use of indirect strategies motivated students to try out a variety of target strategies. On the other hand, with a lack of such training, students simply resorted to one or two obvious strategies.</i></p> <p>Regarding the teachability of individual strategies, for</p>	<p><b>Reported use (Stimulated Recall Interviews)</b></p> <p><i>Whole Sample of Target Strategies</i></p> <p>Analysis by treatment indicates that the C group showed no predicted directions in its reporting of the target strategies. In contrast, for E2, there was a strong upward trend at both Phases 2 and 3 with a 'peak' at Phase 2. <i>The results suggest that strategy training brought about more reporting of the target strategies and the effect was strongest at Phase 2. A lack of training, on the other hand, did not produce enhanced reporting over time.</i></p> <p><b>Individual Target Strategies</b></p> <p>Analysis by treatment showed that the aggregated varieties of strategies reported by C were decreasing whereas those of E2 were on a steady increase across Phases 1, 2 and 3. <i>The results indicate that, for E2, strategy training brought about the reporting of a greater variety of target strategies. On the other hand, with a lack of such training, students identified fewer strategy types over time.</i></p> <p>Regarding the reporting of individual strategies, for the C group, there were no discernible trends across Phases 1, 2</p>	<p><b>Reported use and perceived strategy effectiveness (Questionnaires)</b></p> <p><i>Whole Sample of Target Strategies</i></p> <p>Analysis by treatment indicates that, regarding reported use, there were overall gains in favour of E2 in 6 out of 7 target strategies. Similarly, regarding perceptions of effectiveness, there were gains in favour of E2 in 4 out of 7 target strategies. <i>The results suggest that, for E2, strategy training had effects on the reported use and perceptions of effectiveness in the predicted direction. Moreover, the findings indicate that the training had greater impact on reported use than on perceptions of strategy effectiveness in the predicted direction.</i></p> <p><b>Individual Target Strategies</b></p> <p>Analysis by treatment indicates that strategy training resulted in varying degrees of gains of E2 over C across strategies. In terms of reported use, the effect sizes that are statistically significant are as follows:</p> <ul style="list-style-type: none"> <li>• Asking for help (+76%) <math>p=0.001</math></li> <li>• Problem Identification (+50%) <math>p=0.099</math></li> <li>• Planning ideas in advance (+20%) <math>p=0.096</math></li> </ul> <p>In terms of perceived effectiveness of the strategies, only 'Problem Identification' had</p>



<p>E2, there were dramatic increases in the use of <i>Problem Identification</i> across Phases 1, 2 and 3. In contrast, C showed a downward trend and E1 showed very minimal increases over time. There was another interesting finding. In the uptake of <i>Planning ideas in advance</i>, while both C and E1 showed consistent increases in its use over time, E2 was the only class that had a steady decrease. In addition, results from <u>English group discussions</u> indicated that, for E2, there was a dramatic rise in the use of <i>Evaluation</i> at Phase 2 as compared with C and E1. Apart from <i>Evaluation</i>, the use of the other target strategies was minimal and does not warrant meaningful comparisons across groups and phases. <i>The findings suggest that training in the use of indirect strategies had the greatest impact on the uptake of 'Problem identification'</i>. In addition, <i>the teaching had a strong effect on the use of 'Evaluation' at Phase 2 though not in Phase 3. On the other hand, the training did not have much effect on the use of the other target strategies. Interestingly, it produced an effect on 'Planning ideas in advance' that is counter to the predicted effect on training.</i></p>	<p>and 3. In contrast, for E2, Phase 2 was the time point when the highest proportional frequency (%) of use was identified for 5 out of 7 strategies. Moreover, in the comment on <i>Problem identification</i>, there was a strong and consistent pattern of increase over time. The sharp rise at Phase 3 is dramatic. In addition, for the E2 group, the comment on <i>Evaluation</i> is notably high at Phase 2 though the increase did not sustain at Phase 3. <i>The findings suggest that strategy training appeared to have a clear impact on the students' reporting of 5 out of 7 target strategies in the predicted direction at Phase 2 though the effect did not sustain at Phase 3. Moreover, there was a clear and consistent effect on Problem Identification in the predicted direction. In addition, the study also provided evidence that strategy training had a particularly strong effect on the reporting of 'Evaluation' at Phase 2.</i></p>	<p>a statistically significant gain of (+66%) p=0.011.</p>
<p><b>Whole Sample of Non-Target Strategies</b> Analysis by treatment showed that, for both E1 and E2, there were consistent decreases across Phases 1, 2 and 3. In contrast, for the C group, there was a 'Rise-fall' pattern with no consistent and discernible patterns over time. <i>The results seem to indicate that there were teaching effects for both E1 and E2, bringing about steady decreases in the use of non-target strategies over time. For the C group, on the other hand, a lack of teaching effect appears to result in more random, unpredicted patterns of use.</i></p>	<p><b>Whole Sample of Non-Target Strategies</b> Analysis by treatment showed that, for the C group, there was an irregular, 'Rise-fall' pattern across Phases 1, 2 and 3. In contrast, E2 pointed to a clear downward direction with steady and consistent decreases over time. <i>The results seem to indicate that, for E2, strategy training brought about steady decreases in the identification of non-target strategies over time. For the C group, on the other hand, a lack of teaching effect appears to result in more random, unpredicted patterns of use.</i></p>	<p><b>Whole Sample of Non-Target Strategies</b> Analysis by treatment indicates that, regarding reported use, there were only moderate gains in favour of E2 in 6 out of 7 non-target strategies. Regarding perceptions of effectiveness, there were even more limited gains of E2 over C in 3 out of 7 non-target strategies. For the remaining 4 strategies, the gains of E2 over C were all negative. <i>The results suggest that strategy training brought about moderate increases in the reported use of the majority of non-target strategies. On the other hand, the training did not produce enhanced perceptions of</i></p>

<p><b>Individual non-target strategies</b></p> <p>Analysis by treatment conditions indicated that, for both C and E1, they showed increasing use of one obvious strategy <i>Rehearsing ranking</i>. There was no sign of increase in the use of any other strategies. In contrast, for E2, there was only a slight increase at Phase 2 and no use of <i>Rehearsing ranking</i> at all at Phase 3. Instead, there was an increasing trend in the use of <i>Facilitating progress</i> at Phases 2 and 3, an upward trend in the use of <i>Suggesting turn-taking tactics</i> at Phase 3 and a sustained use of <i>Monitoring contributions</i> at Phase 3. On the other hand, for both C and E1, there was no sign of increase in the use of any of these three strategies.</p> <p><i>The findings suggest that strategy training might have resulted in E2 using fewer obvious strategies but a wider range. Conversely, a lack of training seemed to have limited C and E1 to one or two obvious strategies.</i></p> <p>In terms of the variety of strategy use, there was a big drop at Phase 3 for both the C and E1 groups. In contrast, the drop was very slight for E2.</p> <p><i>The results indicate that, for E2, training in the use of indirect strategies could have raised general strategic awareness and initiated students to try out not just target but non-target strategies as well.</i></p> <p><b>Whole Sample of Target Strategies (By proficiency)</b></p> <p>Analysis by proficiency level revealed that, for E2, the low-ability sustained a steady and consistent increase in strategy use across Phases 1, 2 and 3 whereas the high-ability students whereas the H subgroup displayed a rather random "Rise-fall" pattern. In addition, results from English group discussions also indicate that the low-ability students displayed a much more dramatic</p>	<p><b>Individual non-target strategies</b></p> <p>Analysis by treatment indicated that, for the C group, there was an increasing trend in the reporting of <i>Rehearsing ranking</i> across Phases 1, 2 and 3. In contrast, for the E2 group, there was a consistently downward trend with no reporting of the strategy at Phase 3. Moreover, there was a tendency for the E2 group to report steadily more <i>Facilitating progress</i> over time and to increase in the identification of both <i>Monitoring contributions</i> and <i>Suggesting turn-taking tactics</i> at Phase 3. On the other hand, for the C group, there was no sign of any increases at all in the reporting of these three strategies.</p> <p><i>The findings suggest that strategy training might have drawn the attention of the E2 group away from obvious strategies to less obvious ones, resulting in deploying a wider range of non-target strategies.</i></p> <p>In terms of the variety of strategy use, for the C group, there was a strong downward trend across Phases 1, 2 and 3. On the other hand, for the E2 group, there was a good spread of strategy use at each time phase despite a slight drop at Phase 3.</p> <p><i>The results indicate that, for E2, strategy training could have raised general strategic awareness and initiated students to identify not just target but non-target strategies as well.</i></p> <p><b>Whole Sample of Target Strategies (By proficiency)</b></p> <p>Analysis by proficiency level revealed that, for the E2 group, both the H- and L-subgroups had a 'peak' at Phase 2 with a slight drop at Phase 3. Nonetheless, while L subgroup reported a lower proportion of use than its H counterpart at Phase 1, the L subgroup identified higher proportions of use than the high-ability students at both Phase 2 and 3.</p> <p><i>The findings suggest that strategy training had greater</i></p>	<p><i>effectiveness of more than half of the number of non-target strategies.</i></p> <p><b>Individual non-target strategies</b></p> <p>Analysis by treatment indicates that strategy training resulted in varying degrees of gains of E2 over C across strategies. Nonetheless, in terms of both self-perceived use of the strategies and the perceived effectiveness of the strategies, none had an effect size that is statistically significant.</p>
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*Not applicable.*

increase at Phase 2 when compared with that of the high-ability students. Besides, there were indications that the low-ability students were also more activated in the use of indirect strategies than the high-ability students at all phases.

*The findings suggest that, for E2, the strategy training had a more sustained effect on the low-ability students than on high-ability counterparts.*

**Individual Target Strategies**

Analysis by proficiency level revealed that, in the use of *Planning ideas in advance*, for both the C and E1 groups, the L-subgroup outscored its respective H-subgroup in all comparisons except E1 at Phase 3. For E2, while the L-subgroup had a lower score than the H-subgroup at Phase 1, the former outscored the latter at both Phases 2 and 3. Moreover, in the use of *Problem identification*, for C and E1, both the L- and H-subgroups failed to show obvious signs of increase. In contrast, for E2, while both subgroups showed increased uses at Phases 2 and 3, the L-subgroup considerably outscored its H-counterpart at Phase 3. Lastly, regarding the use of *Functional planning*, for both C and E1, the H- and L- subgroups did not show any sign of an upward trend. In contrast, there was evidence that, for E2, the H-subgroup displayed a dramatic increase at Phase 2 but did not sustain at Phase 3. By comparison, the L-subgroup sustained a steady but very modest increase. Other than these three strategies, the use of other strategies by all groups was too sparse to warrant meaningful comparisons.

The results seem to indicate that, for E2, the target group, strategy training seemed to have greater effects on the low-ability students than their high-ability counterparts in the uptake of 'Planning ideas in advance', 'Problem identification' and 'Functional planning'.

**Whole Sample of Non-Target Strategies**

Analysis by proficiency level revealed a similar pattern. That is, for both E1 and E2, the H- and L subgroups

*effects on the low-ability students than on the high-ability students.*

**Individual Target Strategies**

Analysis by proficiency level revealed that, for the C group, the L-subgroup had higher frequencies of reporting than its H subgroup in only one comparison across Phases 1, 2 and 3 with no increases at all. In contrast, for the E2 group, there were big increases in the number of comparisons in which the L subgroup was higher than its respective H subgroup in the reporting of 6 out of 7 target strategies across phases.

*The results seem to indicate that strategy training had greater effects on the low-ability students than high-ability students in the identification of the majority of the target strategies.*

**Whole Sample of Non-Target Strategies**

Analysis by proficiency level revealed that, for both the C and E2 groups, only the L-subgroups displayed a steadily

showed a downward trend in the use of non-target strategies over time irrespective of whether students had received tuition in direct or indirect strategy use. In contrast, the C group did not display any consistent trends. [Lastly, for E2, the target group, the L-subgroup used more non-target strategies than its H counterpart at all phases.]  
 The findings appear to show that proficiency level did not make much difference to the effects of the strategy training on the use of non-target strategies.

**Individual Non-target Strategies**

Analysis by proficiency level revealed that, for E2, the low-ability students were more active than the high-ability students in the use of obvious strategies (*Enhancing task knowledge, Checking meaning*). On the other hand, the high-ability subgroup used *Monitoring contributions* and *Suggesting turn-taking tactics* whereas the low-ability counterparts did not use any of these at any time point. Both the H and L-subgroups demonstrated increased uses of *Facilitating progress*. The findings indicate that proficiency level made a difference to the training effects on the types of non-target strategies used.

decreasing pattern whereas the H subgroup showed an irregular 'Rise-fall' pattern. [Lastly, for both C and E2, the low-ability students, however, tended to show steadily decreasing reporting of the non-target strategies whereas the high-ability students did not.]  
 The findings appear to show that proficiency level did not make much difference to the effects of the strategy training on the reporting patterns of non-target strategies.

**Individual Non-target Strategies**

Analysis by proficiency level revealed that, for the E2 group, the low-ability students reported higher proportions of obvious strategies (*Enhancing task knowledge, Rehearsing ranking*). The high-ability students, on the other hand, identified higher proportions of less obvious strategies (*Monitoring contributions, Suggesting turn-taking tactics and Facilitating progress* at all phases).  
 The findings indicate that proficiency level did not make much difference to the training effects on the reporting patterns of non-target strategies.

**Effects of Training in the Use of Indirect strategies on Task Performance (Group Discussions)**

**Pre-post gains in mean ratings (on a 6-point scale)**

	High and low groups combined		High-ability groups only		Low-ability groups only	
	C	E2	C	E2	C	E2
Whole class task	- 0.05	+ 0.60	- 0.08	+ 0.58	0.00	+ 0.63
	+ 0.45	+ 1.15	0.00	+ 0.75	+ 1.13	+ 1.75
Pull-out group task	0.00	+ 0.75	+ 0.50	+ 1.25	- 0.50	+ 0.25
	- 0.38	+ 1.38	+ 0.25	+ 2.25	- 1.00	+ 0.50

- Overall, it had higher pre-post gains than C on 4 out of 4 comparisons.
- Both the H-subgroups and L-subgroups had higher gains than their respective counterparts in C on 4 out of 4 comparisons including both the 'English' and 'Task effectiveness' scores
- There were higher pre-post gains on the 'Task effectiveness' scores than 'Wnglish' scores on 4 out of 4 comparisons for E2, 3 out of 4 comparisons for E1, and 2 out of 4 comparisons for C.

**Appendix 28**  
**strategy use)**

**A concise overview of findings from different methods (Direct strategy use)**

Effects of strategy training on observable strategy use/ reported strategy use in SRIs/ reported strategy use in questionnaires		
Observable Use in English (Audio Recordings)	Reported use (Stimulated Recall Interviews)	Reported use (Questionnaires)
<p><i>Analysis by treatment</i> E1, the target group, maintained frequency of use of target strategies <b>at more or less the same level</b>, increased in the variety of target strategies, increased in the use of <i>Resourcing</i> over time.</p> <p>There were no discernible patterns regarding the use of non-target strategies.</p> <p><i>Analysis by proficiency</i> For E1, only the H-subgroup slightly and consistently increased in their use of target strategies in the predicted direction. The scores of the L subgroup were higher than those of their respective H counterparts at all times. In the uptake of <i>'Resourcing'</i> over time, the L-subgroup showed a much more dramatic increase than the H-subgroup at Phase 3.</p> <p>The L-subgroup of E1 showed steadily increasing use of non-target strategies over time whereas the H-subgroup did not. Moreover, the L-subgroup had higher activation in terms of proportion of use than the H-subgroup.</p>	<p><i>Analysis by treatment</i> E1, the target group, had consistent and dramatic increases in the frequency of reported use of the target strategies, <b>displayed evidence of an upward trend</b> in the variety of reported strategies as well as big increases in the reported use of <i>Resourcing</i> across the three phases.</p> <p>There was decreased reporting in the majority of non-target strategies across Phases 1, 2 and 3.</p> <p><i>Analysis by proficiency</i> For E1, both the H-subgroup and the L-subgroup followed similar tendencies to consistently identify more target strategies over time. The L-subgroup reported higher proportions of the target strategies at all time points. The L-subgroup always had strikingly higher proportions of reported uses of <i>Resourcing</i> as compared with the H-subgroup.</p> <p>The L-subgroup identified higher proportions of non-target strategies than its H-subgroup at all phases.</p>	<p><i>Analysis by treatment</i> There were overall gains in favour of E1 over C in the self-perceived use of 6 out of 8 target strategies. <b>Moreover, there was a near statistically significant gain in 'Resourcing' (+51%)</b> p=0.058</p> <p>There were gains in favour of E1 in 4 out of 6 non-target strategies. There were statistically significant gains in <i>'Attentive listening'</i> (+66%) p=0.028 and <i>'Paying more attention to content than language'</i> (+60%) p=0.007</p> <p><i>Analysis by proficiency (not applicable)</i></p> <p>-----</p> <p><b>Effects of Training in the Use of Direct Strategies on Task Performance</b></p> <p>Overall, E1 had higher pre-post gains than C on 3 out of 4 comparisons. The L-subgroups had higher pre-post gains than their C counterparts on <i>'English'</i> scores <b>but not on 'Task effectiveness'</b> scores on both the whole class task and the <i>'pull-out'</i> group task.</p>

**(Indirect strategy use)**

Effects of strategy training on observable strategy use/ reported strategy use in SRIs/ reported strategy use in questionnaires

Observable Use in Cantonese Preparatory Talks (Audio Recordings)	Reported use (Stimulated Recall Interviews)	Reported use (Questionnaires)
<p><i>Analysis by treatment</i> For E2, the target group, there was a dramatic rise in the frequency of use of target strategies at Phase 2 but not at Phase 3. E2 also displayed a wider range of strategy use at both Phases 2 and 3 though frequency use of some was low. <b>In the uptake of Problem Identification, there were dramatic increases across phases 1, 2 and 3. In the uptake of Planning ideas in advance, E2 was the only class that had a steady decrease.</b></p> <p>There were consistent decreases in the use of non-target strategies across phases 1, 2 and 3 particularly in the use of Rehearsing ranking at Phase 3. <b>However, there was an increasing trend in the use of Facilitating progress at Phases 2 and 3, an upward trend in the use of Suggesting turn-taking tactics at Phase 3 and a sustained use of Monitoring contributions at Phase 3.</b></p> <p><i>Analysis by proficiency</i> For E2, only the L-subgroup sustained a steady and consistent increase in the frequency of target strategy use across Phases 1, 2 and 3. <b>In the uptake of Problem identification, while both subgroups showed increased uses at Phases 2 and 3, the L-subgroup considerably outscored its H-counterpart at Phase 3.</b></p> <p>For E2, the L-subgroup was more active than the H-subgroup in the use of familiar, non-target strategies i.e. <i>Enhancing task knowledge, Checking meaning</i>. On the other hand, the H-subgroup used less familiar, non-target strategies i.e. <i>Monitoring contributions, Suggesting turn-taking tactics, and Facilitating progress</i> whereas the L-subgroup did not use much of these.</p>	<p><i>Analysis by treatment</i> E2, there was a strong upward trend at both Phases 2 and 3 with a 'peak' at Phase 2 in the reported use of target strategies. The aggregated varieties of strategies reported by E2 were on a steady increase across Phases 1, 2 and 3. <b>In the reported use of Problem identification, there was a strong and consistent pattern of increase over time. The sharp rise at Phase 3 is dramatic. In addition, for the E2 group, the comment on Evaluation is notably high at Phase 2 though the increase did not sustain at Phase 3.</b></p> <p>There was a clear downward direction in reported use of non-target strategies over time. There was a consistently downward trend with no reporting of <i>Rehearsing ranking</i> at Phase 3. Yet, there was steady increase in the reporting of <i>Facilitating progress, Monitoring contributions and Suggesting turn-taking tactics</i> over time particularly at Phase 3.</p> <p><i>Analysis by proficiency</i> For the E2 group, while L subgroup reported a lower proportion of use than its H counterpart at Phase 1, the L subgroup identified higher proportions of target strategy use than the H-subgroup at both Phase 2 and 3. There were big increases in the number of comparisons in which the L subgroup was higher than its respective H subgroup in the reporting of 6 out of 7 target strategies across phases.</p> <p>For E2, the L-subgroup reported higher proportions of familiar, non-target strategies (<i>Enhancing task knowledge, Rehearsing ranking</i>). The H-subgroup, on the other hand, identified higher proportions of less familiar, non-target strategies such as <i>Monitoring contributions, Suggesting turn-taking tactics and Facilitating progress</i> at all phases.</p>	<p><i>Analysis by treatment</i> There were overall gains in favour of E2 over C in the self-perceived use of 6 out of 7 target strategies. <b>Moreover, there were statistically significant or near significant gains in Asking for help (+76%) p=0.001, Problem Identification (+50%) p=0.099, Planning ideas in advance (+20%) p=0.096</b></p> <p>There were only moderate gains in favour of E2 over C in 6 out of 7 non-target strategies. <b>However, none had an effect size that is statistically significant.</b></p> <p><i>Analysis by proficiency (not applicable)</i></p> <p>-----</p> <p>Effects of Training in the Use of Indirect Strategies on Task Performance</p> <p>E2 had higher pre-post gains than C on 4 out of 4 comparisons. Both the high-proficiency subgroups and low-proficiency subgroups had higher gains than their respective counterparts in C on 4 out of 4 comparisons. There were higher pre-post gains on the 'Task effectiveness' scores than 'English' scores.</p>