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 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.
## CONTENTS

Title Page i  
Acknowledgements ii  
Abstract iii  
Contents iv  
List of Tables x  
List of Figures xii  
List of Abbreviations xiii  

<table>
<thead>
<tr>
<th>CHAPTER 1</th>
<th>INTRODUCTION AND SIGNIFICANCE OF THE STUDY</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>1.3</td>
<td>The present study and its significance</td>
<td>2</td>
</tr>
<tr>
<td>1.4</td>
<td>Overview of the thesis</td>
<td>6</td>
</tr>
<tr>
<td>1.5</td>
<td>Conclusion</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER 2</th>
<th>STRATEGY TRAINING RESEARCH AND STRATEGIES FOR A STUDY OF SPEAKING IN A SECOND LANGUAGE</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Introduction and Overview of Chapter</td>
<td>9</td>
</tr>
<tr>
<td>2.2</td>
<td>Definitions of strategies for the present study</td>
<td>9</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Introduction</td>
<td>9</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Strategies for a study of speaking in second language</td>
<td>10</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Significance of strategies</td>
<td>12</td>
</tr>
<tr>
<td>2.2.4</td>
<td>Summary</td>
<td>15</td>
</tr>
<tr>
<td>2.3</td>
<td>Strategy training research</td>
<td>16</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Introduction</td>
<td>16</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Identification of strategy types for training</td>
<td>16</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Outcome of strategy training</td>
<td>19</td>
</tr>
<tr>
<td>2.3.4</td>
<td>Strategy use and proficiency level</td>
<td>28</td>
</tr>
<tr>
<td>2.3.5</td>
<td>Strategy use and methods of investigation</td>
<td>35</td>
</tr>
<tr>
<td>2.3.6</td>
<td>Summary and discussion</td>
<td>38</td>
</tr>
<tr>
<td>2.4</td>
<td>Developing a theoretical framework for strategy selection</td>
<td>39</td>
</tr>
<tr>
<td>2.4.1</td>
<td>Introduction</td>
<td>39</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Rationale and research tradition</td>
<td>39</td>
</tr>
<tr>
<td>2.4.3</td>
<td>Developing parameters to categorise strategies</td>
<td>41</td>
</tr>
<tr>
<td>2.4.4</td>
<td>Summary</td>
<td>47</td>
</tr>
<tr>
<td>2.5</td>
<td>Applying the framework to select strategies for a study of speaking in an L2</td>
<td>48</td>
</tr>
<tr>
<td>2.5.1</td>
<td>Introduction</td>
<td>48</td>
</tr>
<tr>
<td>2.5.2</td>
<td>Direct strategies for learning to speak</td>
<td>48</td>
</tr>
<tr>
<td>2.5.3</td>
<td>Indirect strategies for learning to speak</td>
<td>55</td>
</tr>
<tr>
<td>2.5.4</td>
<td>Summary</td>
<td>61</td>
</tr>
</tbody>
</table>

| 2.6       | Conclusion                                                                           | 62 |
# Chapter 3 The Research Questions, Research Design and Research Methods: Theoretical Bases

## 3.1 Introduction and Overview of the Chapter

## 3.2 The Research Questions and Their Theoretical Bases

### 3.2.1 Introduction

### 3.2.2 Research Theme 1: The Impact of Strategy Training on Strategy Use

### 3.2.3 Research Theme 2: Relationship Between Strategy Training, Proficiency Level and Strategy Use

### 3.2.4 Research Theme 3: Relationship Between Strategy Training, Proficiency Level, and Task Performance

### 3.2.5 Summary

## 3.3 The Quasi-Experimental Design and Its Justifications

## 3.4 The Research Methods: A Multi-Method Approach and Its Justifications

### 3.4.1 Introduction

### 3.4.2 A Coherent Approach to Assessing Strategy Use

### 3.4.3 Justifications for Rating Task Performances

### 3.4.4 Justifications for Using Self-Designed Strategy Questionnaires

### 3.4.5 Justifications for Observing L2 Language Behaviour

### 3.4.6 Justifications for Tapping Strategic Thoughts Using Stimulated Recall (SR) Methodology

### 3.4.7 Summary

## 3.5 Conclusion

---

# Chapter 4 The Research Design and Research Methods: Methodological Procedures

## 4.1 Introduction and Overview of Chapter

## 4.2 Implementing the Quasi-Experimental Design

### 4.2.1 Preparatory Studies

### 4.2.2 The Main Study

## 4.3 Rating Students' Performances on English Group Discussions

### 4.3.1 Data Collection and Timing of Data Samples

### 4.3.2 Method of Data Analysis

## 4.4 Assessing Self-Perceived Strategy Use by Questionnaires

### 4.4.1 Data Collection and Timing of Data Samples

### 4.4.2 Method of Data Analysis

## 4.5 Observing Strategy Use in Action

### 4.5.1 Data Collection and Timing of Data Samples

### 4.5.2 Methods of Analysis
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6</td>
<td>Tapping strategic thoughts using stimulated recall interviews (SRIs)</td>
<td>115</td>
</tr>
<tr>
<td>4.6.1</td>
<td>Data collection activities and timing of data samples</td>
<td>116</td>
</tr>
<tr>
<td>4.6.2</td>
<td>Methods of analysis</td>
<td>118</td>
</tr>
<tr>
<td>4.7</td>
<td>Discussion and conclusion</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td><strong>CHAPTER 5 PRESENTATION AND DESCRIPTION OF FINDINGS</strong></td>
<td>126</td>
</tr>
<tr>
<td>5.1</td>
<td>Introduction and Overview of the Chapter</td>
<td>126</td>
</tr>
<tr>
<td>5.2</td>
<td>Assessing Performance in English Group Discussion Tasks</td>
<td>126</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Introduction</td>
<td>126</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Results of task performance</td>
<td>126</td>
</tr>
<tr>
<td>5.2.2.1</td>
<td>Results by treatment</td>
<td>127</td>
</tr>
<tr>
<td>5.2.2.2</td>
<td>Results by proficiency level</td>
<td>128</td>
</tr>
<tr>
<td>5.2.3</td>
<td>Summary and discussion</td>
<td>130</td>
</tr>
<tr>
<td>5.3</td>
<td>Assessing Self-perceived Strategy Use from Strategy Questionnaires</td>
<td>130</td>
</tr>
<tr>
<td>5.3.1</td>
<td>Introduction</td>
<td>130</td>
</tr>
<tr>
<td>5.3.2</td>
<td>Presentation and description of findings</td>
<td>130</td>
</tr>
<tr>
<td>5.3.3</td>
<td>Findings on direct strategies</td>
<td>131</td>
</tr>
<tr>
<td>5.3.4</td>
<td>Findings on indirect strategies</td>
<td>132</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Summary and discussion</td>
<td>134</td>
</tr>
<tr>
<td>5.4</td>
<td>Assessing Observed Strategy Use in Action</td>
<td>135</td>
</tr>
<tr>
<td>5.4.1</td>
<td>Introduction</td>
<td>135</td>
</tr>
<tr>
<td>5.4.2</td>
<td>Observed strategy use in English group discussions</td>
<td>135</td>
</tr>
<tr>
<td>5.4.2.1</td>
<td>Findings by whole sample</td>
<td>135</td>
</tr>
<tr>
<td>5.4.2.2</td>
<td>Findings for individual, direct strategies</td>
<td>140</td>
</tr>
<tr>
<td>5.4.2.3</td>
<td>Findings by individual, indirect strategies</td>
<td>143</td>
</tr>
<tr>
<td>5.4.2.4</td>
<td>Findings by individual, non-target strategies</td>
<td>144</td>
</tr>
<tr>
<td>5.4.2.5</td>
<td>Summary of findings</td>
<td>148</td>
</tr>
<tr>
<td>5.4.3</td>
<td>Observed strategy use in Cantonese preparatory talks</td>
<td>149</td>
</tr>
<tr>
<td>5.4.3.1</td>
<td>Findings by whole sample</td>
<td>150</td>
</tr>
<tr>
<td>5.4.3.2</td>
<td>Findings by individual, target strategies</td>
<td>153</td>
</tr>
<tr>
<td>5.4.3.3</td>
<td>Findings by individual, non-target strategies</td>
<td>156</td>
</tr>
<tr>
<td>5.4.3.4</td>
<td>Summary of findings</td>
<td>158</td>
</tr>
<tr>
<td>5.4.4</td>
<td>Summary and discussion</td>
<td>160</td>
</tr>
<tr>
<td>5.5</td>
<td>Assessing Reported Strategy Use in Stimulated Recall Interviews</td>
<td>161</td>
</tr>
<tr>
<td>5.5.1</td>
<td>Introduction</td>
<td>161</td>
</tr>
<tr>
<td>5.5.2</td>
<td>Reported strategy use in English discussions</td>
<td>161</td>
</tr>
<tr>
<td>5.5.2.1</td>
<td>Quantitative findings</td>
<td>161</td>
</tr>
<tr>
<td>5.5.2.2</td>
<td>Qualitative findings (Cases 1-4)</td>
<td>173</td>
</tr>
<tr>
<td>5.5.3</td>
<td>Reported strategy use in Cantonese preparatory talks</td>
<td>188</td>
</tr>
<tr>
<td>5.5.3.1</td>
<td>Quantitative findings</td>
<td>188</td>
</tr>
<tr>
<td>5.5.3.2</td>
<td>Qualitative findings (Cases 5-8)</td>
<td>201</td>
</tr>
<tr>
<td>5.5.4</td>
<td>Summary and discussion</td>
<td>215</td>
</tr>
</tbody>
</table>
5.6 Triangulation of findings

5.6.1 Research Theme 1: Effects of Strategy Training on Strategy Use

5.6.2 Research Theme 2: Relationship Between Strategy Training, Proficiency Level and Strategy Use

5.6.3 Research Theme 3: Relationship Between Strategy Training, Proficiency Level and Task Performance

5.7 Conclusion

CHAPTER 6 INTERPRETATION AND DISCUSSION OF FINDINGS

6.1 Introduction and Overview of Chapter

6.2 Research Theme 1: The impact of strategy training on strategy use

6.2.1 Introduction

6.2.2 Recapping key findings

6.2.3 The impact of training direct and indirect strategies: similarities

6.2.4 Impact on training direct and indirect strategies: differences

6.2.5 Impact of strategy training on individual target strategies

6.2.6 A summary of implications for strategy training

6.2.7 Conclusion

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

6.3.1 Introduction

6.3.2 Recapping key findings

6.3.3 Findings: Synopsis and key issues

6.3.4 Strategy training and proficiency level

6.3.5 Direct strategies and proficiency level

6.3.6 Indirect strategies and proficiency level

6.3.7 Summary and pedagogic implications

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

6.4.1 Introduction

6.4.2 Recapping key findings

6.4.3 Findings: Synopsis and key issues

6.4.4 Direct strategies and task performance

6.4.5 Indirect strategies and task performance

6.4.6 Direct strategies, indirect strategies and task performance

6.4.7 Summary and pedagogic implications

6.4.8 Conclusion
6.5 A multi-method approach to assessing the impact of strategy training: an appraisal
6.5.1 Introduction
6.5.2 Rating task performances
6.5.3 Probing changes in self perceptions via questionnaires
6.5.4 Observing strategy use in action
6.5.5 Assessing reported strategy use in stimulated recall interviews (SRIs)
6.5.6 A concise overview of findings by different methods
6.5.7 Conclusion: contributions of a multi-method approach

6.6 Research design: an appraisal
6.6.1 Research paradigm
6.6.2 Strategy teaching materials and approaches
6.6.3 Discussion tasks
6.6.4 Summary

6.7 Conclusion

CHAPTER 7 SUMMARY AND CONCLUSIONS

7.1 Introduction and Overview of Chapter

7.2 The interventionist study: an overview

7.3 Key findings, conclusions, and pedagogic implications
7.3.1 Research theme 1: The impact of strategy training on strategy use
7.3.2 Research theme 2: Strategy training, proficiency level and strategy use
7.3.3 Research theme 3: Strategy training, proficiency level and task performance
7.3.4 A multi-method approach

7.4 Contributions of the present study

7.5 Limitations of the present study

7.6 Directions for future research

Bibliography

Appendices

1 An inventory of strategic language devices
2 Taxonomies of communication strategies
3 Definitions of strategies targeted in the interventionist study
4 Statistical details of students’ proficiency scores
<table>
<thead>
<tr>
<th></th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Demonstration of the thinking aloud process</td>
<td>333</td>
</tr>
<tr>
<td>6</td>
<td>Sample training material for E1 and for E2</td>
<td>334</td>
</tr>
<tr>
<td>7</td>
<td>Group discussion tasks to assess performance</td>
<td>340</td>
</tr>
<tr>
<td>8</td>
<td>Transcripts of 'whole-class' discussion tasks (see Table 4.3 in section 4.3.4)</td>
<td>344</td>
</tr>
<tr>
<td>9</td>
<td>Rating instructions to 4 judges</td>
<td>363</td>
</tr>
<tr>
<td>10</td>
<td>Contents of questionnaires (1) and (2)</td>
<td>364</td>
</tr>
<tr>
<td>11</td>
<td>Transcripts of 'pull-out' group tasks for coding observed strategy use (see Table 4.6 in section 4.5.2)</td>
<td>371</td>
</tr>
<tr>
<td>12</td>
<td>A coded sample of an English discussion (Performance Data)</td>
<td>396</td>
</tr>
<tr>
<td>13</td>
<td>A coded sample of a preparatory talk in Cantonese (Performance Data)</td>
<td>403</td>
</tr>
<tr>
<td>14</td>
<td>Codes, definitions, and examples of strategies observed in the performance data</td>
<td>406</td>
</tr>
<tr>
<td>15</td>
<td>An overview of students involved in stimulated recall interviews</td>
<td>413</td>
</tr>
<tr>
<td>16</td>
<td>Codes 1, definitions, operational criteria, and examples of strategies reported in the stimulated recall interviews (SRI)</td>
<td>414</td>
</tr>
<tr>
<td>17</td>
<td>A coded sample of stimulated recall interview (SRI data)</td>
<td>428</td>
</tr>
<tr>
<td>18</td>
<td>Details of the questionnaire findings</td>
<td>431</td>
</tr>
<tr>
<td>19</td>
<td>Effects matrix: Annie’s reported use of target and non-target strategies across phrases (case 1)</td>
<td>435</td>
</tr>
<tr>
<td>20</td>
<td>Effects matrix: Cynthia’s reported use of target and non-target strategies across phrases (case 2)</td>
<td>437</td>
</tr>
<tr>
<td>21</td>
<td>Effects matrix: Kwok’s reported use of target and non-target strategies across phrases (case 3)</td>
<td>439</td>
</tr>
<tr>
<td>22</td>
<td>Effects matrix: Ng’s reported use of target and non-target strategies across phrases (case 4)</td>
<td>441</td>
</tr>
<tr>
<td>23</td>
<td>Effects matrix: Vicky’s reported use of target and non-target strategies across phases (case 5)</td>
<td>442</td>
</tr>
<tr>
<td>24</td>
<td>Effects matrix: Rickie’s reported use of target and non-target strategies across phases (case 6)</td>
<td>444</td>
</tr>
<tr>
<td>25</td>
<td>Effects matrix: Dale’s reported use of target and non-target strategies across phases (case 7)</td>
<td>445</td>
</tr>
<tr>
<td>26</td>
<td>Effects matrix: Gary’s reported use of target and non-target strategies across phases (case 8)</td>
<td>446</td>
</tr>
</tbody>
</table>
List of Tables

2.1 Encoding on-line speech: processes, problems, direct strategies and their possible roles and functions (adapted from Dörnyei and Kormos 1998) 51

2.2 Learning to speak in an L2 oral task: indirect strategies and their possible roles and functions 56

3.1 An overview of the research questions and research methods aimed to answer the questions 71

4.1 An overview of the interventionist study in 2000 91

4.2 Overview of Data Collection Methods and Schedules in the Main Study 97

4.3 Rating task performances: data collection schedule and data set 98

4.4 Time Frame of Administering the Questionnaires and the Data Set 102

4.5 Data collection activities for ‘pull-out’ groups 110

4.6 Recording schedule and data set of performance data 110

4.7 An Extract of Coded English Discussion 112

4.8 The recording schedule and data set of stimulated recall interviews 116

5.1 Ratings and pre-post gains for C, E1 and E2 classes 127

5.2 Ratings and pre-post gains (by proficiency level) 128

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 131

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 133

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) 136

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) 138
5.7 Comparison of C's, E1's and E2's standardized frequencies of use of direct, target strategies per 100 words (F) across Phases (By treatment)

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)

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

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

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

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

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

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)

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)

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

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

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)

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

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)

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)

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

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

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

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

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

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

5.29 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of different types of recall segments (by treatment)

5.30 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of different types of recall segments (by proficiency)

5.31 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of segments coded as individual target strategies (by treatment)

5.32 Comparison of C's and E2's frequencies (N) and proportional frequencies (%) of segments coded as individual target strategies (by proficiency level)

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)

5.34 Comparison of C's and E2's proportions (%) of recall segments coded as each of the 6 non-target strategies (by proficiency)

5.35 A cross-case comparison of the number of types of strategies reported

List of Figures

2.1 A Framework for Categorising Strategies for Training: A Proposal

3.1 Diagrammatic Representation of a Multi-method Approach to Assessing the Impact of Strategy Training
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Control Group</td>
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<tr>
<td>CS</td>
<td>Communication Strategies</td>
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<tr>
<td>E1</td>
<td>Experimental Group 1</td>
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<td>E2</td>
<td>Experimental Group 2</td>
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<td>English as Foreign Language</td>
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<tr>
<td>ESL</td>
<td>English as a Second Language</td>
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<td>Low-proficiency</td>
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<td>Language Learning Strategies</td>
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<td>Long-term Memory</td>
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<td>First Language</td>
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<tr>
<td>L2</td>
<td>Second Language</td>
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<td>M Ed</td>
<td>Master of Education</td>
</tr>
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<td>NT</td>
<td>Non-targeted</td>
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<tr>
<td>RQ</td>
<td>Research Question</td>
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<td>SILL</td>
<td>Strategy Inventory for Language Learning</td>
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<td>SLA</td>
<td>Second Language Acquisition</td>
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<td>SR</td>
<td>Stimulated Recall</td>
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<td>SRI</td>
<td>Stimulated Recall Interview</td>
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<td>SS</td>
<td>Speaking Strategies</td>
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<td>STM</td>
<td>Short-term Memory</td>
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<td>T</td>
<td>Targeted</td>
</tr>
<tr>
<td>TESL</td>
<td>Teaching English as a Second Language</td>
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<tr>
<td>TESOL</td>
<td>Teaching English to Speakers of Other Languages</td>
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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 been 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) explicated, "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); Rusciolelli (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 metacognitive, 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) 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.

Poulisse and Schils (1989)

Poulisse 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 counters. 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 Naesssen, 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.

Key Parameter

```
Key Parameter

        'Directness'

        Major categories
        Direct          Indirect

        Other parameter
        'Reflection'
        Reflection-based
        Non-reflection-based

        Sub-categories
        Cognitive (Communication strategies)
        Meta-cognitive
        Social/affective

Figure 2.1 A Framework for Categorising Strategies for Training: A Proposal
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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 the 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).

Poulisse (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. Poulisse (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. Poulisse’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 Poulisse’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.

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)

<table>
<thead>
<tr>
<th>Phases of speech production/comprehension</th>
<th>Potential problems</th>
<th>Direct strategies proposed for the present study</th>
<th>Possible benefits to communication and to language learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualizer &amp; formulator</td>
<td>1. Resource deficits</td>
<td>‘Resourcing’</td>
<td>Providing language models for scaffolding and for possible internalisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Paraphrasing’</td>
<td>Promoting strategic competence</td>
</tr>
<tr>
<td>Planning and encoding the preverbal message</td>
<td>2. Processing time pressure</td>
<td>‘Using self-repetition’</td>
<td>Promoting strategic competence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Using fillers’</td>
<td></td>
</tr>
<tr>
<td>Conceptualizer &amp; formulator</td>
<td>3. Perceived deficiencies in one’s own speech</td>
<td>‘Self-correction’</td>
<td>Directing attention to accuracy of form instead of meaning only</td>
</tr>
<tr>
<td>Planning and encoding the preverbal message</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulator &amp; articulator</td>
<td>4. Perceived deficiencies in interlocutor’s speech</td>
<td>‘Asking for repetition’ ‘Seeking clarification’ ‘Seeking confirmation’</td>
<td>Promoting interaction and negotiation of meaning necessary for L2 acquisition</td>
</tr>
<tr>
<td>Monitoring the phonetic plan and the articulated speech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulator</td>
<td>Post articulatory monitoring</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 difficult 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

<table>
<thead>
<tr>
<th>Strategy sub-categories</th>
<th>Indirect strategies proposed for the present study *</th>
<th>Possible benefits to task performance and to language learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-cognitive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ‘Problem identification’</td>
<td>▪ 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)</td>
<td></td>
</tr>
<tr>
<td>2. ‘Planning ideas in advance’</td>
<td>▪ Developing strategic competence</td>
<td></td>
</tr>
<tr>
<td>3. ‘Functional planning’</td>
<td>▪ Enhancing task knowledge (i.e. understanding task purpose and demands)</td>
<td></td>
</tr>
<tr>
<td>4. ‘Evaluation’</td>
<td>▪ Planning for learning (i.e. rehearsing linguistic structures prior to task proper)</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ‘Asking for help’</td>
<td>▪ Maintaining an optimal social state conducive to successful task completion and possibly to language learning</td>
<td></td>
</tr>
<tr>
<td>6. ‘Giving help’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ‘Positive self talk’</td>
<td>▪ Maintaining an optimal affective/psychological environment conducive to successful task completion and possibly to language learning</td>
<td></td>
</tr>
</tbody>
</table>

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. Skehen 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>
<thead>
<tr>
<th>Research themes and questions</th>
<th>Research methods/ datasets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task ratings</td>
<td>Questionnaires</td>
</tr>
<tr>
<td>Research Theme 1: Strategy training and strategy use (Questions 1 - 3)</td>
<td>X</td>
</tr>
<tr>
<td>Research Theme 2: Strategy use and proficiency level (Questions 4 - 5)</td>
<td></td>
</tr>
<tr>
<td>Research Theme 3: Strategy training, task performance and proficiency level (Questions 6 - 8)</td>
<td>X</td>
</tr>
</tbody>
</table>
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.

![Diagram of multi-method approach]

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

* 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

<table>
<thead>
<tr>
<th>Research methods</th>
<th>Student involvement</th>
<th>Administration Schedule</th>
<th>Research questions addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task ratings</td>
<td>Whole class &amp; pull-out groups</td>
<td>Phase 1 (Pre-training)</td>
<td>Nov 1999 - June 2000</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>Whole class</td>
<td>Phase 2* (Strategy training)</td>
<td>Dec 1999</td>
</tr>
<tr>
<td>SR interviews</td>
<td>Pull-out groups</td>
<td></td>
<td>Dec 1999 - Mar 2000</td>
</tr>
</tbody>
</table>

<*> 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_

<table>
<thead>
<tr>
<th>Task</th>
<th>Whole-class task (Recorded during normal class time)</th>
<th>Pull-out group task (Recorded outside normal class time)</th>
<th>Total no. of recordings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test (Nov 1999)</td>
<td>Post-test (June 2000)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test (Nov 1999)</td>
<td>Post-test (June 2000)</td>
<td></td>
</tr>
<tr>
<td>C High</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Low</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>E1 H</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>E2 H</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Sub-total</td>
<td>15</td>
<td>15</td>
<td>42 *</td>
</tr>
</tbody>
</table>

* 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 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>
<thead>
<tr>
<th>Class</th>
<th>Phase 1 (Dec 1999)</th>
<th>Phase 2 (Mar 2000)</th>
<th>Phase 3 (June 2000)</th>
<th>No. of questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Q1</td>
<td>-</td>
<td>Q1</td>
<td>40</td>
</tr>
<tr>
<td>E2</td>
<td>Q2</td>
<td>-</td>
<td>Q2</td>
<td>40</td>
</tr>
<tr>
<td>C</td>
<td>Q1 &amp; Q2</td>
<td>-</td>
<td>Q1 &amp; Q2</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total: 160</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very high</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very high</td>
</tr>
</tbody>
</table>

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)**

<table>
<thead>
<tr>
<th>Pre-training ratings</th>
<th>Post-training ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>1</td>
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<tr>
<td>(4)</td>
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<td>(5)</td>
<td></td>
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<tr>
<td>(6)</td>
<td></td>
</tr>
</tbody>
</table>

Proportion of increase: \( \frac{8}{15} = 53\% \)
The relative increase in positive scores between E1 and C is (53\%-17\%) = 36\%

Proportion of decrease: \( \frac{4}{15} = 27\% \)
The relative increase in negative scores between E1 and C is (42\%-27\%) = 15\%

**C Group (N=12)**

<table>
<thead>
<tr>
<th>Pre-training ratings</th>
<th>Post-training ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>(1)</td>
<td>1</td>
</tr>
<tr>
<td>(2)</td>
<td></td>
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<td>(3)</td>
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<tr>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>(6)</td>
<td></td>
</tr>
</tbody>
</table>

Proportion of increase: \( \frac{2}{12} = 17\% \)

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 SRI s 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

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

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 SRI s), 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

<table>
<thead>
<tr>
<th>Class</th>
<th>Proficiency/Subgroup</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Number of recordings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 1999</td>
<td>March 2000</td>
<td>June 2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E1 High</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Total | | | |
|-------| | | |
| 18 |

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

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.

\[
\text{Inter-coder reliability} = \frac{\text{Number of segments coded the same by the Coder and the Researcher}}{\text{Number of segments coded by the Researcher}}
\]
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

<table>
<thead>
<tr>
<th>Class</th>
<th>Ability</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Number of SRIs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dec 1999</td>
<td>March 2000</td>
<td>June 2000</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>High</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>E2</td>
<td>H</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>C</td>
<td>H</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

< 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
SRIs were for personal research and that students' performance both in the two tasks and the SRIs 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 SRIs, two key decisions were made. First, in order to cut down on the waiting time for individuals for the SRIs, 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 What do you mean by ‘say something more’?
RECALL 2 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.

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.

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

<table>
<thead>
<tr>
<th>Whole class task</th>
<th>‘English’ scores on a 6-point scale</th>
<th>‘Task effectiveness’ scores on a 6-point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-</td>
<td>Post-</td>
</tr>
<tr>
<td>Class</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>C</td>
<td>3.20</td>
<td>0.89</td>
</tr>
<tr>
<td>E1</td>
<td>2.95</td>
<td>1.05</td>
</tr>
<tr>
<td>E2</td>
<td>1.85</td>
<td>0.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>‘Pull-out’ group task</th>
<th>‘English’ scores on a 6-point scale</th>
<th>‘Task effectiveness’ scores on a 6-point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>C</td>
<td>2.63</td>
<td>0.92</td>
</tr>
<tr>
<td>E1</td>
<td>3.50</td>
<td>1.07</td>
</tr>
<tr>
<td>E2</td>
<td>2.00</td>
<td>0.76</td>
</tr>
</tbody>
</table>

<*> 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 subgroup.

Table 5.2

<table>
<thead>
<tr>
<th>Class</th>
<th>Ability</th>
<th>‘English’ scores</th>
<th>‘Task effectiveness’ scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-</td>
<td>Post-</td>
</tr>
<tr>
<td>Whole class task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>H</td>
<td>3.42</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2.88</td>
<td>0.99</td>
</tr>
<tr>
<td>E1</td>
<td>H</td>
<td>3.67</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>1.88</td>
<td>0.64</td>
</tr>
<tr>
<td>E2</td>
<td>H</td>
<td>2.00</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>1.63</td>
<td>0.74</td>
</tr>
<tr>
<td>‘Pull-out’ group task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>H</td>
<td>2.75</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2.50</td>
<td>1.29</td>
</tr>
<tr>
<td>E1</td>
<td>H</td>
<td>4.25</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2.75</td>
<td>0.96</td>
</tr>
<tr>
<td>E2</td>
<td>H</td>
<td>2.00</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2.00</td>
<td>0.82</td>
</tr>
</tbody>
</table>

<*> 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, of 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.

Results for training in the use of direct strategies
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 El and E2, strategy intervention apparently had an impact on students’ performance in group discussions. In particular, to address RQ6, for El, 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>
<thead>
<tr>
<th>Self-perceived Strategy Use (Effect size in %)</th>
<th>Perceptions of Strategy Effectiveness (Effect size in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attentive listening +66* p=0.028 NT</td>
<td>Attentive listening rather than seeking clarification</td>
</tr>
<tr>
<td>Focusing more on content than language +60* p=0.007 NT</td>
<td>Paying more attention to one's content than use of language +35</td>
</tr>
<tr>
<td>Resourcing +51* p=0.058 T</td>
<td>Seeking confirmation +35</td>
</tr>
<tr>
<td>Using fillers +32 T</td>
<td>Paraphrasing +32</td>
</tr>
<tr>
<td>Letting others take the floor rather than risk paraphrasing +30 T</td>
<td>Using fillers +31* p=0.058</td>
</tr>
<tr>
<td>Using self repetition +23 NT</td>
<td>Using pauses to gain time to think +30* p=0.075</td>
</tr>
<tr>
<td>Using pauses to gain time to think +20 T</td>
<td>Self monitoring +25</td>
</tr>
<tr>
<td>Seeking confirmation +17 T</td>
<td>Using self repetition +25</td>
</tr>
<tr>
<td>Paraphrasing +6 T</td>
<td>Seeking clarification +25</td>
</tr>
<tr>
<td>Seeking repetition +5 NT</td>
<td>Continuing to express oneself regardless +23</td>
</tr>
<tr>
<td>Self monitoring -7 T</td>
<td>Asking for repetition +19</td>
</tr>
<tr>
<td>Relying on oneself rather than on resources -14 NT</td>
<td>Letting others take the floor rather than risk paraphrasing +8</td>
</tr>
<tr>
<td>Continuing to express oneself regardless -14 NT</td>
<td>Relying on oneself rather than on resources 0</td>
</tr>
<tr>
<td>Seeking clarification -18 T</td>
<td>Resourcing -56* p=0.058</td>
</tr>
</tbody>
</table>

<*> 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

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

< * > 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)

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

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

<**> 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 an 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>
<thead>
<tr>
<th></th>
<th>C</th>
<th>E1 **</th>
<th>E2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Phase 1</td>
<td>Phase 2</td>
<td>Phase 3</td>
</tr>
<tr>
<td></td>
<td>W=2332</td>
<td>W=2372</td>
<td>W=1798</td>
</tr>
<tr>
<td></td>
<td>N=168</td>
<td>N=136</td>
<td>N=118</td>
</tr>
<tr>
<td><strong>Target, direct strategies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.Resourcing</td>
<td>0.6</td>
<td>0.3</td>
<td>1.3</td>
</tr>
<tr>
<td>2.Paraphrasing</td>
<td>0.2</td>
<td>0.1</td>
<td>1.3</td>
</tr>
<tr>
<td>3.Using fillers</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>4.Self repetition</td>
<td>5.4</td>
<td>3.8</td>
<td>2.0</td>
</tr>
<tr>
<td>5.Self correction</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>6.Asking for repetition</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
</tr>
<tr>
<td>7.Seeking clarification</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>8.Seeking confirmation</td>
<td>0.1</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Aggregated frequency of use</strong></td>
<td>7.1</td>
<td>5.7</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Aggregated variety of use</strong></td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

< 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)

<table>
<thead>
<tr>
<th>Individual, direct strategies</th>
<th>Phase</th>
<th>C</th>
<th>E1</th>
<th>E2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>1. Resourcing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.8</td>
<td>0.5</td>
<td>1.2</td>
<td>0.2</td>
</tr>
<tr>
<td>L</td>
<td>0.5</td>
<td>0.2</td>
<td>1.4</td>
<td>0</td>
</tr>
<tr>
<td>2. Paraphrasing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.3</td>
<td>0</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>L</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>3. Using fillers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0</td>
<td>0.3</td>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td>L</td>
<td>0</td>
<td>0.3</td>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td>4. Self repetition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>6.1</td>
<td>3.3</td>
<td>2.9</td>
<td>3.3</td>
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<td>L</td>
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<td>3.1</td>
<td>6.0</td>
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<td>5. Self correction</td>
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<td>0.5</td>
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<td>0.7</td>
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<td>0.9</td>
<td>0.6</td>
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<tr>
<td>6. Asking for repetition</td>
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<td></td>
</tr>
<tr>
<td>H</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>L</td>
<td>0.1</td>
<td>0.1</td>
<td>0.8</td>
<td>0</td>
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<tr>
<td>7. Seeking clarification</td>
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<td></td>
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<tr>
<td>H</td>
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<td>0.2</td>
<td>0.3</td>
<td>0.1</td>
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<tr>
<td>L</td>
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<td>0.3</td>
<td>0.1</td>
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<tr>
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<td>0</td>
<td>0.3</td>
<td>0.8</td>
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<tr>
<td>L</td>
<td>0.1</td>
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<tr>
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<td>8.0</td>
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<td>6.1</td>
<td>6.0</td>
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<td>Aggregated variety of use</td>
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<td></td>
</tr>
<tr>
<td>H</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>L</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

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-proiciency 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.
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>
<thead>
<tr>
<th>Table 5.9</th>
<th>Comparison of the standardized frequency of use (per 100 words) of indirect, target strategies across groups and phases (by treatment)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Phase</td>
<td>1</td>
</tr>
<tr>
<td>Problem Identification</td>
<td>0</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0</td>
</tr>
<tr>
<td>Giving help</td>
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</tr>
<tr>
<td>Asking help</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<**> 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.
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

<table>
<thead>
<tr>
<th>Patterns of strategy use across Phases 1, 2, 3</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Rise-fall</td>
<td>5</td>
</tr>
<tr>
<td>Fall-rise</td>
<td>2</td>
</tr>
<tr>
<td>Steady fall</td>
<td>2</td>
</tr>
<tr>
<td>Steady rise</td>
<td>6</td>
</tr>
<tr>
<td>Steady state</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

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

*Key: A shaded box denotes that a low-subgroup had higher frequency of use than its high-proiciency 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>
<thead>
<tr>
<th>Trends across Phases 1, 2, 3</th>
<th>Proficiency level</th>
<th>C</th>
<th>E1</th>
<th>E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise-fall</td>
<td>H</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>5</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Steady fall</td>
<td>H</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fall-rise</td>
<td>H</td>
<td>3</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Steady rise</td>
<td>H</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>3</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Steady state</td>
<td>H</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

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 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 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>
<thead>
<tr>
<th>Class (8 students each)</th>
<th>N/T</th>
<th>N/T x 10 = F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Phase 1</td>
<td>Phase 2</td>
</tr>
<tr>
<td>Target strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>36/89</td>
<td>46/127</td>
</tr>
<tr>
<td>E1</td>
<td>25/55</td>
<td>56/93</td>
</tr>
<tr>
<td>E2 *</td>
<td>28/121</td>
<td>32/97</td>
</tr>
<tr>
<td>Non-target strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>48/89</td>
<td>72/127</td>
</tr>
<tr>
<td>E1</td>
<td>26/55</td>
<td>17/93</td>
</tr>
<tr>
<td>E2 *</td>
<td>78/121</td>
<td>57/97</td>
</tr>
</tbody>
</table>

<EI > 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)

<table>
<thead>
<tr>
<th>Class</th>
<th>Ability</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/T</td>
<td>N/T</td>
<td>N/T</td>
<td>N/T</td>
<td>N/T x 10 = F</td>
<td>N/T x 10 = F</td>
<td>N/T x 10 = F</td>
</tr>
<tr>
<td>C</td>
<td>H(igh)</td>
<td>23/37</td>
<td>20/72</td>
<td>13/59</td>
<td>4.0</td>
<td>2.8</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>L(low)</td>
<td>13/32</td>
<td>26/55</td>
<td>39/51</td>
<td>4.1</td>
<td>4.7</td>
<td>7.7</td>
</tr>
<tr>
<td>E1</td>
<td>H</td>
<td>13/35</td>
<td>30/58</td>
<td>26/32</td>
<td>3.7</td>
<td>5.2</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>12/20</td>
<td>26/35</td>
<td>39/53</td>
<td>6.0</td>
<td>7.4</td>
<td>7.4</td>
</tr>
<tr>
<td>E2*</td>
<td>H</td>
<td>14/59</td>
<td>16/42</td>
<td>11/65</td>
<td>2.4</td>
<td>3.8</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>14/62</td>
<td>16/55</td>
<td>14/39</td>
<td>2.3</td>
<td>2.9</td>
<td>3.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-target strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
</tr>
<tr>
<td>H</td>
</tr>
<tr>
<td>L</td>
</tr>
<tr>
<td>E1</td>
</tr>
<tr>
<td>H</td>
</tr>
<tr>
<td>L</td>
</tr>
<tr>
<td>E2*</td>
</tr>
<tr>
<td>H</td>
</tr>
<tr>
<td>L</td>
</tr>
</tbody>
</table>

<El > 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 consistent 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)

<table>
<thead>
<tr>
<th>Class</th>
<th>C</th>
<th>E1</th>
<th>E2 **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Number of turns produced per class per phase (T)</td>
<td>89</td>
<td>127</td>
<td>110</td>
</tr>
<tr>
<td>Target strategies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Planning ideas in advance</td>
<td>3.0</td>
<td>3.4</td>
<td>4.6</td>
</tr>
<tr>
<td>2. Problem Identification</td>
<td>0.8</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>3. Functional planning</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Evaluation</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Asking for help</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Giving help</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>7. Positive self talk</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Aggregated frequency of use</td>
<td>4.0</td>
<td>3.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Aggregated variety of use</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

< 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),
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)

<table>
<thead>
<tr>
<th>Class Ability</th>
<th>C</th>
<th>E1</th>
<th>E2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Number of turns produced per group per phase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>57</td>
<td>72</td>
<td>59</td>
</tr>
<tr>
<td>Low</td>
<td>32</td>
<td>55</td>
<td>51</td>
</tr>
<tr>
<td>1. Planning ideas in advance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>2.8</td>
<td>2.5</td>
<td>2.2</td>
</tr>
<tr>
<td>L</td>
<td>3.4</td>
<td>4.8</td>
<td>7.5</td>
</tr>
<tr>
<td>2. Problem identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.9</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.6</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>3. Functional planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Asking for help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Giving help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>7. Positive talk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>L</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Aggregated frequency of use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>4.0</td>
<td>2.8</td>
<td>2.2</td>
</tr>
<tr>
<td>L</td>
<td>4.1</td>
<td>4.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Aggregated variety of use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<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>
<thead>
<tr>
<th>Class</th>
<th>C</th>
<th>E1</th>
<th>E2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of turns produced per class per phase</td>
<td>89</td>
<td>127</td>
<td>110</td>
</tr>
<tr>
<td>1. Enhancing task knowledge</td>
<td>1.3</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>2. Checking meanings</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>3. Rehearsing ranking</td>
<td>2.3</td>
<td>4.9</td>
<td>3.9</td>
</tr>
<tr>
<td>4. Monitoring contributions</td>
<td>0.0</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Suggesting turn-taking tactics</td>
<td>0.9</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Facilitating progress</td>
<td>0.1</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Aggregated frequency of use</td>
<td>5.4</td>
<td>5.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Aggregated variety of use</td>
<td>5.5</td>
<td>5.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

<El> 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>
<thead>
<tr>
<th>Class Ability</th>
<th>C 1</th>
<th>2</th>
<th>3</th>
<th>E1 1</th>
<th>2</th>
<th>3</th>
<th>E2* 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of turns produced per group per phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>57</td>
<td>72</td>
<td>59</td>
<td>35</td>
<td>58</td>
<td>32</td>
<td>59</td>
<td>42</td>
<td>65</td>
</tr>
<tr>
<td>Low</td>
<td>32</td>
<td>55</td>
<td>51</td>
<td>20</td>
<td>35</td>
<td>53</td>
<td>62</td>
<td>55</td>
<td>39</td>
</tr>
</tbody>
</table>

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 |

<El > 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 subgroup 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)

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency (N)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C (4 students)</td>
<td>E1 (8 students)</td>
</tr>
<tr>
<td>Phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Target strategies*</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Non-target strategies</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Non strategies</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>35</td>
</tr>
<tr>
<td>Mean frequency per student</td>
<td>11.5</td>
<td>8.8</td>
</tr>
</tbody>
</table>

* 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 El, 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. El, 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 El 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 El groups. Each cell under C presents aggregated frequency counts from 2 students and each cell under El from 4 students.

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

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

<*> denotes direct strategies introduced to El 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 x 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)

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequencies (N)</th>
<th>Proportions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class C (4</td>
<td>Class E1 (8</td>
</tr>
<tr>
<td></td>
<td>students)</td>
<td>students)</td>
</tr>
<tr>
<td></td>
<td>C (4 students)</td>
<td>E1 (8 students)</td>
</tr>
<tr>
<td>Phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Resourcing</td>
<td>0 0 0 3 4 1</td>
<td>0 0 0 0 1 11</td>
</tr>
<tr>
<td></td>
<td>46.2 16.1</td>
<td>41.1 17.2</td>
</tr>
<tr>
<td>2. Paraphrasing</td>
<td>9 2 7 4 4 7</td>
<td>19.6 5.7 14.9</td>
</tr>
<tr>
<td></td>
<td>19.6 5.7 14.9</td>
<td>5.5 4.3 11.1</td>
</tr>
<tr>
<td>3. Using fillers</td>
<td>1 0 0 3 3 3</td>
<td>2.2 0.0 0.0</td>
</tr>
<tr>
<td></td>
<td>1.9 0.0 0.0</td>
<td>0.0 3.2 4.8</td>
</tr>
<tr>
<td>4. Self correction</td>
<td>0 0 0 0 1 2</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td></td>
<td>0.0 0.0 0.0</td>
<td>0.0 1.1 3.2</td>
</tr>
<tr>
<td>5. Self repetition</td>
<td>0 0 0 0 1 0</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td></td>
<td>0.0 0.0 0.0</td>
<td>0.0 0.0 1.6</td>
</tr>
<tr>
<td>6. Asking for repetition</td>
<td>0 0 0 0 1 1</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td></td>
<td>0.0 0.0 0.0</td>
<td>0.0 0.0 1.6</td>
</tr>
<tr>
<td>7. Seeking clarification</td>
<td>0 1 0 0 0 0</td>
<td>0.0 2.9 0.0</td>
</tr>
<tr>
<td></td>
<td>0.0 2.9 0.0</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td>8. Seeking confirmation</td>
<td>0 0 0 0 0 0</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td></td>
<td>0.0 0.0 0.0</td>
<td>0.0 0.0 0.0</td>
</tr>
<tr>
<td>Group’s total in frequencies (N) or proportions (%)</td>
<td>46 35 47 73 93 63</td>
<td>100 100 100 100 100 100</td>
</tr>
<tr>
<td>Group’s aggregate in variety</td>
<td>2 2 1 2 4 6</td>
<td>2 2 1 2 4 6</td>
</tr>
</tbody>
</table>

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>
<thead>
<tr>
<th>Class</th>
<th>Ability</th>
<th>Frequencies (N)</th>
<th>Proportions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td></td>
<td>C (2 students)</td>
<td>E1 (4 students)</td>
</tr>
<tr>
<td>Resourcing</td>
<td>High</td>
<td>0 0 0 1 8 2</td>
<td>0.0 0.0 0.0 2.8 15.4 7.4</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>0 0 0 2 8 9</td>
<td>0.0 0.0 0.0 5.4 19.5 25.0</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>H</td>
<td>7 0 5 1 0 3</td>
<td>30.4 0.0 19.2 2.8 0.0 11.1</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2 2 2 3 4 4</td>
<td>8.7 14.3 9.5 8.1 9.8 11.1</td>
</tr>
<tr>
<td>Using Fillers</td>
<td>H</td>
<td>1 0 0 0 2 1</td>
<td>4.4 0.0 0.0 0.0 3.9 3.7</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>0 0 0 0 1 2</td>
<td>0.0 0.0 0.0 0.0 2.4 5.6</td>
</tr>
</tbody>
</table>
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 El. 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 El’s frequencies (N) and proportions (%) of segments coded as individual, non-target strategies (By treatment)

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequencies (N)</th>
<th>Proportions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C (4 students)</td>
<td>E1 (8 students)</td>
</tr>
<tr>
<td>Phase</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1. Seeking meaning</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2. Repairing</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3. Elaborating</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Focusing on task</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5. Seeking views</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6. Seeking agreement</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Taking risks</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8. Activating background knowledge</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>9. Using gestures</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. Adjusting messages</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>11. Planning ideas</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>12. Functional planning</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13. Evaluating</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>14. Giving help</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>15. Asking for help</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>16. Facilitating atmosphere</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17. Facilitating progress</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. Monitoring contributions</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>19. Taking turns</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20. Enhancing task knowledge</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Trends across phases 1, 2, 3</th>
<th>Treatment group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Overall fall</td>
<td>3</td>
</tr>
<tr>
<td>Overall rise</td>
<td>4</td>
</tr>
<tr>
<td>Steady state</td>
<td>3</td>
</tr>
<tr>
<td>Sub total</td>
<td>10</td>
</tr>
<tr>
<td>Rise-fall</td>
<td>9</td>
</tr>
<tr>
<td>Fall-rise</td>
<td>1</td>
</tr>
<tr>
<td>Sub total</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

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 El, 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 El’s proportions of recall segments coded as individual, non-target strategies (By proficiency)

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

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

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  
\[ A \text{ cross-case comparison of the number of types of strategies reported} \]

<table>
<thead>
<tr>
<th>Student</th>
<th>Proficiency</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>High</td>
<td>15</td>
<td>28</td>
<td>60</td>
<td>46</td>
<td>50</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case 2</td>
<td>High</td>
<td>0</td>
<td>33</td>
<td>25</td>
<td>67</td>
<td>42</td>
<td>38</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case 3</td>
<td>Low</td>
<td>25</td>
<td>25</td>
<td>62</td>
<td>63</td>
<td>50</td>
<td>39</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case 4</td>
<td>Low</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>80</td>
<td>40</td>
<td>67</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

\(<^*^> \text{ denotes the total number of types of target and non-target strategies reported by the students}\)

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 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 recalls 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)

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequencies (N)</th>
<th>Proportional frequencies (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C (4 students)</td>
<td>E2 (8 students)</td>
</tr>
<tr>
<td></td>
<td>C (4 students)</td>
<td>E2 (8 students)</td>
</tr>
<tr>
<td>Phase</td>
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<tr>
<td>1</td>
<td>27 28 24</td>
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<td>100 100 100</td>
<td>100 100 100</td>
</tr>
<tr>
<td>3</td>
<td>100 100 100</td>
<td>100 100 100</td>
</tr>
<tr>
<td>Target strategies *</td>
<td>6 4 8 12 35</td>
<td>22.2 14.3 33.3 15.6 39.3 35.3</td>
</tr>
<tr>
<td>Non-target strategies</td>
<td>12 17 5 44 42 22</td>
<td>44.4 60.7 20.8 57.1 47.2 43.1</td>
</tr>
<tr>
<td>Non-strategic behaviour</td>
<td>9 7 11 21 12 11</td>
<td>33.3 25.0 45.8 27.3 13.4 21.6</td>
</tr>
</tbody>
</table>

<*> 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)

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequencies (N)</th>
<th>Proportional frequencies (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C (2 students per sub-group)</td>
<td>E2 (4 students per sub-group)</td>
</tr>
<tr>
<td>Phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H*</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>L*</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Non-target strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>L</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>‘Non strategic behaviour’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>L</td>
<td>13</td>
<td>14</td>
</tr>
</tbody>
</table>

<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)

<table>
<thead>
<tr>
<th>Class</th>
<th>C (4 students)</th>
<th>E2 (8 students)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequencies (N)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Phase</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>No. of recall segments</td>
<td>27 28 24</td>
<td>77 89 51</td>
<td>100 100 100</td>
</tr>
<tr>
<td>coded per class per</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>phase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>2 1</td>
<td>7.4 20.8</td>
<td>3.4 2.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>5 0</td>
<td>7.1 0.0</td>
<td>3.6 7.9</td>
</tr>
<tr>
<td>Phase 3</td>
<td>1 7</td>
<td>0.0 12.5</td>
<td>1.3 7.9</td>
</tr>
<tr>
<td>Phase 1</td>
<td>7.4</td>
<td>20.8</td>
<td>3.4 2.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>7.1</td>
<td>0.0</td>
<td>3.6 7.9</td>
</tr>
<tr>
<td>Phase 3</td>
<td>0.0</td>
<td>12.5</td>
<td>1.3 7.9</td>
</tr>
<tr>
<td>Phase 1</td>
<td>1.3</td>
<td>2.6</td>
<td>7.9 23.5</td>
</tr>
<tr>
<td>Phase 2</td>
<td>3.4</td>
<td>7.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Phase 3</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>7.4</td>
<td>20.8</td>
<td>3.4 2.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>7.1</td>
<td>0.0</td>
<td>3.6 7.9</td>
</tr>
<tr>
<td>Phase 3</td>
<td>0.0</td>
<td>12.5</td>
<td>1.3 7.9</td>
</tr>
<tr>
<td>Phase 1</td>
<td>3.4</td>
<td>2.6</td>
<td>7.9 23.5</td>
</tr>
<tr>
<td>Phase 2</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 3</td>
<td>7.9</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Proficiency level</th>
<th>C (2 students)</th>
<th>E2 (4 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of recall segments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coded per group per phase</td>
<td>High</td>
<td>14 14 11</td>
<td>42 55 29</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>13 14 13</td>
<td>35 34 22</td>
</tr>
<tr>
<td>1. Planning ideas in H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>advance</td>
<td>H</td>
<td>14.3 7.1 27.3</td>
<td>2.4 1.8 0.0</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>0.0 7.1 15.4</td>
<td>0.0 5.9 4.5</td>
</tr>
<tr>
<td>2. Problem Identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>1.8 7.1 0.0</td>
<td>4.8 7.3 24.1</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0.0 0.0 0.0</td>
<td>0.0 8.8 22.7</td>
<td></td>
</tr>
<tr>
<td>3. Functional planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>7.1 0.0 18.2</td>
<td>9.5 9.1 0.0</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0.0 0.0 7.7</td>
<td>2.8 5.9 4.5</td>
<td></td>
</tr>
<tr>
<td>4. Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0 0.0 0.0</td>
<td>0.0 9.1 6.9</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0.0 7.1 0.0</td>
<td>0.0 11.8 0.0</td>
<td></td>
</tr>
<tr>
<td>5. Giving help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0 7.1 0.0</td>
<td>0.0 1.8 3.4</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>7.7 0.0 0.0</td>
<td>2.9 0.0 0.0</td>
<td></td>
</tr>
<tr>
<td>6. Asking for help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>7.1 0.0 0.0</td>
<td>4.8 5.5 0.0</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0.0 0.0 2.8</td>
<td>2.9 8.8 0.0</td>
<td></td>
</tr>
<tr>
<td>7. Positive self talk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0 0.0 0.0</td>
<td>0.0 1.8 0.0</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0.0 0.0 0.0</td>
<td>0.0 2.9 4.5</td>
<td></td>
</tr>
<tr>
<td>Aggregated proportions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of use (%)</td>
<td>H</td>
<td>35.7 14.3 45.5</td>
<td>21.4 36.4 34.5</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>7.7 14.3 23.1</td>
<td>8.6 44.1 36.4</td>
</tr>
<tr>
<td>Aggregated variety of use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>4 2 2</td>
<td>4 7 3</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2 2 2</td>
<td>3 6 4</td>
</tr>
</tbody>
</table>

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>
<thead>
<tr>
<th>Table 5.33</th>
<th>Comparison of C’s and E2’s frequencies (N) and proportional frequencies (%) of recall segments coded as individual non-target strategies (by treatment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td></td>
</tr>
<tr>
<td>Phase</td>
<td></td>
</tr>
<tr>
<td>No. of recall segments coded per class per phase</td>
<td></td>
</tr>
<tr>
<td>1. Enhancing task knowledge</td>
<td></td>
</tr>
<tr>
<td>2. Resourcing</td>
<td></td>
</tr>
<tr>
<td>3. Rehearsing ranking</td>
<td></td>
</tr>
<tr>
<td>4. Monitoring contributions</td>
<td></td>
</tr>
<tr>
<td>5. Suggesting turn-taking tactics</td>
<td></td>
</tr>
<tr>
<td>6. Facilitating progress</td>
<td></td>
</tr>
<tr>
<td>Aggregated frequencies (N) or proportions (%)</td>
<td></td>
</tr>
<tr>
<td>Aggregated variety of use</td>
<td></td>
</tr>
</tbody>
</table>
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)

<table>
<thead>
<tr>
<th></th>
<th>Ability</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>E2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of segments coded per group per phase (T)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>14</td>
<td>14</td>
<td>11</td>
<td>42</td>
<td>55</td>
</tr>
<tr>
<td>Low</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td>1. Enhancing task knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.0</td>
<td>14.3</td>
<td>0.0</td>
<td>26.2</td>
<td>18.2</td>
</tr>
<tr>
<td>L</td>
<td>23.1</td>
<td>28.6</td>
<td>0.0</td>
<td>57.1</td>
<td>32.4</td>
</tr>
<tr>
<td>2. Resourcing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>L</td>
<td>4</td>
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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

<table>
<thead>
<tr>
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<th>Target strategies (T)</th>
<th>Non-target strategies (NT)</th>
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<tr>
<td></td>
<td>Proportion (%)</td>
<td>Types of strategies reported per phase</td>
<td>Total number of types of (T)</td>
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<tr>
<td>Student</td>
<td>Phase</td>
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<td>2</td>
<td>3</td>
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<tr>
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<tr>
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<*> 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.

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 metacognitive 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 metacognitive 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 metacognitive 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 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:

<table>
<thead>
<tr>
<th>Quantitative findings</th>
<th>Qualitative findings in SRIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There were consistent increases in the variety of observed use of the target strategies across Phases 1, 2 and 3.</td>
<td>• Students used strategy-related terminology to describe strategy use at Phases 2 and 3 but not at Phase 1.</td>
</tr>
<tr>
<td>• There were consistent increases in the variety of reported use in stimulated recall interviews (SRIs) of target strategies across Phases 1, 2 and 3.</td>
<td>• 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.</td>
</tr>
<tr>
<td>• There was a rise in the frequency of observed use of target strategies at Phase 2.</td>
<td>• 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.</td>
</tr>
<tr>
<td>• There was a general upward trend in the frequency of reported use of the target strategies in SRIs across phases.</td>
<td></td>
</tr>
<tr>
<td>• 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.</td>
<td></td>
</tr>
</tbody>
</table>

Key findings specific to the E1 group (i.e. direct strategies) were as follows:

<table>
<thead>
<tr>
<th>Quantitative findings</th>
<th>Qualitative findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target strategies</strong></td>
<td>• 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.</td>
</tr>
<tr>
<td>• There was a slight rise in the observed use of the target strategies (by whole sample) at Phase 2.</td>
<td>• Students reported strategies that might help them monitor contributions, manage turns, facilitate atmosphere, and evaluate task outcomes during the English group discussions.</td>
</tr>
<tr>
<td>• ‘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).</td>
<td></td>
</tr>
<tr>
<td>• There was a statistically significant increase in the perceived effectiveness of ‘Using fillers’ (+31% p=0.058) in questionnaires.</td>
<td></td>
</tr>
<tr>
<td><strong>Non-target strategies</strong></td>
<td></td>
</tr>
<tr>
<td>• There were unpredictable patterns of (1) observed strategy use; and (2) reported use in SRIs of the majority of strategies in SRIs.</td>
<td></td>
</tr>
<tr>
<td>• 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.</td>
<td></td>
</tr>
<tr>
<td>• There was increased perceived effectiveness in the use of ‘Using pauses to gain time to think’ (+30%; p=0.075) in questionnaires.</td>
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</tbody>
</table>
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 the 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 automized. 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 El 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 SRLs 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 SRLs 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 E2group (i.e. indirect strategies) were as follows:

- The low-proficiency students were associated both with higher observed use and with
  reported use in SRLs 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 be 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' proceudral 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 online 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 El, 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’ 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 metacognitive 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 of 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 strategies 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 online 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.
Bibliography


Table 1

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>DESCRIPTION</th>
<th>EXAMPLE</th>
<th>OTHER TAXONOMIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Message abandonment</td>
<td>Leaving a message unfinished because of some language difficulty.</td>
<td>It is a person en... who is responsible for a a house, for the block of house... I don't know... [laughter]</td>
<td>T, F&amp;K, W</td>
</tr>
<tr>
<td>2. Message reduction (topic avoidance)</td>
<td>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.</td>
<td>[Retrospective comment by the speaker:] I was looking for &quot;satisfied with a good job, pleasantly tired,&quot; and so on, but instead I accepted less.</td>
<td>F&amp;K, W</td>
</tr>
<tr>
<td>3. Message replacement</td>
<td>Substituting the original message with a new one because of not feeling capable of executing it.</td>
<td>[Retrospective comment after saying that the pipe was broken in the middle instead of &quot;the screw thread was broken&quot;]; &quot;I didn't know &quot;screw thread&quot; and well, I had to say something.&quot;</td>
<td>T, F&amp;K, W, P; B: &quot;description&quot;; N: appr. &quot;analytic strategies&quot;</td>
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<tr>
<td>5. Approximation</td>
<td>Using a single alternative lexical item, such as a superordinate or a related term, which shares semantic features with the target word or structure.</td>
<td>plate instead of &quot;bowl&quot;</td>
<td>W: &quot;smurfing&quot;</td>
</tr>
<tr>
<td>6. Use of all-purpose words</td>
<td>Extending a general, &quot;empty&quot; lexical item to contexts where specific words are lacking.</td>
<td>The overuse of thing, stuff, do, as well as words like thingie, what-do-you-call-it; e.g.: I can't work until you repair any thing.</td>
<td></td>
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<tr>
<td>7. Word-coinage</td>
<td>Creating a non-existing L2 word by applying a supposed L2 rule to an existing L2 word.</td>
<td>[Retrospective comment after using dejunktion and unjunktion for &quot;street clearing&quot;]; I think I approached it in a very scientific way: from junk' I formed a noun and I tried to add the negative prefix &quot;de-&quot;; to &quot;unjunk&quot; is to 'clear the junk' and &quot;unjunktion&quot; is 'street clearing'.</td>
<td>T, F&amp;K, B, W; N: appr. &quot;morphological creativity&quot;</td>
</tr>
<tr>
<td>8. Restructuring</td>
<td>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.</td>
<td>On Mickey's face we can see the... so he's he's he's wondering.</td>
<td>F&amp;K, W: under &quot;self-repair&quot;</td>
</tr>
<tr>
<td>9. Literal translation (transfer)</td>
<td>Translating literally a lexical item, an idiom, a compound word or structure from LI/L3 to L2.</td>
<td>I'd made a big fault [translated from French]</td>
<td>T, W, N; F&amp;K: under &quot;interlingual transfer&quot;; P and B: &quot;transliteration&quot;</td>
</tr>
<tr>
<td>10. Foreignizing</td>
<td>Using a LI/L3 word by adjusting it to L2 phonology (i.e., with a L2 pronunciation) and/or morphology.</td>
<td>reparer for &quot;repair&quot; [adjusting the German word reparieren]</td>
<td>B, W; F&amp;K: under &quot;interlingual transfer&quot;; N: under &quot;transfer&quot;</td>
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<tr>
<td>11. Code switching (language switch)</td>
<td>Including LI/L3 words with LI/L3 pronunciation in L2 speech; this may involve stretches of discourse ranging from single words to whole chunks and even complete turns.</td>
<td>Using the Latin ferrum for &quot;iron&quot;.</td>
<td>T, F&amp;K, B, W; N: under &quot;transfer&quot;</td>
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<tr>
<td>12. Use of similar-sounding words¹</td>
<td>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.</td>
<td>[Retrospective comment explaining why the speaker used cap instead of &quot;pan&quot;]; &quot;Because it was similar to the word which I wanted to say: &quot;pan&quot;.</td>
<td>T, F&amp;K, B, W; N: under &quot;transfer&quot;</td>
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<tr>
<td>13. Mumbling¹</td>
<td>Swallowing or muttering inaudibly a word (or part of a word) whose correct form the speaker is uncertain about.</td>
<td>And ah well Mickey Mouse looks surprise or sort of XXX (the 'sort of' marker indicates that the unintelligible part is not just a mere recording failure but a strategy).</td>
<td>F&amp;K</td>
</tr>
<tr>
<td>14. Omission¹</td>
<td>Leaving a gap when not knowing a word and carrying on as if it had been said.</td>
<td>then... er... the sun is is... hm sun is... and the Mickey Mouse.... [Retrospective comment: I didn't know what 'shine was']</td>
<td>F&amp;K</td>
</tr>
<tr>
<td>15. Retrieval</td>
<td>In an attempt to retrieve a lexical item saying a series of incomplete or wrong forms or structures before reaching the optimal form.</td>
<td>It's brake er... it's broken broke break.</td>
<td>F&amp;K</td>
</tr>
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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=Pérench & Kasper, 1983b; B=Bialystok, 1983; P=Paribakht, 1985; W=Willems, 1987; N=Nijmegen Group)

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<tbody>
<tr>
<td>16a. Self-repair</td>
<td>Making self-initiated corrections in one’s own speech.</td>
<td><strong>then the sun shines and the weather gets better.</strong> Speaker: Oh, you mean the tap? Tap, tap...</td>
<td>W</td>
</tr>
<tr>
<td>16b. Other-repair</td>
<td>Correcting something in the interlocutor’s speech.</td>
<td><strong>I don’t know the material... what’s it made of...</strong> Interlocutor:</td>
<td>(Tarone &amp; Yule, 1987)</td>
</tr>
<tr>
<td>17. Self-rephrasing</td>
<td>Repeating a term, but not quite as it is, but by adding something or using paraphrase.</td>
<td><strong>(This CS was not included in Dörnyei &amp; Scott’s, 1995a, 1995b, taxonomy)</strong></td>
<td>(Tarone &amp; Yule, 1987)</td>
</tr>
<tr>
<td>18. Over-explicitness (waffling)</td>
<td>Using more words to achieve a particular communicative goal than what is considered normal in similar L1 situations.</td>
<td><strong>[Retrospective comment:] I was miming here, to put it out in front of the house, because I couldn’t remember the word.</strong> Interlocutor:</td>
<td>T, F&amp;K, B, P, W; N: under either “analytic” or “holistic strategies”</td>
</tr>
<tr>
<td>19. Mime (nonlinguistic/paralinguistic strategies)</td>
<td>Describing whole concepts nonverbally, or accompanying a verbal strategy with a visual illustration.</td>
<td><strong>Examples range from very short structures such as well; you know; actually; okay, to longer phrases such as this is rather difficult to explain; well, actually, it’s a good question.</strong></td>
<td>(Throne &amp; Yule, 1987)</td>
</tr>
<tr>
<td>20. Use of fillers</td>
<td>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.</td>
<td><strong>[Retrospective comment:] 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.</strong> Interlocutor: And could you tell me the diameter of the pipe? The diameter? Speaker: The diameter? It’s about er... maybe er... five centimeters.</td>
<td>(Throne &amp; Yule, 1987)</td>
</tr>
<tr>
<td>21a. Self-repetition</td>
<td>Repeating a word or a string of words immediately after they were said.</td>
<td><strong>[Retrospective comment:] I was miming here, to put it out in front of the house, because I couldn’t remember the word.</strong> Interlocutor:</td>
<td>T, F&amp;K, B, P, W; N: under either “analytic” or “holistic strategies”</td>
</tr>
<tr>
<td>21b. Other-repetition</td>
<td>Repeating something the interlocutor said to gain time.</td>
<td><strong>Examples range from very short structures such as well; you know; actually; okay, to longer phrases such as this is rather difficult to explain; well, actually, it’s a good question.</strong></td>
<td>(Throne &amp; Yule, 1987)</td>
</tr>
<tr>
<td>22. Feigning understanding</td>
<td>Making an attempt to carry on the conversation in spite of not understanding something by pretending to understand.</td>
<td><strong>Interlocutor: Do you have the rubber washer? Speaker: The rubber washer? ... No I don’t. [Retrospective comment: I didn’t know the meaning of the word, and finally I managed to say I had no such thing.]</strong></td>
<td>T, F&amp;K, W</td>
</tr>
<tr>
<td>23. Verbal strategy markers</td>
<td>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.</td>
<td><strong>E.g.: (strategy markers in bold): (a) marking a circumlocution: On the next picture... I don’t really know what it’s called in English... 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: it’s some er... it’s some kind of er... paper; (c) marking foreignizing: ... a panel (with an English accent), I don’t know whether there’s a name in English or not [laughs] just it’s a panel flat; (d) marking literal translation: it’s er... a smaller medium flat and in, we call them blockhouse, but it’s not it’s not made of blocks; (e) marking code switching: the bird from the clocks come out and say ‘bukuk’ or I don’t know what; see also the example for message abandonment.</strong></td>
<td>T, F&amp;K, W</td>
</tr>
<tr>
<td>24a. Direct appeal for help</td>
<td>Turning to the interlocutor for assistance by asking an explicit question concerning a gap in one’s L2 knowledge.</td>
<td><strong>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?</strong> Interlocutor:</td>
<td>T, F&amp;K, W</td>
</tr>
<tr>
<td>24b. Indirect appeal for help</td>
<td>Trying to elicit help from the interlocutor indirectly by expressing lack of a needed L2 item either verbally or nonverbally.</td>
<td><strong>I don’t know the name... [rising intonation, pause, eye contact]</strong></td>
<td>T, F&amp;K, W</td>
</tr>
<tr>
<td>25. Asking for repetition</td>
<td>Requesting repetition when not hearing or understanding something properly.</td>
<td><strong>Pardon? What?</strong></td>
<td>W</td>
</tr>
<tr>
<td>26. Asking for clarification</td>
<td>Requesting explanation of an unfamiliar meaning structure.</td>
<td><strong>What do you mean?, You saw what? Also ‘question repeats,’ that is, echoing a word or a structure with a question intonation.</strong></td>
<td>W</td>
</tr>
<tr>
<td>27. Asking for confirmation</td>
<td>Requesting confirmation that one heard or understood something correctly.</td>
<td><strong>Repeating the trigger in a ‘question repeat’ or asking a full question, such as You said...?, You mean...?, Do you mean...?</strong></td>
<td>W</td>
</tr>
<tr>
<td>28. Guessing</td>
<td>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.</td>
<td><strong>E.g.: Oh. It is then not the washing machine. Is it a sink?</strong></td>
<td>W</td>
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</tbody>
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</thead>
<tbody>
<tr>
<td>29. Expressing non-understanding</td>
<td>Expressing that one did not understand something properly either verbally or nonverbally.</td>
<td>Interlocutor: What is the diameter of the pipe? Speaker: The diameter? I: The diameter. S: I don't know this thing. I: How wide is the pipe? Also, puzzled facial expressions, frowns and various types of mime and gestures.</td>
<td>W</td>
</tr>
<tr>
<td>30. Interpretive summary</td>
<td>Extended paraphrase of the interlocutor's message to check that the speaker has understood correctly.</td>
<td>So the pipe is broken, basically, and you don't know what to do with it, right?</td>
<td>W</td>
</tr>
<tr>
<td>31. Comprehension check</td>
<td>Asking questions to check that the interlocutor can follow you.</td>
<td>And what is the diameter of the pipe? The diameter. Do you know what the diameter is?</td>
<td>W</td>
</tr>
<tr>
<td>32. Own-accuracy check</td>
<td>Checking that what you said was correct by asking a concrete question or repeating a word with a question intonation.</td>
<td>I can see a huge snow... snowman? snowman in the garden.</td>
<td></td>
</tr>
<tr>
<td>33a. Response: repeat</td>
<td>Repeating the original trigger or the suggested corrected form (after an other-repair).</td>
<td>See the example of other-repair.</td>
<td></td>
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<tr>
<td>33b. Response: repair</td>
<td>Providing other-initiated self-repair.</td>
<td>Speaker: The water was not able to get up and I... Interlocutor: Get up! Where? S: Get down.</td>
<td></td>
</tr>
<tr>
<td>33c. Response: rephrase</td>
<td>Rephrasing the trigger.</td>
<td>Interlocutor: And do you happen to know if you have the rubber washer? Speaker: Pardon? I: The rubber washer... it's the thing which is in the pipe. Interlocutor: Do you know maybe er what the diameter of the pipe is? Speaker: Pardon? I: Diameter, this is er maybe you learnt mathematics and you sign er with th this part of things.</td>
<td></td>
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<tr>
<td>33e. Response: confirm</td>
<td>Confirming what the interlocutor has said or suggested.</td>
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<tr>
<td>33f. Response: reject</td>
<td>Rejecting what the interlocutor has said or suggested without offering an alternative solution.</td>
<td>Interlocutor: Is it plastic? Speaker: No.</td>
<td></td>
</tr>
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</table>

1Dörnyei 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 swallowing the conjugation suffix about which he/she is uncertain. 2Tarone 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 interviewee'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. 3Tarone and Yule (1987) first identified this strategy as a CS but Blum-Kulka and Olah (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. 4Fillers 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. 5Tarone and Yule (1987) pointed out that research has paid little attention to a very common intralinguage 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

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>AVOIDANCE</strong></td>
<td>FORMAL</td>
<td>LI-BASED STRATEGIES</td>
<td>LINGUISTIC APPROACH</td>
<td>REDUCTION STRATEGIES</td>
</tr>
<tr>
<td>Topic avoidance</td>
<td>Message</td>
<td>Language switch</td>
<td>Semantic context</td>
<td>Formal reduction</td>
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<tr>
<td>Message</td>
<td>abandonment</td>
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### Table 2 (continued)
Various Taxonomies of Communication Strategies

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**Note:** The tables list various communication strategies and their classifications under different taxonomies, highlighting how language and context influence communication techniques. Each strategy is color-coded for emphasis and clarity in the printed version.
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

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Only classes A, B, D were chosen for the main study in the one-way ANOVA.

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**Test Statistics\(^a,b\)**

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\(^a\) Kruskal Wallis Test  
\(^b\) Grouping Variable: Type
### NPar Tests
#### Kruskal-Wallis Test

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| PART1 | 23.92 | 12 |
| Class 2a: Even and Low level | 25.06 | 8 |
| Class 2a: Odd and Low level | 20.56 | 8 |
| Class 2b: Even and Low level | 14.00 | 12 |
| Total | 24.50 | 40 |

| PART2 | 24.50 | 12 |
| Class 2a: Even and Low level | 19.63 | 8 |
| Class 2a: Odd and Low level | 21.25 | 8 |
| Class 2b: Odd and Low level | 16.58 | 12 |
| Total | 21.19 | 40 |

| PART3 | 22.17 | 12 |
| Class 2a: Even and Low level | 22.56 | 8 |
| Class 2a: Odd and Low level | 21.19 | 8 |
| Class 2b: Odd and Low level | 17.00 | 12 |
| Total | 21.63 | 40 |

**Test Statistics**

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*a. Kruskal Wallis Test  
b. Grouping Variable: Type*
Class | Number | Sex | Total | Paper 1 | Paper 2 | Paper 3
--- | --- | --- | --- | --- | --- | ---
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
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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.

Introduction 15 min
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.

**Post-task discussion 10 min**

How far did you use the list of adjectives given to you to describe the 16 things? Why?

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<th>4</th>
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</table>

How far did you use the question form (i.e. Can you tell me where the ...... is/are?) ? Why?

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<th>2</th>
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The end
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:**

“Imaginate 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:

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<th>a stream</th>
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<td>Bananas</td>
<td>a small cave</td>
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<td>a wreck</td>
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<td>a river</td>
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</tbody>
</table>
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!

<table>
<thead>
<tr>
<th>Situation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Protect myself</th>
<th>Like a robot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make me strong</td>
<td>Will know many unhappy things</td>
</tr>
<tr>
<td>Will know what other people think of me</td>
<td>Will see many horrible things</td>
</tr>
<tr>
<td>Look young forever</td>
<td>Will look strange</td>
</tr>
<tr>
<td>Won’t be hurt easily</td>
<td>Other people may not like you</td>
</tr>
<tr>
<td>Can eat anything I like</td>
<td>Other people may be afraid of you</td>
</tr>
<tr>
<td>Can swim fast</td>
<td>Will become too strong and may hurt other people</td>
</tr>
<tr>
<td>Other people will like me</td>
<td>Will be unhappy</td>
</tr>
<tr>
<td>Won’t be late for school</td>
<td>Like a ghost</td>
</tr>
<tr>
<td>Will be beautiful forever</td>
<td></td>
</tr>
</tbody>
</table>

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 B: 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
= I don’t want to be a Kowloon king
I know u want to be a Kowloon king
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 hold also
I agree

Thomas do u agree
I
Do u agree
U are
Agree
Agree
Agree agree agree
Ok let
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 so important

So what (.) I love this
It is a very lovely goldfish u love it very much
I can’t I haven’t seen them
= U haven’t see them
Yes
Agree
I don’t agree
(Chinese)
So or what do u think
=Michael Jordan
U will
= I only like basketball
No it is so valuable
Why
Because Michael Jordan
= more 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: 3 min
Total number of words produced: 551

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 at some paper to prove the ownership of your that
= Then that what
Some insurance
Ok ok ok
The ok
step I will do it
The first one is some insurance paper the fourth one is (...)
Yes this correct or 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 is die ok
no
an expensive TV
no alternative for it
Ok let it ok for a family dog with a broken leg (...) a computer with ok a family dog with a broken leg
A pet a computer or (laughing) with important information and no no this one yes family pho
no
that one
But the () but the goldfish didn’t (...) x 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

fishing
Did u see water not the not the paper water
Ha
Goldfish is
(Chinese)
Ih
Do u wish they
I will take a family dog sorry
But it is () it is a broken leg
= Do what
If it is a broken leg () I wont’ I won’t take it
The dog will die in it
Let it die life is very difficult
I think whole family photo photo is 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 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 was will too
The dog will will er (....)
Er go into the sea
= Go into the sea
Oh
Oh what(.) what is the third thing
= I think 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

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 oil expensive TV
what or never mind an expensive
which one is this one
ok the video tape of your
must no (screaming)
but
of your parents wedding (....)
no not this use this one () in the last could the die (laughing)
no this is the same
ok yes no
no
dad die bear dad die bear (playfull)
here here
then
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 (shouting)
from Japan the twelve one is
no no
you try twelve which one is twelve
the this one thing ok and this one a complete collect yes like this number one
as (laughing) (very long pause)
(Chinese) yes yes yes
no no
yes yes yes
and the twelve one is a complete collection of McDonald snoopy toys
no agree
and the thirteen in your (...) below goldfish
bought in
bought in (....) (very long pause)
how do u say this
re (playful re (laughing) (playfully)
quick say
foreign country a basketball with the wish with Michael Jordan signature is the last one
in the last one (shouting and laughing) and your
(I won’t go)
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 nickie the teddy bear and the soft toy is the last then (...) is the (laughing and playing and cheering)
U know recording you sing not you
Ok say
The ring tone
Say they don’t say
The fifteen is the complete set of Titanic poster the last one is (...) your teddy bear and soft toy
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

The fifth one must be be er (long pause) must be (……) some expensive jewelry yes some paintings and stamps yes some expensive jewelry this is very expensive and cost a lot very valuable not very much not very cost cost a lot cost a lot the sixth one
if you are poor u can sell it yes the sixth one is the the basket basketball and a basketball with a Michael Jordan signature Michael Jordan signature why he because it is because (long pause) a are poor are poor er we are poor and sell sell and get a lot of money and 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 on an an an expensive tv and hi fi system
= I don’t think (……) what do you think because it is too too big too big too heavy to take it out yes so what do you think so I think must be a a (long pause) family photos all family photos yes oh and one but but the family also can can can take the photos every time oh so I think

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 Oh 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 is and what do you think is the eleventh one a a a a a (long pause) but but I think A complete set of of

No. 4

Time: 5 min
Number of words produced: 649

Four First I thought (……) Oh oh Oh Um which one do you think is the most important Um I think (I beg your pardon) your family dog with bow (……) barks leg (……)
I think (……) a ID card because um he he will die He will He will say Yeah very important I think ID card No
= etc ID card
Because life is the most important Then 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

Yes ID card is number one No
Yes
= Passport passport
Yes yes yes Passport Family photo Oh passport passport is the most important No no If ya ya family photo Yes
And we can’t see any more Your family members is very important But if if you take photo and no ID card (ID card) and no passport passport passport
= U can U can get again But yes But is U can get this again
can’t buy it in Hong Kong Can’t buy it again in Hong Kong
And in in In Hong Kong
In Hong Kong Yes Oh
And
And can u can sell it and u can (……) can earn a lot money Yes
Then Then the I don’t think so I think (……) Snoopy Yes Snoopy is difficult to find it again But that but the plants Oh but the the plants from Japan Japan can’t buy again U can also sell it and Yes this is number line

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 Oh
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 is and what do you think is the eleventh one a a (long pause) but but I think A complete set of of

Yes ID card is number one No
No
= Passport passport
Yes yes yes Passport Family photo Oh passport passport is the most important No no If ya ya family photo Yes
And we can’t see any more Your family members is very important But if if you take photo and no ID card (ID card) and no passport
= U can
U can get again But passport passport
No
But is U can get this again
can’t buy it in Hong Kong Can’t buy it again in Hong Kong
And in in In Hong Kong
In Hong Kong Yes Oh
And
And can u can sell it and u can (……) can earn a lot money Yes
Then Then the I don’t think so I think (……) Snoopy Yes Snoopy is difficult to find it again But that but the plants Oh but the the plants from Japan Japan can’t buy again U can also sell it and Yes this is number line
I am very important
You can take again
Oh buy it now
And then and then the the
And then the computer with it is
And then this this this
No
Ah
No u can dub a again
Eh
Jewelry is so expensive
A video tape
Of your parent wedding
No no no this this this and this
And then II FI system
U can buy again
U can't buy
But u too expensive u know
Has some game to we u know
And McDonald no pizza nothing this thing
The jewellery the jewellery
Yeah the expensive jewellery
What is the power of
This is the last one the poster what
A pty plant or in Japan (um) um um and then you 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
so no can't (because)

Total number of words produced: 963

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

why fourth
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 lose it something
so important
if u lost anything
leader please
do you 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)
to keep warm

Total number of words produced: 409
but you can take another photo
is more important also
but you can take another photo
another photo is not important at all
but you haven't a typhoon is going soon
but it is not important and not
another photo
yes some money
not here
but you haven't a typhoon is going soon
another photo is not important at all
yes some money
not here
but you haven't a typhoon is going soon
another photo is not important at all
no it is important to the whole family
yes read the paper
whole family can't do this at
so I think it is must be this one
number five
not the fourth one
I think number
why fourth one is it some
it is expensive
you can sell them
family photo can't sell it but jewelry and this can sell it and get money
no one buy
yes why you think money is so important
it's last 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)
so what
I think 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
do and 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

- can't listen to it
some some yes some is
I love it very much
it is my life (laughing)
but I have it
can't buy the 250 and one again
throw it I have it very much
no you can buy another
no is different or
I think the golden fish ( . ) golden fish is the last
No no you can buy another

But I think a complete collection of McDonald Snoopy gifts
It is easily to ( . ) bring it but it is too heavy and too thick
But it is expensive
But too heavy
Too heavy but u can't bring it but sneezy
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 don't think
But but but
But the basketball with Michael Jordan signature is important
It is easy to bring at
How about the computer with important information
I can sell it
May be it is like a notebook but I think it is not a notebook
U can't can't bring it
u can save u a u can save it in the floppy disk
in a floppy disk yeah
This long time
Not too long time open a computer ( . ) about two minute
But you have just have twelve minutes
do and two disagree one agree
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
does it can sell it if u are poor
u can't buy it is again
yes yes
ok number six
and and the computer information (. ) also u can't buy it
again
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
So cheap (laughing) (very very long pause)
Chinese
Chinese
I know
Why don't u give me suggestion (very long pause)
Ar
Concern the
Quick stupid man (very very long pause)
Quick quick quick quick
Quick quick quick
It should be like this order
Then what 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
yes
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)
Yet yes yes
And this order should be like this (very long pause again)
Um
Like this like this
Speak louder
This is this
Remember the get it get it
Do it from again of
Of course not do it again
This is already ok the order is already ok
No what that what
This this order is already ok and
What that what
Now where now where
Say again say again
No wellehave finished
What that what
This order is not complete u know
No time to do quick quick quick
In 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 intu paper some paper to er
Oh I think some paper to prove the ownership of the flat
Why u think is important
Just feeling
I don't know
What do u think 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
Oh I think with Cynthia because we have some paper to prove the ownership of our flat or we can get money because of the (....) of the flat that protect us (....) ha ha it is quite important (....) is really important
But we can (....) what
Er what is the next one (....) how about your believe gold fish bought in a foreign country (....) it is really difficult for u to (....) go in a foreign country again
Yes because the when u went to a foreign 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 an idiot
Yes
So we can't go again to (....) for (....) again in a foreign country again
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 do u agree
money
Oh money
How to spell money Penny (giggling)
or (long pause) what's next what's next what's next
What's your opinion Cynthia
ar maybe a basketball with Michael Jordan signature yes it is worth saving
why is this Cynthia

(Long pause)
the ten we choose CD or MD disk
disk of all your favorite song
which he because it is my (....) famous songs
and u can listen to it when you are boring (....) and eleven we choose a video tape of your parents send love because u use the video tape of your parents is your memories when you lost and or some accident had happen u can use it (....) for find them or the other way is to remember it
the twelve is a complete collection of McDonald Snoopy toys and the fifteen (....)
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 it
The fifteen is the pitty plant from Japan because it can't bought in Hong Kong (....)
Fourteen
Fourteen
Fourteen or I choose a complete set of Titanic poster
Because it is only a posters so we don't think it is important so we put it to fourteen
And the fifteen is (....) my baby bear and soft toys because they because (....) because I can't forget it and buy another one
And the last we choose my belief love goldfish bought in a foreign country we think um because u know fish can swim and when there is some flooding here or 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 (....) the most important thing is it (....)
(Long pause)

No. 10
Time: 5 min
Total number of words produced: 638

no hear me or have a have the (....) family or yes the radio type(s)
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 or
dog in dogs in bakes
no favorite song u can (....) laugh
not a sound one but u have succeed and and don't do this first
keep the important thing
as a basketball
computer with important information important
yes

No. 9
Time: 5 min
Total number of words produced: 410

Er and (....)
Some
and and the (....)
silly
silly silly is some

important

Important paper because we can get money if we have some money is die or hurt (....) and seven we er choose some expensive jewelry and paintings and stamps stamps because we can get money from this thing er we can change to money and buy food from it as sometimes u can get money (....) eight we choose the eight we er choose basketball because (....) if because this with Michael Jordan signature or important er it is important to er (....) him
I love I love it
I love it very much (....) in 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 but it and some when u go to other place u can get the information from TV too (....)

no what do u think Cynthia
It is words 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 foreign country it's time
Oh
Now 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 ur think
It is more expensive
But expensive can
Oh Penny u think TV is more expensive than a collection of McDonald (....) snoopy toys
Yes
Why why

finally
I have said I have said the fact the fact is a basketball with Michael Jordan sign
a 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 jelly
Jelly? Expensive jelly
Jelly tells jelly painting stamps
stamps
why ar
why
Because the jewelry those thing is very expensive ar 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
If u need go because let u can save the file in the (.) disk you know number five
It is not number four
It is not need ar
Is not need ar
No need ar need no is so what is number four ar
number four ar
yes
number five ar
number four ar is no need ar
If a computer ar u say so need so
A family dog with a broken leg ar
A family dog with a broken leg la
A family dog with a broken leg
Yes
Why
If dog family with a broken leg
Because the dog in very poor ar it has still living and (.) if she die during the flooding
then is so poor ar u know
so poor
it can't swim because of the broken leg
number five number six
number five or number four I think is should be (.)
some papers to your ownership of the flat ar
good ar
yes ar
because er
because no people know (.) that

---

No. 12
Total number of words: 615
How about the next
Dog
Where was the idea
Good idea
Er the dog is
Me too
agree my
Why
But u have live with it so many years and it is the son
But in the world ar it has many many dog
The dog has ki m leg but he it
Because er
Why do u agree this
U are also naughty why u not your leg (ha ha ha)
So what about the fourth?
Ok it it was very naughty and then (.) a leg
If it it was very naughty and then (.) a leg
"U are also naughty why u not (.) your leg (ha ha ha) so what about the fourth?"

---
Because Michael is er (..) superstar

But ray don't agree Ray

I am agree the basketball with Michael Jordan signature not with Michael Jordan

Yes are u agree er (... ) other or (Chinese)

But I think Michael Jordan is very good er

Better than u know

Better Gasa 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 I

but

yes I (why) think it is important because your buy what is er because (bouder please) your

because (bouder) because your house is has some phoom typhoon to hit your house and your house will destroy and time u have the pa er paper u can get the money (..) for your house

er are u agree some expensive stamps (the name) and painter important

how about do u do them er

but er this thing is not very heavy and u (ask Sam)can bring this Sam how about u

yes I am agree ur er ideas

good u are very clever

thank you

how about 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 er we can have more money to buy this

How about the snoopy

Cheaper

Five dollar for each one (laughing)

Yes five yes for which one er

And then twice to buy (laughing)

U have twice to buy (laughing)

Ray u can can can give me more detail (laughing)

Alan

Yes

Do u think cd and cd is important

CD and MD this month ok (long pause) (important) yes

No no

Hey important

-yes yes yes ID card u can get it again or

u can load it again but is it is important too (long pause)

no no no no then (long pause)

us a computer with important information

us I don't think this

reason yes reason

important information is very important and then another reason

another reason the important information is very important er

as 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 twelve paper only ok

goldfish bought in for

but the goldfish can swim

no

can swim too dirty the water (can a swim) (..) you die

a swim belong

and then the (..) McDonald (no no no) Snoopy u can't collect it

I have to

No

Stupid thing

U can't collect it again ID card for

Yes Then (this one) some expensive jewelry

No jewels diamond

Jeewelry (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 can bring this

Yes

How about Sam

Us I think or 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 u can buy

But have u got the money? Is very expensive u know

And then the second is a record er leg of the a budge leg dog of the office

Ok ok or

second is um yes family dog with a broken leg agree

agree agree

agree why why agree why very poor

very poor broken leg

u can buy another one

no

living thing a life

yes living thing u can because is a life

because is a leg painful what painful u can painful

a life or a life

um um

then this

the photos

no

u cannot take again

no

no no no (photos)

u can't find it again some is (..) u know some is pass pass

*f I think the photos is more better the photo (..) I don't argue with u

a computer with important information this this

big CD MD (me mo) dish u can c (my favorite song) u can load it again

*I lose it I will very (..) unhappy u know

*they it again

yes u don't lose again u buy it again

and then waste again u waste your money

---

=Why 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

Yu 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 six number one is all ID card and passport because (..) we can know who are u are easy to find u

er number one am I think number two is some we have to bring some paper to (..) prove the ownership of the flat because er we can use it to armed our money get

pro to let people know that er (..) u are the far ownership er (long pause)

number number two 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 it is too heavy

*no no no yeah yeah

Er number six is er I will take CD MD disc of all our er (..) all your favor song because (..) er 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 a computer with 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 or (..)

Number number

And and eleven is er a complete collection of McDonald Snoopy taLL; because it is all all all your favorite u collect it for long time

Last one
Oh I know u frankfy er how about this point
Michael Michael Michael
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 (......) 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 (......)
He 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 think it is cheaper than Jupiter collection of McDonald (......) TV Hi Fi (......) It is just spend er I think (......) maximum three hundred dollars (long pause)
Also
Er er Stephen why u think er family photos is important
Er u can meet your family (......) when come 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 help us to meet our own family
How about the ownership of the flat (......) it is it more important than the family photos (......) because if we sold this is in (......) already (long pause)
But but 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 (......)
Everyday
U may be put into the computer already

(Chinese)
we will take pretty plant from Japan because it is a living thing
then we will take the video tape of our parents wedding because it is very er (......)
important
(Chinese)
we will take an expensive tv and Hi fi system (laughing) because we can look at the TV every time no electric
Second er we will take my family dog with a broken leg (......) because it it help our help (......)
we can find our people when we lost
-Fourth we will bring some insurance paper (......) because when
-when we have accident
then we will take the expensive jewelry or paintings and stamps because it is expensive then (Chinese) instead some we will take some paper to prove that the ownership of the flat because after after typhoon we can or go or go to or to our flat
Then we will take our CD MD disk of all our favorite song because we can listen to it when we go
Then we will take a complete collection of McDonalds snoopy toys because we want for it for a long time
Then we will take a complete set of Titanic poster because our family is very love it (Chinese)
truth we will take a teddy bear and soft toys (......) because er it can help us to sleep with it
then we will take the (Chinese)
basketball with Michael Johnson signature because it is very special

But if u only have the ID card how can u live (......)
Haven't some money
How can u a dog
Have a dog
But if we can't we can't lose ID card and passport we must have id card and passport to prove that we are Chinese people we are Hong Kong (......) we are Hong Kong people (......) so that
If u are (......) ok if 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 in 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 think is so important
-The dog is so cheap
-I'd lost the dog u can buy it again
Why
Why
Can u find the other father or mother
-May be may be maybe
Can u find the other friend
-Just the dog
U can't buy any the same
The next one
Ok is the dog
-No
-The dog
-Yes in
-I diagno u can't do this
-Yes
-No what
-No no no
-Why is it dog
-Why u is so cold blood
-Why is a dog
-No no no no no
-No no no no
-Ar we or we
-No no no no
-A computer with what important information
-No it 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 or no
Ok

Yes

why

Yes some paper of (....) to prove your flat ownership

Also put it in the the number tag

Some paper to prove the own ownership of the flat

Why

=flat but we

=number fig not number two

=if it hasn't this one u can't prove the flat is yours

=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

The fourth

All family photos

=I think in the flat

=I think in flat flat flat

=Family

=The flat

The flat

No I think is er the the same 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 we can we can can

we can take it again

remember in this flood is die and how it it

ok i agree with john

but

just think or after this typhoon your father and mother will die

No

Why

Some paper to prove the ownership of the flat

Also put it in the number three

-if it haven't this one it can't prove the flat is yours

-number one not number two

-said already Michael Jordan signature

and dran the second one is Michael Jordan basketball with is the basketball with is the basketball with (no

But we can

And the third one is the third one is

-Yep after the telephone you can er (....)

-swimming

-and the the the the flat is yours

-No no no no la the one the one

-some insurance paper

-Yeah your family yes family yes very lonely so (lonely) and then

-No be because it is very very um (important) (too old broken because it is broken)

-Is a family dog with a en leg (broken dog)

-And then the fourth one is would be is (....)

-some papers to prove the ownership of the flat

-Yes yes um this one (Iongpause)

-May be die

-But a big typhoon and bomb is coming

-If we there have we there have a lot of songs u lost

-that is big typhoon and bomb is coming

=Um I do very expensive (TV is too heavy um

=I think is important too (than jewelry) than or paintings

-Yes you see this one (long pause)

-It is better because it is very big

-And then I think this is important (no) then than than than Michael because don't know (I think I think)

-snoopy toys is just small u can take it (compatible but many many snoopy)

But it is smaller or

Golden fish golden fish

=Yes golden fish golden fish in my life

Michael Jordan

Snoopy is so difficult no this i will die

And let him

Er blue and yellow again and then green

No they will die no no yes

Ok

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 overtime 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 compensate one

Ok ok and then

-No I don't think this is

Michael Joe

Yes

Snoopy is happy

Very expensive

Oh i take this

why

why

is very expensive Michael Jordan is a famous what

-This is also c expensive jewelry but it is dearer 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 everyone everyone will like this

no no (no in your) I don't like I don't like cheap cheap cheap I don't like I don't like (as 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

so I don't think

=But I think I think the ID card is have your family number photo

-yes and then cut out cut and paste paste paste and then finish is a name

-and the flat and the flat

and the

and the

let said v and hi di

and some paper to prove the ownership of the flat

-some paper to prove the ownership of the flat yes la

=Yes

here

-no so flat of course

number 7 number 7

let me put the order

number file

-number six

-um

No

Why

Some paper to prove the flat is yours

Yes

The next one is (...) er causes TV and Hi Fi

This

But but but

If we there have we there have a lot of songs u lost

-that is big typhoon and bomb is coming

-Us I do very expensive (TV is too heavy um

=I ask it TV is not we we can take (yes) we can take the CD or MD disk up my favorite song

=Yes you see this one (long pause)

-It is better because it is very big

-And then I think this is important (no) then than than than Michael because don't know (I think I think)

-snoopy toys is just small u can take it (compatible but many many snoopy)

-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 (....)

-think

-And can travel everywhere

yeah

And second one is er

Er the second one

The the scene in (....)

-Some insurance paper

=No no no no 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 the flat is yours

-Yes 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 some money when u are hurt so u are or hurt so on u can get some money from it

-And then the fourth one is would be er (....)

-a family dog with a bulldog 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 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 (laughing)

And then is the the a computer with important information (ab) (....) because it has information so (....) so we must take it (....) and then some expensive/ew/er

Jewelry

Or Jewellery

Painting and stamps it is expensive (.....) it is very good I like money (laughing)

Ok next

What

Number number

Then when 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 or after we are are after we are old we can or we can remember (remember your family member) our family daily life (giggling)

-And then may be the a couple not 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

*Oh take it take it like this take it
And then the
*And then where is the goldfish goldfish
Golden fish
Gold fish gold fish (laughing)
Where
All we must bring your below beloved goldfish bought it from country because it is very ex
No no no
Not expensive
Seppe
Yes special to us (....... faster faster the water is coming
Yeah
I don't want to die jag
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 um here here
Is what the pity plant from Japan
*No no no
Japan
This is the pity plant.
A basketball from Michael Jordan signature (long pause)
Hey and then and then must be a complete or a complete collection of um McDonald (giggle)

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

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No. 29

Total number of words produced: 677
But some paper to prove the ownership of the flat yes because use () because the people know at 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
Yes at least
Yes
Ok the
Third one
I think is dog

---

Yeah but because
*No is here in the flat dog
Are
A a happy memory the memory (....) but
But memories in your mind but not in the photo (giggle)
Oh
We will we will the family photos we can put it in the third (....) so now which one
May can we put the no expensive jewelry paintings and stamps can we no no
So
Send something expensive
Who () who think who think stamps is more important
Yes
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 flat
Yes the fifth one
No dog
U can eat if one
dog dog dog dog dog or my dog don't make my dog alone is (Chinese)
U have a dog ar I 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 is
dog dog dog dog
The fifth one
The same
So many dogs
Do not be so kind to the animals
Three dogs

---

All family photos
*Family photo is not that good
Dog or dog ar
A computer with
Not important ar
The computer
You me too um the computer with important information (....)
Has always dog
Dog
A compass is a computer computer one why
Just because or 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 is
Photo
An expensive t v and hi fi system
What's that is
What about u
An expensive hi fi and tv system
Expensive t v and hi fi system
Not u the same
No
No
I am I am
Not be not u
The that t v and hi fi system
Yes u
I think some expensive jewelry paintings and stamps
Oh I think is some family photo
The photo by
La
I think dog
Any other suggestion except the dog with a broken leg
No than u then pay paintings and stamps let it can touch touch water and then touch water it if it will hurt
New mind la
Pardon pardon
It so if it if the stamps and paintings match some water it it will melt
No melt
No
You know what I mean
I know I know
*Ya yes
*No but I think the family photo is more important

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No. 30

Total number of words produced: 488
How about you? Abbie?
Um I don't agreed I think () the group project is more important because () we may not have each time to get the information back and then () the 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 agree Abbie but () because () (giggle) because in the world nothing is important than the () than the life life (giggle) so I think I think (....) the second important is still () a family dock
Okay I agreed () I do you think the sec is the third important Eric?
(giggle)
I think I think I think () I think is computer with important informations () because () (....) I think I think (....) I think (....)
Yes I agreed um I agree um I agree um the group project is important but something you can't buy it again just like the photo with a lot of happy (....)
Memories
Memories because when er it is I may can't fold it again and it give me a lot of joy and happy and happy (....) Do you agree James?
Yes I agrees () How about you what do you think you bought in important (....) important (....) fish Abbie (....)

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---

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Ok I think the fourth important fish is the lovely goldfish because er it can't save itself (giggling) whereas the cat broken leg may be she it can (....) oh sorry sorry sorry (....) yet I think the golden fish yes I think the golden fish (giggling) goldfish is more important because it can't save 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 agree with (....) Abbie Abbie points because the goldfish is (....) important and (....) it is difficult to buy it again because (....) it is (....) or in (....) another country. How about you Konami? Yes I agree (....) and I think the sixth important thing is a computer with important information (....) because er maybe is has some important really important information so if you haven't any money you may (....) use the (....) information (....) to (....) change a lot of money. Do you agree? Abbie?

Ok 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?

Yes I agrees (....) and I think the sixth important thing tis a computer (....) with important information (....) if you haven't any money you may (....) use the (....) information (....) to (....) change (....) a lion. Because er maybe it has some important really important information. Do you agrees? Abbie?

No not sleep. A complete of collection of McDonald McDonald yes is McDonald because he 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 (....) the third one what is the third one CD and MD No er your parent No Piano No u can borrow from your friend (....) very very (....) very small air very small air What is small air? (....) Small air it are try to live (....) Little air Small air (....) For good it buy another one yeah (ok buy another one) Ok ok

Ok the last last last.

Last Don't want to die McDonald McDonald MacDonaldOk who is agree McDonald Michael Jordan McDonald McDonald (laughing) CD from Michael Jordan (a complete McDonald) where McDonald No no need A complete of collection of McDonald McDonald yes is McDonald because he 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 (....) the third one what is the third one CD and MD No er your parent No Piano No u can borrow from your friend (....) borrow your friend so my fan very very (....) very small air very small air What is small air? (....) Small air it are try to live (....) Little air Small air (....) For good it buy another one yeah (ok buy another one) Ok ok
Valuable
I help
I see the
So next
Next
Caret
um eleven
what’s the fast room
my beloved gold fish ball in a (foreign country) foreign county
why
a(?) you why
I think because the fish is in a life also it is from buy from the foreign country
And then
Last one
He he
Your (...) poke fish buy in a for Japan country because (...) (..) can’t buy a different type
Jenny (long pause)
Fish price from Japan because (...) this (...) put it is (...) my friend give me (pause)
Um sadly hear and sell toy um this is fourteen because um can yes because er it is not important um can buy another one (...) but (...) some (...) it (...) some (...) its so expensive
What (long pause)
Er
This
Something is (...) important (...) but (...) something is important
What what why important
Someone can buy another one (Chinese) but something (yes yes) 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 computer um can’t buy because computer um need to type into the computer (...) so (...) so something is not important something is important (long pause)
Um
Um McDonald snoopy toys um should use many many toys to collect it (collect) uses too much money to buy (...) or er how about a Jean Joan
I speak louder please I feel er
U think this
Many many money
And and a basketball can play
Jewelry paintings and stamps
Number 5 number 5 number 5
and the fourth is er some expensive /elerv paintings and stamps
Number 3
Number 5 number 5
We think the most important (...) thing we need to get er or all ID card and passport or number 2 is some paper to prove the ownership of the flat
Number 3 is some insurance paper
Number 4 is a family dog with a bone (.) with a bone leg (laughing)
Yes
or number 5 er a video tape of our our parents wedding
Number six is some expensive some gem
Jewelry paintings and stamps
Number 7 I think is CD or MD disk of all your favorite song
Number 8 is all family photo
Or number 9 is a bad a basketball with Michael Jordan signature (laughing)
Number 10 is your tidy bear and soft toys
Number 36

No. 27
Time: 3:5 min only (enable to sustain any longer)
Total number of words produced: 240

Memories
Memories the memories is in your mind no need to take it
But can been get it back and see it and think about it and will happy (or) but is bigger than er (Chinese)
Group
If I don’t know
Is GROW
I only think I think I think a lot
Don’t think
It is bigger than before ar ma
No
I say something
Okay am can say something
Yes er I think passport and ID card is more important
What
ID card and passport is more important
Yes
Because um can put er um can to another place and go
How can you go to other place the police station they go help and go to the police station and um need to er talk with the police and write down what did u do at this time (passport) a always need to (...) write down all of your information um of course is no
The very terrible u lost the passport and I ID card u know know first first can go away u go to police station and take it and fill in the info
But there u have help and go away u always need to go to police station and write down what did u do that in time
U must have an ID card and a ID card and passport (not me photo) photo not use u have photo can take it again
But it do not remember (.) ok u think
ID card
Ok
The ID card
I think the
I think the
I think the
I think the
I think the
The second one is the basketball with Michael Jordan signature because it can tell many money and you (.) 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 like basketball
And and a basketball can play
One
One can buy how many money
Many money
I think this
But but is a money

Yes you can sell money but don’t said how much is important it can sign signature
Michael Jordan
Michael Jordan u can buy (yeah) it if 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 boiling leg
Yes I agree I think is about thing this is life
I think the dog with a boiling leg
What
Fee
Number two
Number two
Number two because the dog is our fan (...) Life it has his life
The boiling leg no leg only boiling leg don’t want to die
I want to want to die
I will is (...) (Chinese) get many many trouble
But do u know he has his life (...) his life (...) (.) a know 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 in ten years
Hand is not handsome is not handsome also want to die
Hasn’t write down is the dog handsome or not handsome haven’t write down die also also also also no leg is not handsome u no hand is also no handsome
Not about the face u know
Oh
Handsome is all the thing
All the body see all the body lost the last one of course (handsome) handsome like me
Ok see
Not the handsome u know
Most handsome u know
Ok
I do I think the dog because it is your if your has boiling leg u will kill him
This kill but kill (kill kill) but friend or is boiling leg he will kill too
This not kill is is no use is no use know
Yes no use
Rubbish rubbish
Is
No use
Yes yes
Your friend boiling 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 mindful when the basketball he will be raining and the Michael signature will be go quick (...) raining

Ok see
the second important be because (...) because (...) because er we can't buy a different one is er very important them er James what to do what do u think
I think the next important is all family photo because we have a lot of remembers in them (...) and we can (...) remember this from this photo
And I think the important to me is the expensive TV and Hi Fi because we can we can't buy a different one it is er very important then er
I think the next important is all family photos because we have a lot of remembers in it so we need to keep it Then er we now discuss why er we er discuss miss er (...) we discuss why do or er the er the last important reason er do have 
I think the another reason is an ID card (...) or any one said one reason is first er
Oh er er er Oh er I think we have ID card and passport we can travel Hong Kong easily because if er we haven't the id card we have any problems (...) Ask me er
And er then er then think er
Er Er I think the the (...) (Chinese) I think er the I think I I think the basketball because because another reason er or er er (...) (long pause)
U don't know
I don't know yes James give me fire
I think the next important is your doggy hear and soft toys er maybe the toys have follow me for a long time we er have some feels for this toy
I think but I think the toy is not important because er er the toy can't buy it again but many things u can't buy it (...) like the dog and goldenfish because it can't buy the exactly the same one
And another is er er er er er er the photo or the photo er or we can't or or but er can we photo it or again but but the person in it is different the the person James I I think the next important is a CD or MD disc of all your favorite songs because maybe we spend a lot of money to buy them (...) and it is also our favorite songs

The end

Transcripts of 'pull-out' group discussion tasks (see Table 4.3 in section 4.3.1)
*Ann -I think powerful ear
*Ray -What? that (her) ear you have
*Ann -What?*
*Ray -But I think one person will not know other very well because (all) of us have some secrets to be, because all of us have some secret we don't know about each other, and I think it is quite important because all we have known (giggling)
*Ann -Yes, I don't think it is true.
*Ben -I think power muscle is very important too.
*Ray -then (the) same
*Ann -Why?
*Ray -Yes, I think the power muscle is important.
*Ben -The health of ourselves
*Ray -I think this is not useful
*Ann -Yes because you have to eat something in the exam. what in the exam
*Ben -This is not useful.
*Ray -I think the power muscle is very important too
*Sam -Yes, I want to know your secret.
*Ann -I want to know your secret.
Car Second one.
Kel I think you think it's important.
Car Maybe we can eat some strong bones that last forever because if you have the strong bones you can do many things. Let's see if you still have bones after you die. But the doctors are studying this bone.
Kel Is it important?
Car Yes.
Kel Yes.
Car Yes.
Kel I think so.
Ste No but I mean we can have cancer.
Kel Is that a true story?
Ste No. Right or wrong.
Kel And we use the blackboard and can hear who are speaking.
Cur I think also important because we need to do activities by hands.
Kel No.
Cur I think computer arm isn't.
Kel So am I using a computer arm.
Ste But hands bands.
Kel Can I study because we need to do activities by hands.
Cur - Ino need to buy car.
Ste Run away you can use your powerful legs.
Kel Really?
Cur Yes. Super-nose can smell danger.
Ste Run away you need to use many crazy.
*Vic* That that extra strong hand
Dish

*Vic* Um super hair that does not fall out (....) (giggling)
Step

*Step* Like a glue (touching Vic's hand)
Um this (....)

*I agree (....)

*Ric* cause the other things
*We are not good

*Step* We need to sweep the hair on the floor
Wow

*Ric* May be in the sink
*Vic* A pretty handsome face that attract the opposite (....) sex
*May* Stop

*Step* The opposite sex attract (....) No need so need
*Vic* But that like on (....) (giggling) have high power muscle muscle

*No

*Vic* There would you like to fight with tiger (....) something that
*Vic* This would you (....) would you like to have powerful ears that can hear what other people think?

*Step* We the last one

*Joe* So the pretty handsome face

*Step* Attract the opposite sex

*Joe* Yeah

*Ric* And then (....) The high power muscle

*Yeah

*Ric* The last one

*Vic* With a pretty (....) with a pretty face you would like to have a high power muscle

*Step* For muscular (....) On not everyday people have handsome face or pretty face

*Vic* Powerful can that can hear what other people think

*Jag* Um but nose is too ugly

**Vic** Yeah I agree like this. Why so ugly?

*Step* Finish

**Vic** Finish

**Yeah**

**Ng 10 Number of words produced:** 554

**Last Next is**

*Char* Muscle

*Last* Muscle

*Char* Your turn

*Char* Chilly muscle is

*Kwo* Say something

*Joe* But I think super skin is good

*Ric* Maybe in the sink

*Kwo* Say something else

*Joe* Yeah

*Kwo* The nose

*Kwo* But what

*Luc* Super skin can protect (....) your muscle

*Kwo* Doesn't need it (....) to fix your muscle

**Char** Your muscle is easy but not (....) skin is important (....)

*Step* Um high power muscles that are as strong as a lion (....)

**Char** That's good

*Luc* Yeah

*Char Why

**Ng 11 Number of words produced:** 639

**Aar** By taxi by car by airplane (....) etcetera

**Aar** Car is that in the year three thousand (....)

**Aar** So what?

**Aar** Have money

**Aar** You can disagree. (....) So do disagree

**Aar** Disagree

**Kee** The nose

**Kee** But what

**Kee** Yes the nose is important. (....) because

**Kee** Oh

**Kee** But because is in the year three thousand (....) there may many B T. Oh

**Kee** It T

**Kee** You may smell the danger (....)

**Kee** Car they will catch you (....)

**Kee** Yeah

**Kee** Play you (....)

**Kee** Do you agree?

**Kee** Yeah okay

**Kee** Next next one Kee?

**Kee** My turn? If I think (....) the (....) (....) walk as fast as a cat.

**Kee** Yeah

**Kee** Because (....) like Carrie said (....) at the time (....) many thing is fast as possible so we can come time and um we can have a better life.

**Kee** Yes

**Kee** Car because

**Kee** Yeah

**Aar** Ok your turn Comic?

**Kee** Next next one Kelly?

**Kee** (Chinese)

**Aar** Next next one Kelly?

**Aar** Because um (....) in the year was thousand er (....) there maybe many B T. Oh

**Kee** But what?

**Aar** Next next one Kelly?

**Kee** Next next one Kelly?

**Kee** Yeah

**Aar** Because um (....) like Carrie said (....) at the time (....) many thing is fast as possible so we can come time and um we can have a better life.

**Aar** Next

**Aar** Car because

**Aar** Yeah

**Aar** Do you agree?

**Kee** Yeah okay

**Aar** Next next one Kelly?

**Kee** My turn? If I think (....) the (....) (....) walk as fast as a cat.

**Aar** Yeah

**Kee** Because (....) Kelly

**Kee** Yeah

**Kee** But what?

**Aar** Next next one Kelly?

**Aar** Because um (....) like Carrie said (....) at the time (....) many thing is fast as possible so we can come time and um we can have a better life.

**Aar** Next

**Aar** Car because

**Aar** Yeah

**Aar** Do you agree?

**Kee** Yeah okay

**Aar** Next next one Kelly?

**Kee** My turn? If I think (....) the (....) (....) walk as fast as a cat.

**Aar** Yeah

**Kee** Because (....) Kelly

**Kee** Yeah

**Kee** But what?

**Aar** Next next one Kelly?

**Aar** Because um (....) like Carrie said (....) at the time (....) many thing is fast as possible so we can come time and um we can have a better life.

**Aar** Next

**Aar** Car because

**Aar** Yeah

**Aar** Do you agree?

**Kee** Yeah okay

**Aar** Next next one Kelly?

**Kee** My turn? If I think (....) the (....) (....) walk as fast as a cat.

**Aar** Yeah
1. The Strong hand?
2. Yeah but you must live.
3. Can't live.
4. Car, it is useful.
5. Car, it is useless.
6. Car, it is useful. Muscle?
7. Car, it is useless. Muscle.
8. Car, it is useless. Muscle.
9. Car, it is useless. Muscle.
10. Car, it is useless. Muscle.
11. Car, it is useless. Muscle.
12. Car, it is useless. Muscle.
13. Car, it is useless. Muscle.
14. Car, it is useless. Muscle.
15. Car, it is useless. Muscle.
16. Car, it is useless. Muscle.
17. Car, it is useless. Muscle.
18. Car, it is useless. Muscle.
19. Car, it is useless. Muscle.
20. Car, it is useless. Muscle.
21. Car, it is useless. Muscle.
22. Car, it is useless. Muscle.
23. Car, it is useless. Muscle.
24. Car, it is useless. Muscle.
25. Car, it is useless. Muscle.
26. Car, it is useless. Muscle.
27. Car, it is useless. Muscle.
28. Car, it is useless. Muscle.
29. Car, it is useless. Muscle.
30. Car, it is useless. Muscle.
31. Car, it is useless. Muscle.
32. Car, it is useless. Muscle.
33. Car, it is useless. Muscle.
34. Car, it is useless. Muscle.
35. Car, it is useless. Muscle.
36. Car, it is useless. Muscle.
37. Car, it is useless. Muscle.
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**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>quite weak</td>
<td>ok</td>
<td>quite good</td>
<td>very good</td>
<td>outstanding</td>
</tr>
</tbody>
</table>

**General ability to handle the discussion task**

<table>
<thead>
<tr>
<th>1</th>
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<th>5</th>
<th>6</th>
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<td>quite weak</td>
<td>ok</td>
<td>quite good</td>
<td>very good</td>
<td>outstanding</td>
</tr>
</tbody>
</table>

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) *

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Non-target strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q.5. Strategy: Resourcing</strong></td>
<td><strong>Q.14</strong> When I have difficulty in expressing myself, I</td>
</tr>
<tr>
<td>When I have difficulty in expressing myself, I refer</td>
<td>try to think of my own words rather than refer</td>
</tr>
<tr>
<td>to the notes given by the teacher for suggestions of</td>
<td>to the notes given by the teacher for suggestions of words</td>
</tr>
<tr>
<td>words and structures to help me in the discussion.</td>
<td>or phrases to use to help me in the discussion.</td>
</tr>
<tr>
<td><strong>Q.8 Strategy: Paraphrasing</strong></td>
<td><strong>Q.3</strong> When I have difficulty in thinking of the right</td>
</tr>
<tr>
<td>When I have difficulty in thinking of the right</td>
<td>word(s), I let others say something first rather</td>
</tr>
<tr>
<td>word(s), I use words or phrases with similar meaning</td>
<td>than use similar words or phrases to express myself.</td>
</tr>
<tr>
<td>to express myself.</td>
<td></td>
</tr>
<tr>
<td><strong>Q.2. Strategy: Using fillers</strong></td>
<td><strong>Q.12</strong> When I need to think of what to say, I pause to</td>
</tr>
<tr>
<td>When I need to think of what to say, I use um, urh,</td>
<td>let myself have time to think and then continue</td>
</tr>
<tr>
<td>well, you know, etc. to gain time to think.</td>
<td>the utterance from where I left off.</td>
</tr>
<tr>
<td><strong>Q.10 Strategy: using self-repetition</strong></td>
<td></td>
</tr>
<tr>
<td>When I need to think of what to say, I repeat</td>
<td></td>
</tr>
<tr>
<td>words or phrases I have just said to gain time to</td>
<td></td>
</tr>
<tr>
<td>think.</td>
<td></td>
</tr>
<tr>
<td><strong>Q.4 Strategy: Self correction</strong></td>
<td><strong>Q.1</strong> I pay more attention to the content of what I</td>
</tr>
<tr>
<td>When I realise that I have used the wrong words,</td>
<td>say than to the words I use or to my pronunciation.</td>
</tr>
<tr>
<td>phrases or pronunciation, I immediately correct them</td>
<td></td>
</tr>
<tr>
<td>by myself.</td>
<td></td>
</tr>
<tr>
<td><strong>Q.13 Strategy: Seeking clarification</strong></td>
<td><strong>Q.7</strong> When I don't understand others, I continue to</td>
</tr>
<tr>
<td>When I don't understand others, I ask them to</td>
<td>express my meaning rather than ask them to clarify</td>
</tr>
<tr>
<td>clarify what they mean.</td>
<td>themselves.</td>
</tr>
<tr>
<td><strong>Q.6 Strategy: Asking for repetition</strong></td>
<td><strong>Q.9</strong> When I don't understand others, I listen quietly</td>
</tr>
<tr>
<td>When I don't understand others, I ask them to</td>
<td>and hope that I can understand without having</td>
</tr>
<tr>
<td>repeat the words or phrases they have just said to</td>
<td>had to ask them to clarify themselves.</td>
</tr>
<tr>
<td>help me understand their meaning.</td>
<td></td>
</tr>
<tr>
<td><strong>Q.11 Strategy: Seeking confirmation</strong></td>
<td></td>
</tr>
<tr>
<td>When I don't understand what others mean, I ask them</td>
<td></td>
</tr>
<tr>
<td>to confirm what they mean so as to help me clarify</td>
<td></td>
</tr>
<tr>
<td>their meaning.</td>
<td></td>
</tr>
</tbody>
</table>

**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

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<tr>
<td></td>
<td>Very low</td>
<td></td>
<td></td>
<td></td>
<td>Very high</td>
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</table>

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

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<tr>
<td></td>
<td>Very low</td>
<td></td>
<td></td>
<td></td>
<td>Very high</td>
<td></td>
</tr>
</tbody>
</table>
An Overview of Questions on Indirect Strategies in Questionnaire (2)

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Non-target strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
<td>Q. 3 I say whatever I can think of during group discussions rather than plan for the key ideas in advance.</td>
</tr>
<tr>
<td>Q. 5 Strategy: Functional planning Before I speak, I plan for and rehearse words or pronunciation needed for the group discussion.</td>
<td>Q. 7 I say whatever I can think of during group discussions rather than rehearse the words or pronunciation in my mind in advance.</td>
</tr>
<tr>
<td>Q. 6 Strategy: Asking for help During group discussions, I ask my groupmates for help with the language or content of the discussion.</td>
<td>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.</td>
</tr>
<tr>
<td>Q. 1 Strategy: Offering help During group discussions, I help my group-mates with the language or content of the discussion.</td>
<td>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.</td>
</tr>
<tr>
<td>Q. 10 Strategy: Evaluation After group discussions, I reflect on my performance during the discussion and think of areas that need improvement.&quot;</td>
<td>Q. 2 After group discussions, I let the gone be bygones rather than reflect on words I have used or ideas I have expressed.</td>
</tr>
<tr>
<td>Q. 13 Strategy: Using positive self talk Before I speak, I let myself relax and remind myself not to be nervous.</td>
<td>Q. 4 I let people say more to help myself relax and to reduce my pressure.</td>
</tr>
</tbody>
</table>

**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

(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
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：

<table>
<thead>
<tr>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>很少</td>
<td>很多</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(B) 我認為以上策略對幫助英語討論的有效程度是：

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>很低</td>
<td>很高</td>
<td></td>
<td></td>
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</tbody>
</table>

### 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：

<table>
<thead>
<tr>
<th>1</th>
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<tr>
<td>很少</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(B) 我認為以上策略對幫助英語討論的有效程度是：

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### 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：

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</table>
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：

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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：

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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：

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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：

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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：

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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：

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策略 (10)
當我需要思考說些甚麼時，我會重複一遍自己刚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：

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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：

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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 the teacher is kind.」

(A) 我在英語討論時運用以上策略的次數是：

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</table>
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：

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(B) 我認為以上策略對幫助英語討論的有效程度是：

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<td>中等</td>
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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：

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謝謝你回答問卷 (一)
Appendix II

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: 6-8 min preparatory talk + 12-16 min English discussions

No. 1

Phaze 1 Control (10)

Pre-discussion planning in Cantonese (5 min)

*Car Which is most important?
*Kel Handsome face, of course.
*Kel No, this world is too superficial. No good.
*Car Others may be justice of you.
*Car I've a question here. How should we express all those in English in the upcoming discussion?

*Kel What do you mean by "how to express"?
*Car Yeah, like 'outlook' is very important.
*Car 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 live, 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.
*Kel But not everyone has the money to buy secret ears. So that's not a problem.
*Car I think that x-ray eyes are good. You can find things that you've lost.
*Tar "Muscle'.

*Car But not everyone has the money to buy secret ears. So that's not a problem.
*Con Yeah, like outlook's very important.
*Tar OK then, what about this one (pointing). "Ears that can hear what other people think"?
*Car Super ears that can hear what other people think.
*Kel As a group after we've some consensus and conclusion.
*Tar And then we may discuss these.
*Kel But will we have enough time?
*Car No, don't worry.
*Kel OK, let's finish the ranking first. (reading the notes)

Car Why why why u want to have a petty face (to Kelly)
*Kel But 1(. ) is 1i think it is good for myself (haha) and 1 like I like (ah ah) so (so) how
*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 or when u (. ) when a person is suggesting an item, the others respond and give opinions.
*Car Um what about this? When a person is suggesting an item, the others respond and give opinions.
*Kel But just that (. ) or do u think in ray eyes the other (. ) points um um more more (important) important or than this (. ) this body this
*Car No
*Kel Why
*Kel Just
*Kar Just because just because (. ) U always need this thing to (. ) find the last thing
*Car Yes
*Kar Only this
*Kar Yes
*Kar To
*Kar To just a little
*Kel Yes
*Kar It is impossible if everyone is (. ) simple so (. ) u don't need to live
*Kar But (. ) um um um um just like if u have a nose one can smell the danger u can find the robber and so on
*Kar Oh u are shook now
*Kar And it is important
*Car U are Chinese
*Kel And it is important more more more important than x ray x ray eye or
*Kar Can may be be
*Kar Chinese
*Kar But u said u said out more Connie
*Conn Kelley
*Kar Kelley
*Kar Kelley
*Kar Kelley
*Car Why why why u want to have a petty face (to Kelly)
*Car Ok
*Car May be many people love (laughing)

*Car I've a question here. How should we express all those in English in the upcoming discussion?

*Car What's the first one?
*Kar Pretty handsome face.
*Car In this brain? (pointing at the notes)
*Kar Yes, you're right.
*Kel A pretty handsome face with a dumb mind. (ha ha)
*Kar What's the one I think it should be the first.
*Kar What's?
*Kar Super ears that can hear what other people think.
*Car But I like x-ray eyes.
*Car So what should we do? Every one has a different choice.
*Car Let's vote.
*Car What do you mean by "how to express"?
*Car Let's get it straight. Should we mark the sixteen items individually or as a group?
*Car As a group after we've some consensus and conclusion.
*Car OK, let's do so later in the upcoming task.
*Car I think this should be the third. We won't die wherever we are. We'll have a super strong stomach.
*Car No, you'll be full to death.
*Kel Later. We'll pool all ideas together first.
*Car Checking dictionary.
*Kel I think 'strong teeth' is the third.
*Car How 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.
*Car Right?
*Car What if two people speak at the same time??
*Car We'll sort it out later.
*Kel Yeah, ok. "Ears strong help".
*Kel I got it from the dictionary. It means 'necessity'.
*Kar Yeah, the liver changes food into nutrients.
*Car OK, let's go. What about extra strong bones here?
*Kar 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 or when u (. ) when a person is suggesting an item, the others respond and give opinions.
*Car Um what about this? When a person is suggesting an item, the others respond and give opinions.
*Kel But just that (. ) or do u think in ray eyes the other (. ) points um um more more (important) important or than this (. ) this body this
*Car No
*Kel Why
*Kel Just
*Kar Just because just because (. ) U always need this thing to (. ) find the last thing
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*Kar Oh u are shook now
*Kar And it is important
*Car U are Chinese
*Kel And it is important more more more important than x ray x ray eye or
*Kar Can may be be
*Kar Chinese
*Kar But u said u said out more Connie
*Conn Kelley
*Kar Kelley
*Kar Kelley
*Kar Kelley
*Car Why why why u want to have a petty face (to Kelly)
*Car Ok
*Car May be many people love (laughing)

*Car I've a question here. How should we express all those in English in the upcoming discussion?

*Car What's the first one?
*Kar Pretty handsome face.
*Car In this brain? (pointing at the notes)
*Kar Yes, you're right.
*Kel A pretty handsome face with a dumb mind. (ha ha)
*Kar What's the one I think it should be the first.
*Kar What's?
*Kar Super ears that can hear what other people think.
*Car But I like x-ray eyes.
*Car So what should we do? Every one has a different choice.
*Car Let's vote.
*Car What do you mean by "how to express"?
*Car Let's get it straight. Should we mark the sixteen items individually or as a group?
*Car As a group after we've some consensus and conclusion.
*Car OK, let's do so later in the upcoming task.
*Car I think this should be the third. We won't die wherever we are. We'll have a super strong stomach.
*Car No, you'll be full to death.
*Kel Later. We'll pool all ideas together first.
*Car Checking dictionary.
*Kel I think 'strong teeth' is the third.
*Car How 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.
*Car Right?
*Car What if two people speak at the same time??
*Car We'll sort it out later.
*Kel Yeah, ok. "Ears strong help".
*Kel I got it from the dictionary. It means 'necessity'.
*Kar Yeah, the liver changes food into nutrients.
*Car OK, let's go. What about extra strong bones here?
*Kar 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 or when u (. ) when a person is suggesting an item, the others respond and give opinions.
*Car Um what about this? When a person is suggesting an item, the others respond and give opinions.
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*Kar It is impossible if everyone is (. ) simple so (. ) u don't need to live
*Kar But (. ) um um um just like if u have a nose one can smell the danger u can find the robber and so on
*Kar Oh u are shook now
*Kar And it is important
*Car U are Chinese
*Kel And it is important more more more important than x ray x ray eye or
*Kar Can may be be
*Kar Chinese
*Kar But u said u said out more Connie
*Conn Kelley
*Kar Kelley
*Kar Kelley
*Kar Kelley
*Car Why why why u want to have a petty face (to Kelly)
*Car Ok
*Car May be many people love (laughing)

*Car I've a question here. How should we express all those in English in the upcoming discussion?

*Car What's the first one?
*Kar Pretty handsome face.
*Car In this brain? (pointing at the notes)
*Kar Yes, you're right.
*Kel A pretty handsome face with a dumb mind. (ha ha)
*Kar What's the one I think it should be the first.
*Kar What's?
*Kar Super ears that can hear what other people think.
*Car But I like x-ray eyes.
*Car So what should we do? Every one has a different choice.
*Car Let's vote.
*Car What do you mean by "how to express"?
*Car Let's get it straight. Should we mark the sixteen items individually or as a group?
*Car As a group after we've some consensus and conclusion.
*Car OK, let's do so later in the upcoming task.
*Car I think this should be the third. We won't die wherever we are. We'll have a super strong stomach.
*Car No, you'll be full to death.
*Kel Later. We'll pool all ideas together first.
*Car Checking dictionary.
*Kel I think 'strong teeth' is the third.
*Car How 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.
*Car Right?
*Car What if two people speak at the same time??
*Car We'll sort it out later.
*Kel Yeah, ok. "Ears strong help".
*Kel I got it from the dictionary. It means 'necessity'.
*Kar Yeah, the liver changes food into nutrients.
*Car OK, let's go. What about extra strong bones here?
*Kar I think you should consider your own reasons for support now so that we could use them in the discussion.

(Time was up.)
*Kd* 
Er go on go on go on

*Aar* 
Go ahead

*Car* 
Go on go on

*Aar* 
What's this (beautiful) pretty and hand some

*Car* 
Go on go on

*Aar* 
Speak speak

*Aok* 
Here

*Luc* 
Come your turn

*Car* 
We two pass two points

*Yan* 
And then

*Car* 
How about the third

*Con* 
Come a first

*Car* 
Come

*Car* 
Why

*Car* 
But last one is a powerful Liver that (....)

*Car* 
Speak up speak up

*Con* 
A powerful liver that turns anything u eat into <resourcing, reading from notes>

*Car* 
Why

*Car* 
Because u like it <givehelp>

*Car* 
That

*Car* 
And then it turns to good is that

*Con* 
And then it turn to good is that

*Car* 
Oh may be

*Con* 
Oh healthy

*Kel* 
Kid its mean or a car

*Con* 
If you need to eat

*Car* 
A powerful liver that turn anything u eat into <resourcing, reading from notes>

*Car* 
No no. 

*Car* 
OK let's just say my eye

*Aar* 
May be (extra strong bones that last forever) because if u have the strong bones

*Car* 
You can do many things

*Aar* 
Maybe you die (the bones will last also)

*Car* 
That's that

*Car* 
But why u don't choose um (we don't choose a super strong heart that last for 100 years (reading from notes))

*Car* 
The earth is very small (laughing)

*Car* 
But some as it just like

*Car* 
Every one live for 100 years (no) no place you can live

*Car* 
Use um or not

*Car* 
Go to the moon

*Car* 
Yes the more people more or baka mu more things they they (.) or invent

*Car* 
Invent

*Car* 
Invent what

*Car* 
Um just like go um can invent the or

*Car* 
<resourcing, reading from notes>

*Aar* 
<laughing>

*Car* 
Um just like go um can invent the or

*Car* 
<resourcing, reading from notes>

*Aar* 
Yes and then

*Car* 
We pays two points

*Con* 
Aar comic your turn

*Yin* 
The End

*Car* 
We should vote then. *Aar* No no. 

*Car* 
Ok let's just rank. Brain.

*Car* 
OK let's roughly rank the first five item

*Car* 
I think we should continue the practical aspect first. I mean

*Car* 
Because If you are (.) older, your teeth will (.) fall out.

*Car* 
-sweets or (.) or or something (.) hurt the teeth so er (.) they don't want to (.) vi

*Aar* 
-chocolate

*Kel* 
-or brain

*Aar* 
-but woman is too weak

*Kel* 
-l don't think so many many (man is too weak) woman is a very

*Aar* 
So ok this one

*Mel* 
And then so

*Car* 
OK the tint is brain.

*Car* 
What about next? [I no Aaron your turn

*Car* 
Kelly your turn Connie your turn

*Car* 
Kelly turn to good is that

*Kel* 
Or healthy

*Car* 
And then it turn to good is that

*Kel* 
Super nose (laughing)

*Car* 
-or brain

*Aar* 
1 support.

*Car* 
When you die, only a teeth (laughing) <gesturing to express meaning)

*Aar* 
I think we should start ranking the item first.

*Kai* 
But er we put the super strong heart (er) (.) in the five

*Aar* 
Me too me too.

*Kd* 
Please.

*Aar* 
OK extra strong teeth.

*Kel* 
But not a woman need not (.) this (. ) muscles

*Aar* 
A strong man and women (.)

*Kel* 
No one die turn to a muscle people

*Car* 
Good fighter (laughing)

*Aar* 
A powerful liver that turn anything u eat into <resourcing, reading from notes>

*Kel* 
But you know all the things (.) you won't live happily. You don't have any fun.

*Kel* 
No (.) just can smell danger (.) not always smell (.) over everything.

*Aar* 
OK On

*Car* 
Connie, your turn (laughing)

*Kel* 
Do you know em (.) super hair (laughing)

*Aar* 
Why

*Car* 
This is one hundred years. (Shuffling paper strips on desk)

*Kel* 
Super hair that does not fall down. Super hair.

*Aar* 
Why

*Kel* 
Because many man has (.)

*Aar* 
Has no hair (laughing)

*Kel* 
Yeah (laughing). Tend to use the (.) or (laughing)

*Aar* 
It's terrible.

*Kel* 
No, just not fall out

*Aar* 
But if your hair is hurt, or (you can't) (laughing) your hair will become very (.) very terrible. I don't support it.

*Car* 
I support it

*Car* 
The last one should be a 'super strong heart that lasts a hundred year'.

*Car* 
Right.

*Aar* 
Then it's pretty handsome face that last forever.

*Car* 
No, it should be in the middle.

*Kel* 
OK may be.

*Aar* 
Well I don't. Pretty hair isn't much use after you die.

*Kel* 
Then good.

*Aar* 
It's OK be ugly. The second one is ...

*Kel* 
Not so good.

*Kel* 
No, better not to say second last. I mean as long as the items are not of much

*Aar* 
But what do you mean by kind of practical weal? How do you define it?

*Kel* 
Like extra strong bones, forever or something like that. Other not so important

*Car* 
High power muscle. Then the more useful things are er a super nose that can

*Kel* 
Then what about the first one? What is it?

*Kel* 
Brain, of course.

*Aar* 
The second one is super nose. Right?

*Kel* 
Yeah.

*Car* 
Remember, we need to explain the reasons in English in the upcoming task. You know

*Kel* 
Well I'll think about it when we're in the English discussion. Don't worry.

*Kel* 
Aaron, remember you should say something? OK?

*Car* 
OK don't worry.

*Kel* 
What's need? Something external or internal?

*Aar* 
Internal beauty is more important.

-Kai* 
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

*Kel* 
"Maybe even lower than that.

*Aar* 
I think we should provisionally rank the item first.

*Kel* 
Let's write down the order.

*Car* 
No, we are not supposed to do so

*Kai* 
Right then, let's try to remember the order.

*Kel* 
"Memories? Difficult to do so for all the item.

*Kel* 
OK extra strong hands doesn't sound very useful. Are we ranking from the top

*Aar* 
Yeah. Brain first then nose.

*Kel* 
Right.

*Kel* 
What about the third one? Next ear or legs. The two are similar. So it doesn't really

*Kel* 
OK then or pretty handsome face.

*Car* 
Pretty handsome face? (Then signaling to CO to speak. CO doesn't respond.)

*Kel* 
Yeah should be the fifth or sixth new.

*Car* 
They are all body parts.

*Kel* 
Yeah.

*Car* 
Then what about ranking the least important items first? I mean we start with the

*Kel* 
The last one should be a 'super strong heart that lasts a hundred year'.

*Car* 
Right.

*Aar* 
Then 'pretty handsome face that last forever.'

*Car* 
No, it should be in the middle.

*Kel* 
OK may be.

*Aar* 
Well I don't. Pretty hair isn't much use after you die.

*Kel* 
Then good.

*Aar* 
It's OK be ugly. The second one is ...

*Kel* 
Not so good.

*Kel* 
No, better not to say second last. I mean as long as the items are not of much

*Aar* 
But what do you mean by kind of practical weal? How do you define it?

*Kel* 
Like extra strong bones, forever or something like that. Other not so important

*Car* 
High power muscle. Then the more useful things are er a super nose that can

*Kel* 
Then what about the first one? What is it?

*Kel* 
Brain, of course.

*Aar* 
The second one is super nose. Right?

*Kel* 
Yeah.

*Aar* 
Remember, we need to explain the reasons in English in the upcoming task. You know

*Kel* 
Well I'll think about it when we're in the English discussion. Don't worry.

*Kel* 
Aaron, remember you should say something? OK?

*Car* 
OK don't worry.

*Kel* 
What's need? Something external or internal?

*Aar* 
Internal beauty is more important.

*Kel* 
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

*Kel* 
"Maybe even lower than that.

*Aar* 
I think we should provisionally rank the item first.

*Kel* 
Let's write down the order.

*Aar* 
No, we are not supposed to do so

*Kai* 
Right then, let's try to remember the order.

*Kel* 
"Memories? Difficult to do so for all the item.

*Kel* 
OK extra strong hands doesn't sound very useful. Are we ranking from the top

*Aar* 
Yeah. Brain first then nose.

*Kel* 
Right.

*Kel* 
What about the third one? Next ear or legs. The two are similar. So it doesn't really

*Kel* 
OK then or pretty handsome face.

*Car* 
Pretty handsome face? (Then signaling to CO to speak. CO doesn't respond.)

*Kel* 
Yeah should be the fifth or sixth new.
Car: We should continue to rank. 
Kel: That’s quite good, actually.
Car: Then long.
Kel: What about x ray eyes?
Car: Should be the next on seventh or eighth. Just follow the order, you know.
Car: What about pretty face?
Kel: We’ve already dealt with that on about fifth or sixth.
Car: Yeah.
Car: Muscle is useless. It should be put in one of the last few items.
Kel: Then the last one on...

*English discussion* (8 min) No shuffling of the paper strips on the desk; simply reading the notes when needed.

Aar: OK we’ll first the one (. ) extra (. ) no so (. ) is super smart brain that works better than a computer? (seems to be reading from the notes)
Car: Yeah
Kel: You
Car: Why? Why? (looking at K to answer) <askhelp>
Kel: Um because er... 
Car: [we can think more idea] <givehelp>
Kel: er on er at er and we need in 3000 years we need a
Car: [good memory] <givehelp>
Kel: [good memory] <givehelp>
Car: ya ya and then we need or very or (. ) good memo or and we need er um remember things more better
Car: [enough useful just useful] <givehelp>
Aar: you useful ok (. ) ok second
Car: um second one is (. )
Kel: maybe <givehelp>
Car: no
Yea: why?
Kel: why?
Aar: OK I answer <givehelp>
Car: ok ok
Aar: because um when we have a (.) some danger we can(.) know that so we can protect our life
Car: you the third one also <COOPENEGO>
Aar: third one
Car: but um may be
Kel: leg or er?
Aar: may be um can ya
Car: powerful extra why? Can we
Kel: ya er (. ) we can well (giggling) hear more many many things so so um er or er

Car: ya because what
Car: healthy
Car: healthy?
Car: may be fat
Kel: um next one
Kel: ha ha number number
Kel: [extra strong lung] <givehelp>
Kel: [extra strong lung] <givehelp>
Car: why?
Kel: because in your 3000 um on the air pollution may be very bad or very bad so we need a extra strong lung to protect ourselves
Car: protect (.) you
Kel: also protect
Aar: yeah protect myself (using gestures)
Kel: you um you mean?
Car: [many people hurt you]
Kel: [super skin]
Aar: just like to you
Aar: do you agree?
Car: I or agree
Aar: How about you? (talking to CO)
Car: Agree
Kel: Agree
Aar: Suggestion Connie?
Aar: I think the last one
Aar: Last one (. ) you think the last one
Kel: The last one or (.) heart strong heart
Kel: Why?
Car: Super hair
Kel: Oh you
Kel: Why?
* Car: Why?
Kel: Because I am of super hair er I don’t need
Car: you
Car: ok that’s mean super hair is the last one
Kel: ha
Kel: no
Kel: or yes
Car: here this that many many hair I don’t need
Kel: I agree to
Car: yes
Kel: ah that’s mean super hair is the last one
Kel: ha
Kel: no
Kel: or yes
Car: here this that many many hair and (pointing at the instruction sheet)
Kel: ok ok
* Car: don’t
Car: ok next one next one
Car: many (may be) things are unusual I think
Kel: ya
Car: ya
Kel: ya two one two
Kel: ya just pow (next one) High power muscles
Kel: ya
Kel: so next next may be pow (next) x ray (.) x ray eye

Aar: You mean that hear some comment or you from always?
Car: ya so um also useful
Car: many useful
Aar: [OK (many) fourth one
Kel: um I think it is powerful leg or that can walk as fast as a car because er er (. ) 3000 years we need (. ) to do things or more as fast as possible so we need er or instrument to make us do things many more faster
Aar: ok then
Car: what do you think?
Kel: pretty and handsome face <GIVEHELP>
Aar: that lasts forever why?
Car: [last forever]
Aar: why?
Kel: outlook
Car: [because] is important
Car: ya
Kel: just the look
Car: you your look is important
Car: not too important
Kel: but you know if you are so ugly
Kel: you can talk to you
Kel: during this years or may be only said that er we need to see or hear about the beautiful if you ugly er
Aar: if you are ugly
Kel: ok if you are ugly and you will er (. )
Car: you love
Kel: no not this mean er or I don’t know the words (Chinese)
Aar: so what do you mean? (giggling) I don’t know too worst
Kel: ok just leave it
Car: yesterday
Kel: outlook outlook
Aar: and next one is
Kel: next one
Car: um extra strong teeth may be
Aar: ya because we always eat sweets then (. ) we don’t want (.) toothache so we need extra strong teeth
Kel: someone may afraid of pain very pain
Aar: ya
Kel: um next one no one disagree
Aar: ya because we have prepare well
Kel: ya so one don’t think very strong hand
Car: um
Kel: [powerful stomach]
Kel: but if you have extra strong teeth (. ) and not eat anything
Car: a powerful stomach that
Kel: [we can eat many many (giggling)] <givehelp>
Aar: yeah I see I agree
Kel: But a computer also use robot (. ) er robot is it
Kel: Robot robot
Kel: but not computer is robot
Kel: Robot
Kel: but computer not computer (. ) because need to type
Car: type
Car: ya
Kel: um
Kel: use keyboard
Car: ya type the keyboard (.) next one next one
Car: next one is (.) um (.)
Kel: maybe super skin <givehelp>
Car: super skin
Kel: outlook skin
Car: some I think (. ) ok
Kel: ok
Kel: um super skin that doesn’t or doesn’t change
Aar: just like look
Aar: we have discuss all is war
Car: yes
Car: please
Car: finish it
* or ya
Kel: or ya
Kel: [not be the last one a powerful liver that turn anything a eat into nutrient]
Kel: with how about x ray eyes
Car: x ray
Kel: talk already
Car: [you un distinguish]
Car: ok ok the
Kel: so after extra strong hand may be
Kel: x ray eye
Kel: um extra strong hand to x ray eye and super skin that doesn’t change and then the last one is the
Car: a powerful liver
Kel: ok
* ya
"Um um
"Kel So finish
"Con finish
"Car finish
The End

Na 3  *Phase 3 Control (II) Pre-decision planning conducted in Cantonese (4.5 min)

*Aar What do you think Carrie? Which should be the first item?
*Car Super skin or. Super skin
*Aar Do you agree? (Looking at Carrie)
*Con Em well, you agree.
*Car 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.
*Kel Kelly?
*Car If you have bones, then you need skin to complement them.
*Aar Em. To complement right. By the way, ids difficult. It'll be easier to rank it the other way around. I man, it's easier to start ranking from the bottom /
*Con finish

*Aar Do you agree?
*Car Um, to complement right. By the way, ids difficult. It'll be easier to rank it the other way around. I man, it's easier to start ranking from the bottom /
*Con finish

*Aar Ear then?
*Car I don't care. Extra strong hand. Not important. Why will we need to lift such heavy things? /
*Aar Yeah, we'll have machinists.
*Con Oh. That'll be the last one then.
*Aar Then a ray gun. We'll have electricity and lights.
*Kel Maybe at that time we have no lights. We have light bugs!
*Aar Em pretty handsome face.
*Aar No it's fine. We've already ranked it. We have skin and then bone.
*Con Nose is good. We can smell danger. You see at that time it might be very chaotic.
*Kel Then or ears. Should they be put at the end?
*Aar But you said you wanted them.
*Kel No we said hands not ears.
*Car Oh Ok. Second last then.
*Kel What about machines?
*Kel Muscle should be second last or third last.
*Kel Not very useful to be so powerful. Actually,
*Aar Yeah, we'll have machinists. Fourth from the bottom. What about strong hands?
*Kel No they should be ranked the last.
*Kel Should be ranked.
*Aar No lea the first. We've already ranked it. We have skin and then bone.
*Kel Maybe at that time we have no lights. We have light bugs
*Aar No lea the first. We've already ranked it. We have skin and then bone.
*Kel Yeah. Very important. Em. Then the next one is bones... extra strong bones.
*Aar Ya
*Kel Hair then. Useless.
"Car (You an disagree.
*Kel But you must live.
*Car Why?
*Kel To see your bone (giggling)
*Kel Uten Cando
*Car (Yes someone need the old
*Kel How other people think of you (giggling)
*Kel Then there is no secret.
*Kel No secret is good
*Kel Doesn't matter ok agrees. Agrees.
*Car But then next one. Er etc...
*Kel (Yes Superhair does not (-) fall out.
*Kel Why?
*Kel Because we are alive we can or make some change in our body so (-) no need to have super hair it is impossible
*Car (You someone need the old
*Kel Why? But why why we didn't you put some more important than this one (-)
*Car Because in year three thousand em all the things are go fast (-) like money things are go fast (-) like car
*Kel Next.
*Kel (Agree
*Car Because in year three thousand em all the things are go fast (-) like money things are go fast (-) like car
*Car Next
*Car Uh (-) Muscles? (reading from the notes)
*Car Because em in year three thousand er (-) there may be many F T. Ok
*Kel 1 T?
*Kel But what?
*Kel You the nose is important (-) because em Ok
*Car (You can disagree. So (-) do disagree
*Car Disagree
*Car The nose
*Kel But what?
*Car You the nose is important (-) because em Ok
*Kel It T?
*Kel Why?
*Kel Yeah
*Kel Next one Kelly?
*Car My turn? I think I think (-) the leg (-) can walk as fast as a car.
*Kel Yeah.
*Kel Because um (-) like Carrie said (-) at that time many thing is that as possible so we can save time used (-) we can have a better life.

"Car Because (-)
*Kel Yeah.
*Car Oh your turn Carrie?
*Car Ya. Aaron.
*Car Carrie?
*Car Aaron?
*Car Ya. Aaron?
*Con We can
*Car The nose
*Car (Yes someone need the old
*Car How other people think of you (-)
*Car Next
*Car Uh (-) Muscles? (reading from the notes)
*Car Next
*Kel Next.
*Kel (Agree
*Car Next
*Kel Yeah
*Kel You the nose is important (-) because em Ok
*Kel It T?
*Kel Why?
*Kel Yeah
*Kel Next one Kelly?
*Car My turn? I think I think (-) the leg (-) can walk as fast as a car.
*Kel Yeah.
*Kel Because um (-) like Carrie said (-) at that time many thing is that as possible so we can save time used (-) we can have a better life.

"Car Strong teeth is fifth from the bottom.
*Car OK sixth from the bottom.
*Car Some times you can think of the reason.
*Car It seems that we've finished ranking all the items already.
*Car What's the second most important?
*Car The second should be legs.
*Kel Second?
*Kel Should be OK.
*Kel No, not good, of course.
*Kel Then, legs should be the fourth important.
*Kel Again, the first is a pretty handsome face.
*Kel Second is skin, third is bones, fourth is legs.
*Kel None, er about danger.
*Kel Then ears.
*Kar Ears is already in place.
*Kel Then legs.
*Kar Then Muscles. Strong hands. Yeah not much use.
*Kar Then ears then? Hair. Muscles. Strong hands.
*Kar None, er about danger.
*Kar Then ears.
*Kar Ears is already in place.
*Kar Then legs.
*Kar Then Muscles. Strong hands. Yeah not much use.
*Kar Yeah, do so eternally and make us ever green.
*Kar I think I think (-) the leg (-) can walk as fast as a car.
*Kar Yeah.
*Kar Because um (-) like Carrie said (-) at that time many thing is that as possible so we can save time used (-) we can have a better life.

English Discussion in progress (9 min)

*Kar Oh the first (-) what do you think about? Kelly?
*Kel But why the first one I think (-) the first one is er (-) is a pretty and handsome face that attract the opp po palate
*Car Improper yes Why you think that?
*Kel Because I think (-) in that century we need it
*Car Why why you need it?
*Kel We may be there um at that time (-) um all thing or is (-)
*Kar What (-) all thing is (-) beautiful.
*Kar Yeah. No beauty er? no please to live here yeah (giggling)
*Kar Then second point
*Car Um
*Kar What do you think about the second, Carrie?
*Kar Super skin.
*Kel Why?
*Car Can em. er (-)
*Kar It can protect ourselves (-) <GIVEHELP>
*Car Won't hurt easily.
*Kar Everyone agree?
*Car [Agree
*Car agree
*Car And then?
*Car Aar?
*Kel Ya. Aaron?
*Kar Strong teeth is fifth from the bottom.
*Kar Sometimes you can think of the reason.
*Kar It seems that we've finished ranking all the items already.
*Kar The second most important should be legs.
*Kar Second?
*Kel Should be OK.
*Kel No, not good, of course.
*Kel Then, legs should be the fourth important.
*Kel Again, the first is a pretty handsome face.
*Kel Second is skin, third is bones, fourth is legs.
*Kel None, er about danger.
*Kar Ears.
*Kar Ears is already in place.
*Kar Then legs.
*Kar Then Muscles. Strong hands. Yeah not much use.
*Kar Then ears then? Hair. Muscles. Strong hands.
*Kar None, er about danger.
*Kar Then ears.
*Kar Ears is already in place.
*Kar Then legs.
*Kar Then Muscles. Strong hands. Yeah not much use.
*Kar Yeah, do so eternally and make us ever green.
*Kar I think I think (-) the leg (-) can walk as fast as a car.
**English discussion (8 min 20 sec)**

"Ray Why a handsome face is the

**Sam Because because.

"Ray Because what

"Ala I think the (handsome face) handsome face is facial express

**Sam Because or I think it is important

"Sam Why important

"Ray Why important

"Ala Br To

"Ben Because you are so ugly now <givehelp>

---

**Pre-discussion planning in Caxonne (5 min 40 sec)**

*Ben Clever

*Ala Is clever than computer

*Ray I think it is the most important (.) Yes (.) Clever than computer (.) Change number

Number

*Sam Change number three to change

**Ala Change number four

*Ray This one -pointing at the strip

*Ala Why

*Sam Why

*Ben Because (what) we can see the thing (.) we want to see

*Ala What mean that

*Ray或<br>

"Sam Super skin <touching Alan's face> How about next

*Ray How about the super hair

*Ben Um I think powerful can

*Ray U u can cut it can walk

*Sam As fast as (.) Then

*Ala Um (.) Is very important (then) it is very important when u can u can

*Sam Why important

*Sam Very important or agree how about number six

*Ray Car skin

*Ala Strong hair

*Sam Strong hair

*Ben No no no

*Ray Oh the bone we bones strong bones

*Sam Strong bones
Ben: Hmm yeah if a car hit u
[Ben (U) looks at U]
[Ben: 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

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why

Ray: Why

Ben: Why
*Sam: I don't think so. I think 'super heat' 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: And handsome face.

*Ben: Then we should move to breast after breast.

*Sam: Why not body?

*Ben: Of course not. Our brain is very important.

*Sam: Yes agree.

*Ala: The next is related to functions of our body part.

*Sam: Why don't we listen to Alan's views?

*Ben: Well apart from our heart, which is an internal organ, the next most important is our lungs.

*Ray: No according to experts' views, an environment with fresh air can make you live longer.

*Ben: No if your lung breaks you won't die yet.

*Sam: But you already have a heart that is one hundred years old.

*Ray: 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: I think stomach is more important. We won't get poisoned.

*Ben: Hey, everybody, don't think that the fish in the ocean is important?

*Sam: It's brain and we've already talked about it.

*Ray: Then what have we ranked so far?

*Sam: The first is heart second is brain and the third is breathing lung.

*Ben: OK let's decide on number four now.

*Ray: I think liver is important.

*Ben: The sixth will now be over. Hurry.

*Sam: Will liver can filter dusts from our body. That way, liver can lengthen our lives.

*Ray: You're already ranked everybody.

*Sam: I think a "super nose" is very important. Even if you have a strong heart or liver, you can't outrun danger.

*Ben: Then why don't you choose 'my eyes' then? You can avoid danger too.

(The preparation didn't finish but time was up.)
Ben: Er u can kill him her first
Ray: He got a gun.
Ben: No if u has a gun if he has a gun ( s) die he has a gun ( u can go) but u die
Ray: When the gun cannot hit u
Ben: It can't hit u if he has a sun ( u can go) but u die
Ray: No

Ben: I think the powerful cars are important
Ray: Powerful powerful cars
Ben: Why?
Ray: Too big
Ben: Um u can hear um the other (. ) people thing and
Ray: More
Ben: Why?
Ray: More
Ben: If someone if people tell lies um u can know that
Sam: Yes and
Ray: Tell what
Ben: u can know er or he is good or bad man
Sam: How about Alan Deng do u agree (yes) But but but the u have the super super ( car) super car if the other people is has the super car too he can listen your thing
Alan: Good liar
Ben: Um then we haven't any
Sam: If they say u can hear
Ben: But I think we haven't any our own things we when we want we have something
Ray: Don't want to tell other people
Sam: Why
Ray: Or I know
Ben: But they said u only his thing and not go (we are not out) so said it to the other people
Ray: Why not tell me why
Ben: So the cars are quite important
Sam: Think
Ben: But my do u or is (cars) is important or muscles is important Important which one is important
Ray: X ray eyes
Ben: Why x ray eyes important

Ben: Muscles is important
Ray: Ya muscles alan pang which do u think is important
Alice: Muscles
Ray: Er U bar[
Ben: What is this (. ) can u ok
Alice: Yes Can what ur muscles in the next
Ben: And the next in next ( u) ear And then ( ok) is ray eyes
Ray: Because ray is a ray eyes
Sam: X ray eyes is safe we must safe our self first
Alice: Don't talk
Ben and don is ( the last) think I think the strong teeth is (. ) very important too
Ray: Because I have er
Sam: the last er last
Sam: Is it is old and u can if not
Ray: What is want to say
Benny: The last one is super the last one is super (pointing across the desk)
Ray: Something
Sam: Can u can the surfing (yes) ( y) important than your teeth ( chinese yes yes)
Ray: But how about the handsome face (. )
Ben: Why your body is important then (yes)outside your body you think no
Ray: So what is the next important (. )
Alice: I think (. )
Ray: Number number number
Sam: No number here
Ben: (How about how about the (. ) um (. ) super air Super air not fall out when super air
Ray: Super air
Sam: Hair
Ray: Oh sorry sorry sorry (hair) hair is super ( sorry)
Ray: Why
Sam: Why
Ray: Now look at the time
Ben: When u is old in a air
The End

English discussion in program (12 min)
Ben: Hey sam
Sam: Yes
Ben: No your havn't (chinese)
Sam: Which is the most important? Nose, bones or unucla?
Ray: Bones can help you in many respects.
Sam: What about bones first?
Ray: Powerful muscles are quite good, we won't feel tired.
Alan: Like what?
Ben: Hey sam
Sam: No. why do you think that you won't be teed.
Ray: How can it helped is <give help>
Ben: Do you think is the it, ortant?
Sam: Um u can use this and (. ) at fat at a car and
Ray: Why?
Ben: Which car?
Ray: A car
Sam: Why do you don't choose x ray eye (. ) u can see many thing (. ) how about danger
Ray: Why
Ben: Why x ray eye important
Sam: I think The End

Preparation talks in Customs (5 min 20 sec)

Ben: I think strong teeth are useless.
Ray: Please talk about which items is the most important.
Alice: Yes, yes, Ray.
Ray: Br (...) I'd like to pass this to Alan.
Alice: 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, your hair will fall out. Regeneration is a problem and your body functions start to deteriorate.
Ben: Oh, right.
Sam: What do you think about strong bones?
Ray: Unless if you don't have strong muscles, strong bones don't help much.
Ben: That you need bones to support your muscles.
Ray: Then which body part do you think
Ben: What about bones first?
Ray: Then what do you think bones can help you do?
Ben: You won't have a bunch back if your bones are strong.
Alice: That means right.
Ray: Using is want powerful legs.
Ben: Paradox.
Ray: Powerful legs.
Ben: What's wrong if you have no powerful legs?
Ray: Don't matter. They have no function.
Ben: No, powerful legs have functions. They can be found in the roots.
Ray: Really.
Ben: What about handsome face? I think it's important.
Ray: Why?
Ben: Because you have a handsome face. (laughing)
Ray: Then which do you think is the most important?
Ben: X ray eyes.
Ray: X ray eyes?
Ben: Yeah, quite good. Why not?
Alice: But there are electric torches in this world.
Ben: Ray What? Electric torches. They are different.
Ray: With a x ray you can see through many things. OK?
Alice: Right. Right.
Ray: With a x ray, you can see through bones and skeletons. There is no need to do any ray x ray test.
Ben: Yeah. What about skin problems?
Ray: X ray eye help you detect where malignant tumours are in your body.
Ben: Ray 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.
Alice: Ah, what you really want to drive at is that handsome face is the most important. Right? (Laughing)
*Ben I don't care.
*Ben On a said.
*Sam How about a Ben Leo?
*Ben I don't agree that.
*Ben Leo how about a.
*Ben Um because the nose is (.) Because the the nose is more important than the eyes.
*Sam Why a think that?
*Ben Um(....)
*Sam Now a can see the everything (Ray/ no) but now a can't smell everything.
*Sam I can't smell (.) I also can smell (.) But (.) me (.) very (.) good and so (.)
*Sam I am not sure what you think.
*Sam Also (laughing).
*Ray How about a Ray?
*Ray Ha (.) I am (.) my idea (.) the same so a.
*Sam Do you think the handsome face is important?
*Ray no.
*Sam I think yes.
*Ray Why?
*Sam Have U think it is important (.) Why why (.) more important (.) Because somebody (.) than a ray.
*Ray What.
*Sam Just like Alan (.) not Alan Pang.
*Alan Alan claim his face is very beautiful (.) no handsome.
*Sam And when a see other er (.) people (like him him) if a have a have a handsome face (.) then I will some (.) something (.) good (.) for u (like him).
*Alan What good ar.
*Sam How about the (.) strong teeth?
*Ray Ray I have no common how about a sam.
**Sam But now where have.
*Sam Where can (.) which one is most important?
*Ben In the eyes and the nose (.) are the most important.
*Sam Nose yes.
*Sam Nose is the most important one.
*Ray But choose one U must choose one most most important.
*Sam yes you I will choose I will choose the handsome face.
*Ray oh.
*Alan But u have a.
*Ben But thin because I have so we want more.
*Sam But now have 3 people (.) agree x ray eyes (.) so the most important is a x ray (.) eyes (.) and the second important (.)
*Ben oh give u.
*Ben how about the powerful ears.

*Sam Now.
*Ben how about the powerful ears.
*Ray Can u speak louder please Alan.
*Alan Powerful ears.
*Sam why.
*Sam here haven't no powerful ears.
*Alan because er.
*Sam ears.
*Alan because it can help some unhappy people.
*Ben how to help.
*Ben because er can hear what other people they think (.) let me think.
*Alan Ray u can't only hear some some people think and u cannot help them.
*Sam If some people think a ugly.
*Alan ok kill him.
*Ray I think u (.) KILL people.
*Sam Ok continue Alan.
*Sam Then u hear some people (.) so ugly u can (.) do er (.) (.) giving liar listens.
*Ben But (.) they er no your friend and u also go to help them.
*Alan No.
*Ray So bad a Ben.
*Ben I think the nose (.) super one is the second.
*Ben Why? Second second.
*Ben Now it is explain.
*Alan I know the strong (.) nose strong nose is the third important because
*Alan Why second.
*Ray High power muscle high power muscle.
*Ray High power muscle.
*Sam High power is not important than (.) bone.
*Sam Yes.
*Sam Because the bone can support (.) your (.) power.

The End.
Ann: What about 'protect yourself'? In addition, 'protect yourself' might be a reason for choosing super strong bones.

Cyn: What about this one? "Like a ghost"?

Ann: Oh, maybe we have super skin. Haha.

Ann: During the upcoming discussion, let's relax and don't be so nervous.

Ann: Yeah, that might be the reason.

Mn: No, I think it's more important (no) because three thousand years (.) I mean three zero zero zero and they can't eat (.) some liquid (.) because super skin is to protect (.)

Ann: Hands

Cyn: Oh yes, hands.

Ann: Of course. But that means we can talk to others in a low voice during the class (yes).
"Ann -1 think this one is more important than hair

"Mn Haha

"Ste No no no

"Ste No is no

they still are handsome

"Ste So handsome I don’t think is important (. ) anyway there

haha

"Ste How about legs or teeth or teeth (legs) which one is more important?

"Ann Legs

"Ste So teeth (. ) muscles (. ) hair (. ) handsome face (. )

"Cyn Yaah Its ha ok

"Ste why?

"Ann What do u think Penny which one is better?

"Ste Why

"Pen Because (.... ) u have some people haven’t got hair (. )

so u looker u think ('Ste no I again) he is so ugly ('Steno I think hair is quite

Important (. ) to protect) M (. ) 1 see Um um

accept him (. ) right yes (. ) so I don’t think handsome is

"Ste And then (if u have time because) Because handsome or not handsome (. ) but still

"Ann -if someone is excellent will if someone is excellent er or(.... )

"Cyn -Something like that (power)

"Ste so

"C’n super strong heart

(unfinished but time is up. )

"Ste so what is the second one?

remember it clear 'Ste or 'Ann and then (is quite) we wont’ forget

"Ann Come on what do you think Penny?

It can remember everything u know (giggling)

it is better than a computer(. ) then u can remember everything um everything can remember

"Ste but is it useful to remember everything? 'Ann ofcoz not just remember everything u can do other things (. ) if u if u have a test or

"Ann that lau forever

"Cyn is it useful to remember everything?

"Ann or first flat of ooz is the

"Ste - why

"Ann because um because (if u have a super (. ) brain um u can think (. ) more er

if it is it better than a computer (. ) then a can remember everything um everything can er

can remember everything know (giggling)

"Ann -But it is useful to remember everything?

"Ann of course not just remember everything u can do other things (. ) if u have a test or

then u can remember your works and if your mother advise something u can remember it clear

"Ste or

"Ste and then (is quite) we wont forget

"Ste so what is the second one? er

"Cyn strong heart

"Cyn strong heart? (laughing)

"Cyn strong bone

"Ann that last forever

"Cyn which one? (laughing)

"Ann which one? (laughing)

"Cyn super strong heart

"Cyn super strong heart why you think Cynthia?

"Ann um um live longer

"Ste so

"Ste so

"Ste what
"Cyn No I think is the powerful legs

"Ste Not think is the liver

"Cyn Why

(.__.) is the stomach u can get food

"Ann What is the next?

'Pen Yes

"Cyn How about a Penny?

Pass agree

"Ste Why why agree with me? [pressing]

"Why why don't know

'Ann actually I don't agree with this why I can't get any reasons to revoke it

"Cyn do what?

'Ann I think mean that (.__.) (laughing) I (well) I don't think stomach is quite important

'Ste So which one is more important than this?

'Ann I have told you I don't know or this thing

'Ste This is inside our body this is inside [refilling the paper strips on the desk]

'Ann How about I (1.1.1) hear is just say that a is a power muscles is important

"Cyn I didn't

"Ann U didn't?

"Cyn No I didn't

"Ste Oh sorry

'Ste This one a pretty handsome face should be because

'Ste I 11 know why do you choose this because u haven't

'Ste No u haven't.

'Ste You I haven't because I have a very very handsome look I know I (no forget it) sixteen so this is important

'Ann I think think that should be succeed

'Ste yes of cost (.) so how about the super hair a think is hair can protect our head and head in the flesh is can protect our brain indirectly

'Ste but pretty or handsome face can make more people like u

'Ste but if I have a brain can make many money without a handsome face (.) just like Richard Li (.) he handsome? (1.1.1) agree I don't think so I don't think so

'Ste Agree agree

'Ste He is handsome I

'Ste But the he be really really gain a lot of a lot of money

'Ann But I think handsome (.) boys or handsome girls at no handsome boys or pretty girls is more popular (.) more popular than those who is ugly

'Ste So what but they don't have very handsome or very

'Ste I know I know or un or a say

'Ste An richard ice

As

'Do u

'Ste Yes so this is agree

Ann unum

'Ste Or any excuse to tell them 'oh I am busy (.) can you help me? it smart brain what to do (.) hand is not important more than this one

'Ann And u mean this one and x ray

'Ste Right

'Ste No

'Ann We haven't finish this part (yes) I do thing

'Pen Penny can you give us some idea?

'Ste Oh sorry (paper strip all on the floor)

'Ann Or I think (.) legs

'Ann Vs I think so

'Ste Why why

'Ste Because we can walk as fast as a car [reason]

'Ste So

'Ste How about a Penny? What is your idea?

'Pen When we are danger we can run faster

'Ste Good idea

To me and

better than u

'Bear hurry when we are in hurry we can run faster

'Ann Do a like this

'Ste How about my eye

'Ann or actually I think it's quite terrible if someone see (in the nose it is ugly) yes it is nose and if inside your house u will very afraid of someone who has a x ray eye and see through the walls what u are doing doing here (but still important) or (.) to not important (.) unless unless unless

'Ste no how should we have left (.) hands skin and muscle

'Ast oh skin

'Ste yes it can protect our (.) skin

'Ste a agree

'me why

'Ann Just agree

'Ste how about the left one

'Ann may be strong hands?

'Ste heavy things?

'Ste But no make sure that

'Ste I think this one is not so important

'Ste I think this one is not so important

'Ste Small strong high power muscles

'Ste yes then here can protect (.) x ray eye

'Ste the face so

'Ste small

'Ste ok
discussion in English (12min)

'Ann Do (.) I think the most important one is (.) a super nose that can smell danger (.) it is because when (.) we are in danger (.) we can smell it and we can protect ourselves and we can escape

'Ste Yes

'Ann Ahah (.) when you think?

'Ann Can you explain? (long pause; looking at S) Haha protect yourselves (long pause)

'Ann What do you think? Do you agree? Do you agree? (insisting others to respond)

'Ste Can you explain? (long pause; looking at S) Haha protect yourselves (long pause)

'Ann Thank you. Thank you.

'Ann Will hurt you easily.

'Ste Yes.

'Ste Can you explain? (long pause; looking at S) Haha protect yourselves (long pause)

'Ste But super hair won't fall out. So what's the use?

'Ste I think can protect your head and skull.

'Ste I think can protect your head and skull.

'Ste Small strong high power muscles

'Ste unhurt I think

'Ste But you can cut your hair short though it won't fall out.

'Ste Yeah. Okay.

Group discussion in English (12min)

'Ste Yes

'Ste Yes

'Ste When you smell danger then you have to have some (.) action

'Ste Yes

'Ste So to do it and next to the

'Ste Actually I think (.) Hong Kong is now polluted (.) when we have a strong legs (.) we can walk as fast as a car (.) and that means we (.) we can no need for us (.) so (.) or also there is no air pollution (giggling) air pollution anymore (.) Can I say this?

'Ste Yes so we no need to (.) use cars

'Ste Yes

'Ste Yeah

'Ste Haha

'Ste So next thing

'Ste Yes you can agree

'Ste Right! Earth! (Shuffling paper strips on the desk; long pause.)
Ann: Third one is that a (long pause) with all the things with others and the friends will help help her or him to slow off the *Ste
High power muscles that are as strong as lion's (... _) difficulties they face
*Ste
Also protect (. ) yauself.

Cyn: Wont be hurt easily (. ) we all protect ourselves haha yes (.... ) 'Ste
array be shy (. ) may be shy . Ste Um this ... don't know how to say it or um if we have strong bone there is another method that we won (. ) er er broken our leg or others know about what they think they (. ) they have something deep in their heart and they can help them although we know what they have think people what other people think and this means they can also hear what you think do you . Ste (but we would try our best
won (. ) let other know but if you have a strong cars powerful cars you can hear what 'Cyn (but you can realize
you want it? Help (laughing)

That means er you know all the things of me and you I know all the things of you $Ann
Ok
$Ann -no "Cyn
As you like
Stel to there won't there with friends or a couple something 'Alen
As you like la
$Ann -No . Ste
And they

Luc Er er also we should also have brain. bone or other organs such as beart. You
$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 her or him to slow off the
difficulties they face

*Cyn
yes if your friend is or unhappy then you know so you can (.... ) can confirm he

Anm: Ok with you if they don't talk you (.... ) you will talk to you (.... ) you don't need to listen their feelings

*Cyn: "some friends may

Yes may be they (.... ) may be they

*Cyn
yes because they don't want to talk to you

+Cyn
They don't talk (. ) they don't know how to say it or us

*Ste
They (.... ) don't want to worry them .

Yes

+Cyn
You so you can do something that they don't (. ) know and to let her feel better

Ann Oh help Panny help (touching P's hand) What do you think (giggling)

Panny
At . But I don't want other to know my secret actually

Yen all of us (.... ) feelings (.... ) sometimes we don't want other to know (. )

Yes

But if you are really really real friends they could help (. ) this could help

Ann But we we (. ) we good friends we can talk to each other and we don't need (.... )

*Ste
they don't know how to express

Ann but

*Ste
Something like our classroom they don't like to talk (.... ) in fact they don't like to talk (.... ) they just something had to him and he just hide or he just hide it in his heart and

*Cyn
share doesn't with others and always unhappy and unhappy (.... ) we can't help (. ) it is better to know what they (.... ) (of course) we know that you have secret but if I don't tell her

Ann: But we don't want you know I hear but if you want someone to share (.... ) I know it (.... ) right away

*Ste
But if we know (. ) our friends or feeling 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? I want you (touching C's right shoulder)

Helpful

Yes

Ann I want to I want to know your secret (giggling) (touching C's right shoulder)

*Ste
It's all to help them to afford their worries

*Ann
Ok

And they

Ann As you like for

Cyn
As you like

She So can

*Ann: Maybe (giggling) Ok

*Ste
Um so what is the secret?

+Cyn
Our pretty handsome face that can attract the opposite side (giggling)

*Ste
Why?

+Cyn
Because you are not ugly you have a pretty and handsome face

*Ste
So?

+Cyn
So is will be happy

And it

Unless that our friends or a couple something 'Alen
As you like

*Ste
So you can attract the opposite side sex (giggling)

Cyn
Want I can't

*Ste
But friends or couple something 'Alen
As you like la

Ann: Well no (. ) friends or couple something 'Alen
As you like la

*Ste
And they

Luc Er er also we should also have brain. bone or other organs such as beart. You

*Ste
And even if we have no brain we can still think. Everyone can be perfect you know

*Cyn
But you can realize

+Cyn
But you can realize

*Cyn
You made it the first. Without it we might not be able to live on

*Kwo: Don't worry there are ideas in the notes. You see you can actually use the suggestive techniques here. You could just take them from the notes.

+kWo
Nor

*Ng: Were we talking about brain?

*Ann: Yeah we marked it the first. Without it we might not be able to live on

*Cyn: What do you mean by 'Ther's'?

*Cyn: It means vitality.

*Cyn: I think all (.... )

*Ng: Also if we have no heart how can we live on. Right?

*Cyn: Then brain. We use it for thinking. If we have no头脑, there is nothing left except our body. But on the other hand, if one's body is handicapped with no legs or whatever, it's because we have thought. Nobody can be perfect you know.

*Cyn: Then brain, right? 'GivHelp'

*Ng: Yeah they, support our body. Without them, we can do nothing.

*Cyn: Apart from brain, what else?

*Ng: Also lungs. Without breathing, you have no air to survive.

*Cyn: I think lungs are more important than bones.

*Bela: But without lungs, you can do nothing with bones. So I think both are important.

*English discussion (8 min)

*Cyn: Apart from bones, what else?

*Ng: Every day 'GivHelp'

*Kwo
Yes everyday

+Cyn: Um how about

*Ste: Which is important

Um

*Kwo
And then the (...)

*Cyn: strong

*Ste
And then

*Cyn: Yes you yes you

*Luc: Nice (laughing)

*Ng: I think or super or super smile (brain ) sea because (.... )

*Cyn: landmark 'GivHELP'

*Ng: It is important (because) because (.... ) we think

*Cyn: Anything else and brain 'GivHELP'
Cha use brain *GIVHELP*

*Ng* any anything

Cha And the forth the five one (... ) (er is) is stongue (. ) ar super powerful stomach

* "Aik to you yes

*Kvo* I use choose a choose

Cha No so no

*Cha* Stomach (. ) use a powerful stomach if in the world (. ) in the life u can't eat (. ) u or er have u will have no any fund because flag eat flag or flag is very dellicies and (. ) food is very dellicies (. ) if u eat or (. ) can't eat to eat (. ) it is no way anti-

*Cha* And then me eat (. ) Ye So the extra strong (. ) (thick) range because there range up to stand up (. ) it need to move and (. ) exercise (. ) and keep fit

Haha

*Luc* Me super skin if u have no skin u can't posession or your body

Cha Mainte u

*Ng* I think I think the high (. ) I think the high power muscles (. ) is important because (. ..) it can (. ..) (C was moving the paper stripe on the desk to give help hint)

*Cha* Because it is in to (. ..) give u power *givhelp* (C and eye contact to signal)

*Kvo* Yes we can move (. ..) and we we don't have stick

Cha But power (. ..) (C) can (. ..) not easy be hur-

Um

*Cha* And how about the ninth (. ..) the ninth I think the ears

*Cha* Ears

*Cha* Where where (. ..) This this this

Cha No yes

Cha Eyes yes (eye yes) because if I have no eye I can't see anything

Um

*Luc* um (. ..) (You powerful) if I use legs, or (you) can't walk and how about u Jerry (. ..) (looking at C, the first time)

*Kvo* Um I think is no (. ..) I think is need hands or extra strong hands because we need hands to write (. ..) to pick something

*Cha* to hold something *GIVHELP*

*Kvo* yes to hold something the important thing is to write (. ..) We need to write thing

Um

*Cha* Yes (C kept shuffling paper stripe on the desk to give hints to K & N) How about u

*Cha* You (C kept shuffling paper stripe on the desk to give hints to K & N) How about u

Um

*Luc* Yes (. ..) (Looking at C, the first time)

*Kvo* *anything* *GIVHELP*

*Ng* anything (. ..) (C) listen to listen anything

*Cha* Um we know what (. ..) The next I think the extra strong (. ..) (C) is (. ..) (C) can breathe (. ..) but if we no nose u can breathe (. ..) u can breathe also is u can breathe on the mouth is the first

Haha

*Cha* Because if u no stronger (. ..) teeth u (. ..) can't eat anything

Um none

"Chu* Why?

*Cha* Well we need to use it. If you speak think, you aren't a human being, you know.

*Ng* Bore because they help support our whole body.

*Luc* No hat what about fear? U have no heart, then er...

*Cha* Then eyes are important as we need them to see.

*Cha* But even if I can't see you can still live.

*Cha* OK, as you like it. What about you? Do you like my eye?

*Cha* Life

*Cha* Then let's rank them rank them.

*Cha* Lungs should go first.

*Luc* Well eye and ears then.

*Cha* No I believe hand are more important.

*Ng* We can hear things with ears.

*Cha* This is hand.

*Cha* Skin too. You can catch diseases easily without skin you know.

*Cha* Yeah without skin what can you do?

*Cha* Then rank it.

*Cha* Then storage.

*Cha* No eyes are important?

*Cha* Yeah window of the soul.

*Cha* What about teeth? U know we can have false teeth.

*Cha* Not much use.

*Cha* Nee even then handsome then hand then er what about hair importance? It's fashionable to be bald now.

*Cha* No it's horrible if you are bald. Hair is more important. Let's see if the making is correct. This is more important. (. ..) that should be here. Hair is important can't be more important than nose.

*Cha* Well if u believe that internal organs we important we should rank them first (. ..)

*Cha* Then we should think about how we can make use of the body parts? (reading from the instruction sheet) *questionsdiscussion*

*Luc* There is of course for thinking.

*Kvo* Yeah to be wise and do the thinking.

*Cha* If you have a (lot) brain you should use it more

*Cha* but if you have no brain then.

*Cha* if you have no brain even if you have a heart it's useless.

*Cha* if you have no heart then you can't live either right?

*English discussion (12 min)*

*Cha* First I think a smart (smart) brain (brain) is important (because what because what because what)

Tell me

*Luc* Umm u can't think

*Cha* I will use this to think (. ..) (C) think our idea *givhelp*

*Cha* Yeah yes. The second is the super strong heart if no heart will die um...

*Cha* Daise you try

*Cha* This

*Cha* Next heavy power um because if it (. ..) can um or (reading from the note)

*Cha* Yes. The first one the forth one is (. ..) extra strong lungs (. ..) because everyone need to breathe (. ..) breathe u need the lung (. ..) so the lung is important

Um

*Luc* Um then a powerful storage is also important

And and (. ..)

*Cha* Dr Wears your (. ..) (C) eye. Um maybe storage. Your food can't or (. ..)

*Cha* You can eat if you like (. ..)

*Cha* Yeah (. ..) (C)

*Ng* *ailing help in Cantonese*

*Cha* Extra *givhelp*

*Ng* Extra strong "be" because um because it will be strong and long eh other or other people

*Cha* Um the next one is the powerfull (. ..) because (. ..) everyone can eat it can listening some pop music and (. ..) and so on (. ..) it important too

*Cha* Um and then (. ..) (C) think extra strong hands (. ..) (. ..) we use hands to do things we like (. ..) (C)

*Luc* And the men is powerful legs and can run or walk or do it everything or walk where or anywhere um (. ..)

*Ng* And or the any thing I fight

*Cha* Next Su superfut skin superfut skin

*Cha* Super skin

*Ng* Super skin or

*Cha* Kvo if you haven't superfut skin the sun will burn U *givhelp*

*Luc* And then a will die *GIVHELP*

*Cha* Won't want to wear it so easily hur

*Kvo* He Won't be stronger

*Cha* Won't be hur easily

Br

*Luc* U will have some (. ..)

*Ng* maybe the next even (very long read)

*Cha* The next one is (not) know super super superor or (. ..) the nose is use to or to smell some (. ..) to smell or something (. ..) but I can't say so or (. ..) so is important to (. ..) it if (. ..)

*Kvo* What and extra strong we use nose to the eat? (. ..) (C) does have mouth? If (. ..) if u haven't mouth (. ..) u will be hungry

*Luc* And last in high power muscles um it is important and not and muscle u can't put a hard (. ..) thing um (. ..)

*Ng* Su super hair be (. ..) (C) it can (. ..)

*Cha* Would a agent? *givhelp*

*Kvo* Could u like to take our hair? *givhelp*

*Ng* Super hairful. And there no hair

*Cha* You need to take our hair (speaking to L)

*Cha* Next a pretty or hand陌生 face (. ..)

*Cha* It isn't important

*Cha* Because

*Cha* isn't important

*Cha* um is important because many people will like (. ..)

*Cha* Also important too in Hong Kong

*Cha* Yes yes it is so important (. ..) um (. ..) super smile brain we use (. ..) (C) think something about (. ..) about study about (. ..) um (. ..) superpowerful

*Luc* Um um the heart (. ..) or the heart in our and we will die and (and met) um and a powerful?
"Kwo Life is precious."

"Cha But don’t do any exercise.

"Kwo If something is too long, then it will die.

"Cha Again powerful life is precious. Use it to protect others."

"Kwo Then if you have a powerful lung and you haven’t breathed, you will die.

"Cha Do you know the lung can do what?" <GIVEHELP>

"Ng Because no lungs, you will die.

"Kwo And powerful ears are unusable."

"Cha If you have a powerful lung, you can eat anything. If you can’t breathe, you cannot eat.

"Kwo Work faster, work faster.

"En Extra eyes.

"Kwo Extra eyes are very useful.

"Luc Yes, you can see many things.

"Cha Again you will die."

"Kwo If you haven’t extra strong lungs and you haven’t breathed, you can’t breathe."

"Ng Then if you don’t have lungs, you will die.

"Kwo Can’t say it, can’t know it. If you have a powerful stomach, you can eat anything.

"Luc Um, powerful stomach.

"Cha If you have a powerful stomach, you can eat anything. If you can’t say it, you can’t know it.

"Kwo Work faster, work faster.

"En Extra ears.

"Kwo Extra ears are very useful.

"Cha Yes, you will hear many things.

"Kwo Extra strong hands have many uses. Can do anything.

"Kwo And can eat.

"Ng Powerful lungs because can swim fast and eat.

"Kwo Run away run away fast—GIVEHELP. Extra ears can protect us."

"Luc Yes, we will hear.

"Cha And we will not be easy to hurt."

"Luc And you can smell many good smells.

"Kwo How about the bad smell?"

"Luc It’s not good."

"Cha And you don’t eat food."

"Luc You can eat.

"Kwo Yes. Muscle is not important.

"Cha Yeah. Not important. Not important if you have high power muscle.

"Kwo Extra eyes are the first important because... When it can be cr-."

"Luc You can see on your phone."

"Kwo It can be cr-."

"Luc It can be cr-."

"Kwo Protect yourself.

"Cha That’s good.

"Luc That’s a great advantage."

"Cha How about the nose?"

"Kwo Extra bone.

"Ng Number two is here."

"Kwo Extra bone.

"Cha What is important?

"Luc Yes, if you have thieves, you can see.

"Kwo Yeah, it saves electricity.

"Cha But in the year 2000 you can...

"Kwo Extra bone."

"Cha Yes, we can imagine many things for the year 2000. But I think it should be rare. Can you smell danger?

"Kwo But is it the most important?

"Luc Maybe."

"Kwo Yeah. It’s not good if you can smell but not look. You know, if you have a hand that can lift things up to 100 pounds but then you aren’t able to smell that it is too 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 care.

"Cha I think bones.

"Kwo But bones are no good.

"Luc Why?"

"Kwo Because skin can protect you.

"Cha Yeah, if you have strong muscles, you can’t move.

"Luc No hair and pretty handsome face.

"Kwo When?

"Cha To attract the opposite sex.

"Luc Yeah."

"Kwo Then there are teeth.

"Cha Yeah.

"Kwo Hold the things just like this."

"Luc Because your turn.

"Cha Extra bone."

"Kwo Extra bones that (that) (last) forever can be it because it can help us and people

"Luc It can help us."

"Ng Extra bone that.

"Kwo Even smaller flies that can hear what other people think."

"Luc Even smaller people will attract or do not like us."

"Kwo Extra bone."

"Luc Extra bone.

"Kwo I think muscles.

"Cha Extra bone."

"Kwo Extra bone.

"Cha Extra bone."

"Kwo Extra bone.

"Luc Extra bone."

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"Cha Extra bone."

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"Cha Extra bone.

"Kwo Extra bone.

"Luc Extra bone.

"Kwo Extra bone.

"Cha Extra bone.
because want be late (late for school) for school

"Luc um then

"Cba but er but no fast as er er but not need to walk as fast as a car

Ochs no need to drive the car

"Kwo and with the car so fast (. ) u can not need the car what but its very tire

"Cbs u walk to far

*Luc er extra strong hands that can lift things up to 100 pounds (100 pounds) um

"Cba how can it change your life (. _.. ) er can can it hell u to hold the thing

*Luc yes

"Kwo I don't think so I think teeth is important too (. ) extra strong hands

'Kwo Because we use teeth to eat

"Cha U can't eat

The must be it

'Cha U can u like as u like

Kwo But you can stop the an. 'Step 'A boy is crossing the road? 'Vic We should now discuss how we should do the discussion task.

Vic Jaasy should. 'Jas why?

Vic It should be OK if each of us is prompt to respond and speak.

Jas Brain is very important

Vic You have x ray eyes so er you could see well across the street.

Jas Is er er balance?

Vic No the heart (. ) I think it is most important

Jas Yes (ya) so u can learn more (help the exam)

Vic So how then? Come on

Vic I also want to ask the same question. (. ) What do you think we can prepare now for the
I think

*Vic* I think 100 years (I will retire) is ok

*Jaz* Because of the long life (um) I think I will feel tired because of the long life

And louder.

And then you go to die (I beg your pardon)

*Vic* I beg your pardon.

*Jaz* Then you go to die (is crazy)

At.

And then

Nice.

*Vic* I can't trust your nose?

*Ric* Oh (long pause)

*Step* Do u agree? (Moving out the paper strip 'eyes' on the lid) \( \text{GIVERU} \).

*Ric* Eyes again ok

*Jaz* Without the eye u see ur will see nothing just the black black (black color) black everything are back are back are black

Um.

Not colourful

*Jaz* U see one or u will vis or u will easily (3) or attack by other people

I think this is attack

*Vic* I think about what?

Er Ok

And then dark

This case

*Jaz* Ear or ear or skin

Skin

Ear

Ear

Ear

Why

Can hear many

*Jaz* But can not (no no no no no) affect people thinking. (4) No is not good I think u u are (gently) u need your nose

*Vic* I think the skin is the important skin (5) Super skin super skin

Do u have it?

Um

*Step* Can protect ur (6) Protect ourselves

*Vic* Won't be hurt easily (the bone, YES) then u can hit the car ur turn

*Step* Then I think the lungs

Vic always (the same)

*Jaz* Like lungs

*Vic* Where's the ear

You

*Vic* AST. U u can ear (hear other people think) ur ya. And what other u will feel boil (.)

Painful u know other people how to think or Super hair

*Jaz* Super hair no (Chinese) never mind

A powerful storage

*Jaz* How about ear? (7) Hmm.

*Vic* Last.

*Step* The nose.

Yes.

*Jaz* You can't breathe. (you can't breath) (8) And then you can't do respiration and then you will die.

*Vic* Respiration. (9) Crazy (10) Science and history (11) 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 (12)

I think

And then the key

Why

*Step* Why think

*Jaz* It is because u just ur (It is more in that Power) (and then u have power)

Don't u (this one ur) have the powerful storage

Storage

or A

Storage

*Vic* Don't think this one

Super hair

Nose (.)

Like this

Agree?

Um

Yes

*Vic* I think muscles is more important than

*Jaz* No muscles

*Vic* Liver is more important than muscles

*Jaz* But I think I think u (a poly hard or

Go with u

um um um um um

*Vic* And muscles is not good for (.) for girl

On the ear case

Falling down

*Jaz* What can the ear help u

Do not fall out

Fall out

*Vic* The Mediterranean Sea

you see

Finish

Nothing

Muscles

Muscle

Muscle is no er

Liver

*Vic* I think live.

*Jaz* No why

*Vic* No wonder every (No No) every turn every anything u eat into this

*Vic* Pat keeping fit

Um.

Nose (Legs)

Hand

*Vic* Legs

*Vic* Hands

*Vic* Legs

*Vic* Legs

*Vic* Powerful legs or can walk as fast as a car

Step Walk around the road

*Jaz* I can't write (so hand u can't hold), so so so no need no need to buy a car or less money will use) (.) ur are very rich now

Um.

*Vic* Don't talk about this point

How about is

And Hands

*Vic* Turn your turn

Yes.

*Rich* Why turn or ear or

Chinese

*Vic* This one

*Step* Why

*Vic* Why

*Vic* Why

*Step* I beg your pardon

*Jaz* I beg your pardon aren't why tell me why I don't agree

*Vic* Because I think (Chinese) (Because I think what the bone is)

*Vic* Yeah why why

*Vic* Legs. Don't sail

*Vic* I beg your pardon

*Vic* What are you 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

*Vic* Remember answering time you use reason to (we we) then the reason the question talk

I listen to a (Chinese) bones (then) bones bones (this)

*Jaz* The dog will eat all your bones

A powerful storage

So fast

*Jaz* um um um

The end.

No. 14

*Phase 2 Indirect (11)

Pre-discussion planning in Cantonese (5 min)

*Jaz* Didn't seem to be involved in checking the dictionary

*Vic* Dutifully checking pronunciation and meanings from the dictionary

*Step* No much except apparently concerned with who is going to speak first.

*Ric* Shuffling and provisionally ranking the paper strips on the board

*Vic* Reading the dictionary with Ricky (12) 'nutrients' (trying to pronounce and practise it).

*Jaz* Trying to pronounce it.

*Vic* The problem already.

Talk about now. (It's because we already did problem identification last time. We've analyzed the problem already.

*Ric* Let's read the content of the norm carefully first. Hey, there's some suggested words or phrases here for us to use. You see, (pointing the notes to Jerry).

*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?

*Step* We should do some analysis. I don't think we need to do problem identification. We've already done it in our oral lessons. Let's separate the paper strips fint. It's been decided we did similar things in our oral lessons. Let's separate the paper strips first.
will be easy to find. Locate them later.

*Step We could reverse the ranking order. Powerful cars.

*Step I think the hair is not (suggesting a paper strip)

*Step I think it is more important than your body

*Step Super hair does not fall out (reading from the notes)

*Step Powerful cars are more important than super hair

Yes you

Does not fall out

*Vic Dominating she is the one to reshuffle paper strips

*Vic I think ex super strong

*Vic+Thick The stomach (yeah) must have some stomach

*Vic+Thick Powerful lives also very good is know (very good stomach) or extra strong

Step I think if the teeth all (?) or all fall down (you can't eat)

*Step How about the stroll eyes

*Vic No need very ugly your inside

U talk to need too see

*Vic Why are pretty handsome face is also

*Vic Why muscles I think (no no no no) some this extra strong long

*Vic Why Chinese (if u die -) then have a handsome face is (yang) -

*Step I don't need face (not useful) because I am handsome now (looking at Ricky)

*Vic Beautiful handsome is the boy

*Vic but have strong heart already

*Step x super nose (looking at the paper strip) or super nose (all reading the notes)

*Vic+Thick Powerful ears

*Step Extra strong (pointing at the paper strip) no x ray eyes

*Vic I don't like this ear (then reading the notes)

**Step Extra strong long

*Vic+Thick Very many many many many yes

*Vic+Thick Extra strong bone (forever this one may be ( suger to insert and come back) yes

*Step I think the hair is not (suggesting a paper strip)

*Vic+Thick Powerful liver

*Vic+Thick I will be very old What is this

*Vic+Thick And super hair is very (important) (en) if (a have not I why) ch (change head) ur or ur can't go out

*Vic+Thick Super hair is very important than your body

*Vic+Thick Super hair does not fall out (reading from the notes)

*Vic+Thick I think powerful cars are more important than super hair

Yes you

Does not fall out

*Step Dominating she is the one to reshuffle paper strips

*Vic+Thick I think ex super strong

*Vic+Thick The stomach (yeah) must have some stomach

*Vic+Thick Powerful lives also very good is know (very good stomach) or extra strong

Step I think if the teeth all (?) or all fall down (you can't eat)

*Step How about the stroll eyes

*Vic No need very ugly your inside

U talk to need too see

*Vic Why are pretty handsome face is also

*Vic Why muscles I think (no no no no) some this extra strong long

*Vic Why Chinese (if u die -) then have a handsome face is (yang) -

*Step I don't need face (not useful) because I am handsome now (looking at Ricky)

*Vic Beautiful handsome is the boy

*Vic but have strong heart already

*Step x super nose (looking at the paper strip) or super nose (all reading the notes)

*Vic+Thick Powerful ears

*Step Extra strong (pointing at the paper strip) no x ray eyes

*Vic I don't like this ear (then reading the notes)
*When hasn't suggested anything yet?*
*Vic: *No...*
*Vic: *Problem identification now. Right? Purpose (....) What's the purpose this time?*
*Ric: *Purpose is to...
*Vic: *Discussing 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?*
*Ric: *No.
*Ric: *Help... did you notice that some body parts are missing this time? Like ear, heart, etc.
*Vic: *Yeah, what's missing?
*Ric: *It's related to the concept of weight.
*Ric: *We don't have brain.
*Ric: *Nor we have legal.
*Ric: *Yeah.
*Ric: *We can start now?
*Vic: *Not yet.
*Ric: *How many minutes left?
*Vic: *Four more.
*Ric: *We should discuss how we could improve our discussion this time.
*Ric: *Any words we don't know?
*Vic: *You two should speak more, OK? (looking at V & J).
*Vic: *We should all speak more in this discussion later.
*Vic: *We should discuss the purpose of the discussion now...
*Ric: *How should we follow one another during the discussion?
*Vic: *Purpose?
*Ric: *Why can't you start first and then I will pick up where you stop*
*Vic: *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.
*Ric: *Then what do we need to do?
*Ric: *Rank the items first. Then give reasons.
*Ric: *We should decide on who should break this ice first. Then who should continue and so on...
*Ric: *Take turns. (looking at J & K).
*Vic: *Don't take turns. It's said here.
*Ric: *We don't take turns. That's said.
*Ric: *Don't take turns. Why?
*Ric: *But it's said 'Don't simply take turns'. (pointing the notes to J)
*Ric: *What can we do without it here?
*Ric: *You should think of something to say and then we'll fit in or continue from where you stop. (looking at J)
*Ric: *I see.
*Ric: *OK. What about this? Let's do paper, rock, scissors now and then see who loses.
*Vic: *This is the best
*Ric: *Strong hearts
*Ric: *This can I change this thing we need?
*Vic: *I think super none there (super) can sensel danger.
*Vic: *Extra strong teeth. Every time you think about danger, it will not be happy we know (every time you think about danger just use super strong teeth) sometime is ok.
*Ric: *Super strong teeth is here.
*Vic: *Extra strong teeth (....) extra strong teeth is used to eat thing (super none um teeth is more important)...
*Ric: *Use and extra strong hands (....) How about (....) the next (....) a pretty handsome super hair
*Vic: *Super hair is it?
*Ric: *Extra more important I think (listens) like this
*Vic: *Use.
*Ric: *Super hair
*Ric: *Fall out
*Vic: *If...
*Ric: *But is it a handsome face.
*Ric: *But is it a U? Don't think super hair is important (.....) then (super) skin is not important (....) extra strong bone is not (....) so can move important
*Ric: *Why?
*Ric: *If you send your skin (to protect) to protect but your hair if a have no hair (....) you just or wear a hat
*Vic: *If you have no hair (....) we are cold we know.
*Vic: *If you can wear a hat
*Ric: *If you can wear
*Vic: *Hair will stop six then

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**No. 15**

**Phase 3 Indirect (H)**

*Pre-planning conducted in Canronaa (3 min 30 sec)

*Ric: *What methods to use?
*Ric: *Problem identification.
*Ric: *PI.
*Ric: *PI yeah.
*Ric: *Anything else?
*Ric: *Evaluation.
*Ric: *Asking for help.
*Ric: *Giving help.
*Ric: *Functional planning.
*Ric: *Asking for help.
*Ric: *Planning ideas in advance.
*Ric: *You will use them all.
*Ric: *I don't like relax and think positive.
*Ric: *Why?
*Ric: *Are you tease?
*Ric: *No.
*Ric: *So why relax and think positive?
*Ric: *Yeah, not much use.
*Ric: *Anything else?

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*Vic: *Yeah, that's start.

**English discussion begins here. (6 minutes only)**

*Vic: *Which one is (....) the most important?
*Ric: *Heart?
*Ric: *But among bone.
*Ric: *Same I agree.
*Ric: *That's strong bones?
*Ric: *If bone is important (....)
*Ric: *After you die (....)
*Ric: *If you support your body (GIVEHELP)
*Ric: *You would want to keep it?
*Ric: *Give other people to you
*Vic: *It's support your body (GIVEHELP)
*Ric: *Good (....) good idea.
*Ric: *Rice can you?
*Ric: *I don't think so
*Ric: *Um
*Ric: *Disagree
*Ric: *Do agree.
*Vic: *Because bone at (....) you die will you keep the bone? (....) But the (....) use of this bone (....)
*Ric: *Power muscles for (inanimate)
*Ric: *As a super nose that can smell danger
*Ric: *Super skin (....) skin can protect yourself?
*Vic: *Yeah
*Ric: *Yeah
*Ric: *Super skin (inanimate)
*Ric: *Um
*Ric: *Second the one (....) Long praise.
*Vic: *Super nose
*Ric: *No
*Ric: *Really? (expressing surprise)
*Ric: *Can smell the bad smell
*Ric: *Danger not bad smell (....) can smell the danger
*Ric: *You talk this is important yes
*Ric: *Why?
*Ric: *Then
*Ric: *Do protect you
*Vic: *Maybe you can
*Ric: *Can see if you know the danger you can (....)
*Ric: *Run away as fast as
*Ric: *You can protect yourself.
Vic: We need to use so many money.
Yes? [tsi] Is it important?
Um
Vic: You need to buy car.
Kwa: That you will feel very tired.
Vic: Need to buy car (tsi). [pa]
Step: Then strong bone is.
Jaz: Try eye that can see in the dark.
Step: (Only see in the dark) [diagnose with J].
Vic: No use.
Kwa: No use? [tsi] (challenging S).
Vic: Extra strong teeth that can eat extra strong [as tiger].
Jaz: What about this word? (looking at S).
Vic: You can digest whatever you've eaten. It's powerful.
Step: This people. (....) when you when you have this people.
Vic: No need to use (....)
Kwa: What is the meaning? (tsi). Don't know how to say it.
Vic: Then bones for horse.
Um: Um
Vic: Then or (x ray eyes) that can see in the dark.
Kwa: Well I think it means that our hair won't fall out. So we won't be ugly.
Vic: What about this? (challenging S, gigling).
Kwa: Yes, that's right. Let's check if there are any words we don't know and have checked the meaning.
Dal: What does this mean? Does it mean the stomach?
Kwa: No, we don't need it. Food has nutrients already.
Vic: The word means super handsome face that attract the opposite. [yes].
Kwa: Not only can see in the dark.
Vic: You can see in the dark then you will be very (....)
Dal: Use this. [strong] You can fight with other people (....) fight with other people.
Vic: You can have more care bones and more careful.
Kwa: Yes, staying (at 3). Vey many eyes that can see in the dark.
Vic: Super hair (....) does not fall out (....)
Kwa: We are not (....) we are not many so not very to fall out our hair you know.
Vic: Powerful ears.
Jaz: No no no no.
Vic: Hands.
Jaz: You fight with other people.
Vic: That has no problem and then won't age.
Kwa: What?
Um: (I think) protect yourself. [It is more important] [???? better to be].
Vic: When you (....) when you are young, you can take so many things as you want.
Kwa: I think this one is more important than the teeth.
Vic: Why are?
Jaz: The teeth is so ugly.
Vic: When when you (....) when you are (....) when you are old and ur teeth win(-) (....)
Vic: Fall (gigling) fall down.
Jaz: Why?
Vic: The opposite sex a.
Kwa: We can then remember better.
Dai: What is this word? Does it mean the stomach?
Dal: How can they change your life (....)
Dal: The word means super smut brain.
Vic: Extra strong teeth that can eat extra strong [as tiger].
Vic: With pretty and handsome face first, I believe.
Vic: Extra strong teeth that can eat extra strong [as tiger].
Jaz: So the pretty handsome face.
Garlic think (the bone) the bone

Garbon

*Gar*What help?

*Gar*How can we use it?

*Gar*the bone

Garbon

**Gar** difficult to die

**Gar** difficult to die

*Gar* but dog dog can eat u

*Gar* [bake (Chinesse)] I am sorry

*Gar* U can (super strong heart) yes (yeah)

*Gar* A man (super strong heart) super heart but (my guess) what is the bone (bone use) I think not very useful

*Gar* We never afraid

*Gar* Many people want to cut your bone

*Gar* Can I use it again

*Gar* How can we smell the (hit) danger we can

*Gar* If I think no one people (yeah) what can u this guy remain

*Gar* If the American have danger

*Gar* (Chinesse) but u or can smell (.) the danger u can go first (.) go out first?

Go first ok

*Gar* Yes (small) then u don't need the bone now

**Gar** Then I can go away u can never need the bone (oh) I think (the legs) legs is not important

**Gar** No

**Gar** No

*Gar* I think the bone

*Gar* I think the x-ray eyes is important too

**Gar** Objection objections

*Gar* Objection objections

**Gar** Did u think eyes strong?

**Gar** Why objections

**Gar** The yes no I objection the bone because yes the strong bones is very strong (signalling for help) (Dines <GIVEHELP>) yes because u can u no don't eat anything but u also all can't life

Yes But

*Gar* No bill Chinesse (Chinese) can eat what (.) water (.) drink the water (.) drink the water (.) drink the water (.) drink the water

81

*Gar* No I have

Choose

No

Ok ok

*Gar* If u die u have handsome face

**Gar** Do u so?

**Gar** Who is (.) u can u can? Other people u can can

* * * the handsome face is

**Gar** He will be the old 100 years old did the handsome face also handsome?

**Gar** Also handsome but I am the most handsome most

*Gar* If u no money u have handsome face

*Gar* No handsome face I can do such

Do such

*Gar* U know

Get and then

*Gar* Did u think what did we need in (.) the seven?

**Gar** Eye

Rye

Our Rye

Yeah

Ok Sorry I

Can hear other people what did they think

*Gar* Because it also

*Gar* I like it

*Gar* Like it like it

*Gar* I like it other people what he think

*Gar* Like it like ar

Chinese

Get and like to see other people

**Gar** No

*Gar* Do u think this

morning

*Gar* Extra or Super (or if some because u u u If people know what to think and to danger danger) Something danger (danger)

*Gar* Did u think to kill u and I yes hit him u also can <GIVEHELP> (.) But u can eat

*Gar* Hear people thinking if the people think to

**Gar** Super noise like a dog but hear no people or (you) know u can hear or will danger u

*Gar* But many many thing he can bear

*Gar* Do u think something that something like that

*Gar* You big (Chinese)

* * * will be

*Gar* Your nose is also (.) busy very busy busy (.) the americas is danger they are in the Indian is danger Yes all is danger

*Gar* U must meet the power powerful

*Gar* Need to say why

*Gar* But if u can't have super tea but u have (. .) also u can see things also

*Gar* About or eighteen (. .) or eighteen years (oh the (.) the (.) they are so old) Old or (yeah) 18 years old u know no tea (ah ya) like my grandmother only (ah) drink the hot the

*Gar* Love OK OK <GIVEHELP>

*Gar* Can you soup soup ok

No

Oh

So

*Gar* Shit die

**Gar** Did u think one is the

**Gar** Objectives

**Gar** Think the note is most important

**Gar** Know

**Gar** First is the no I think the eyes

**Gar** Why tell me why is the a x-ray eyes

**Gar** Or Because if u exam or test can see or see under the chair (other people chair) the other people answers then u get 100 marks

**Gar** If the eyes not say can see very very far (yeah far away) if the eyes just can see something like (using footage) that a (can't) see the thing

**Gar** Er If I can sit 1 seat hand to cover the surgeon but I can see I can see over this (.) But I have revision u have remember all the thing u can don't need to use this in the exam (.) I think

OK

**Gar** Know

*Gar* Do a remember this but the people (Chinese) but you remember things the things is not all the same as the exam exam

**Gar** All the things is the exam

*Gar* U can see the people

Oh

*Gar* Can u see the people but why if the other people wasn't clever

Ok very

**Gar** Other people if (. .) not clever than u

**Gar** Ok Then my god I only can say my god

**Gar** Other things other (. .) to see it

**Gar** Agree

GerOk

**Gar** Yeah strong

U have my something

**Gar** Eat cat

No

**Gar** Eat animal

yes

Gerhandsome face

Handsome face

You then no 6

Yes

No

Why

Ok

*Gar* Ok

**Gar** What did we think

**Gar** Why

**Gar** If our eye know the danger yes and u can help too

**Gar** I think why

**Gar** U can see the people

Ok

*Ger* No

**Ger** I run away like dog

**Ger** He is talking by because He think the be run away

U no

GerAnd no 9

**Ger** Did u think (. .) what did we

**Ger** No super nice

**Ger** Yes

*Ger* Not that

No

Why

Ok

GerWhy

**Ger** Because if if

I think why

**Ger** No I have

Know the danger u (confusingly) run very fast to or to far away the danger

Oh

**Ger** Oh run away like dog

**Ger** Do u think too because

He think the be run away

U no

GerAnd no 9

**Ger** Did u think (. .) what did we

**Ger** No super nice

**Ger** Yes

*Ger* Not that

No

Why

Ok

*Ger* Why

**Ger** Because if if

I think why

**Ger** No I have

Know the danger u (confusingly) run very fast to or to far away the danger

Oh

*Ger* Not that know (. .) the danger u can (. .)

**Ger** Say or but I am the

*Ger* Can make the first first

**Ger** I am like superman

**Ger** Can if you know the danger (yes) and u can help too

**Ger** If your eye know the danger (yes) and u can help too

**Ger** I can help

**Ger** U can help very fast too

**Ger** U can faster than the fire

**Ger** No I don't away I help other people

**Ger** U can very fast and u can go and help very very fast

**Ger** But if we want many people u can help who

**Ger** Then I think we need

**Ger** I think we need

**Ger** U have a super hand

**Ger** Who

**Ger** U have a five hand

**Ger** Can help many people at one time

**Ger** Hand hand at one time only one red or one

**Ger** Not one

**Ger** We other one will die one and one no one and one

**Ger** One finger u want (I think) ten forget

**Ger** I think u is once super big

**Ger** Long

What

Long

What is hang?
Time is this
*You Because in 3000 years (yes) I think there are no oxygen
*Kwa — oxygen yes you may be
*You if we haven't (torn) then oxygen (but) we will die
*DalBecause there are very dirty
*You
*Dalvery dirty then I think it is most important
*Kwa Oh
Next time is
*GeRSkin
*Kwa Skin
*You Skin
*Genot change
*Kwa No objection
Oh
Then
*DalSuper hand (yes) because u can help other people with your stronger hand
*You Yes stronger stronger bone
*DalBone I don't agree because (. ) not very useful (. ) not very (. ) useful (. ) I think
*Kwa Oh ok then super (hair)hair
*DalEm
*Kwa Because some some old some old people use money to hope they want to get a sm (but) a good better last if he have or super hair u don't need to think this (. ) you need to pay more money
*DalIt is very expensive u know
*Kwa I know but it one time u can use for u never want to two times (. ) one time is ok
*DalYear
*Kwa (next)
*DalBetter bone
*You I think u need to say
*Kwa Is last (.) bone is last
No
No use
Why
*Kwa
*You Because bone has before this thing
No
*You If solid (. ) you will (. )
*DalBone Not need I think if have (.) which one is to have change the food to the
*Kwa Change the food to the (I know) you something like power
*You Energy
*DalYou because u have this can er
*Kwa Help other people
85
*You Let's explain each please one by one.
*DalPenny means interesting (laughing)No less see which one we don't know.
*GaiOK did 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)
*DalHere the two of us should continue to discuss.
*Kwa Let's continue. Anything else?
*You When 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
*DalReliable. 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.
*GeRsay it please.
*You It means "jealous" (in chinese)
*DalNo.
*Kwa OK.
*DalMany people will be what?
*Kwa "smart" have to be good.
*Dal'next' is "handsome"
*Kwa Oh then.
*DalLet's stop any more time on monsera. Let's continue.
*You Let's note some mind mapping to brainstorm ideas. Any ideas?
*You No idea.
*You No idea.
*DalIt's not doing mind mapping. Don't interrupt.
*You Not just use your mind, you should penny out your thoughts you know.
*DalCome on, let's discuss.
*You Yeah, if we talk about it is Castenoute first, then when it comes to the English part, it'll be same.
*Kwa What about talking about how each body part can help computer.
*DalWhat's this? A super smart what? (pointing at a word)
*GeRthe same. Super smart.
*Kwa A very smart brain that's smarter than your home computer. How can they help you? (reading from the notes)
(time is up) (the group heaped a sigh of relief)
*English discussion in progress
*DalWhat do we need to do? Put it in the first ok
Oh
*You Any suggestion?
*GeRWhat do you want to say
*DalThe objection just say objection
*DalIt think u can say
*Kwa I think
*DalLeg is leg in the leg or the leg where the leg
*DalLeg
*DalOh leg Powerful leg art why because leg (powerful leg) or when it is become (. ) late
*DalNo have this don't will be have many many (yes) u don't will feel sick so easily
*You as you don't need to (Kdie die GIVEHELP) don't need to go (pay money to see doctor)
*Kwa Um The
*DalLet's what this be see
*Kwa I think it is a powerful storage
*DalAnything u eat
*Kwa What is stomach?
*DalEvery thing u eat because I like it like the like the (...)
*DalSomething (very interesting) some cr
*You Little apple
*DalLike apple
*You Like some don't need to say this
The end

No 17

*Dal We should be talking about preparation before the real discussion
*You Yes, pre planning before the discussion.
*DalBecause of problem identification. What we're going to do is that after three thousand years, there will be many body parts we could buy. And we have limited amount of money.
*You We should decide how much money we have.
*DalDoes 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)
*DalAlright. Let's start.
*DalStart moving the paper strips We know the meanings of all the words. Right?
*DalThis is nose (pointing at the nose)
*DalThis is eye (pointing at D's paper)
*DalThis is anything we need to explain?
*DalNo we did that last time. We explained everything already.
*Kwa Yeah, right.
*You No, last time we didn't explain words or phrases on the second page (pointing at the notes)
*DalWe know them more or less.
*DalDullful forever. Happy, Pamp, um ... What about planning the language we will need?
*DalLet's decide which item to choose first (pointing a paper strip forward)
*DalLet's think what is choose on our own first. My opinion for the moment is a ray eyes. It's most important.
*DalLet's a ray eyes. (laughing) Any words we don't understand?
*DalDon't know this. (pointing at Dal's paper)
*Kwa Oh then check the dictionary. First any other words? (without really checking the dictionary. The second page, let's read it.1

(*Gar you go to other place when u go to yes ok other places you agree is can be fast to there)
*You Only faster than car
1*DalYou agree agree or U can
*GaiNo
*GeRWhy
*You No
*DalWhy
*You Not
*DalWhy
*You Why you
*DalCan u (why) help other people (why) and then (...) why so we need help people when u going to (ok) help people u will be (ok) running help people to get something (...) or help people to get back
*DalOK Next next next
*Kwa x ray eye is the second (*Dal ok u went to explaining why so i want to see the answer when you put
*GarNo doing cheating ok
*Kwa U can (see) (.) u can see the book (.) don't can cheat
*DalDo u think (...) when u going to (ok) every people in the book what do u feel (.) u can cheat cheat the thief the book book u can see in the book shop u don't need to buy to buy Is save many money
*Kwa Yes
*GarNo doing cheating ok
*DalThat is not (...) never mind is
*You Nevermind nevermind
*DalCan I do computer or
*GarCan I put a picture a paper strip forward
*DalLong long long leg long long why oh I know
*GarBecause the air pollution is very bad (get help)
*DalEye is this time
*Kwa Yes u can
*DalOK everybody
*Kwa = Flash
*DalYea
*You Never mind 100
*GarOK another
*Kwa = flash air u can
*DalYea ya ya I agree
*Kwa Strong hand strong hand hand in
*GarThink the leg the first one yu (changing the order of paper strips you ok agree
*GarAgree ok oh
*Kwa Strong hand
*GarStrong hand hand hand
*Dal = High power
*GarDoes the strong hand (standing Cary from putting the paper strips)
*Kwa = Ask reason I don't (...)
Ok change powerful e (ears, gift/help) and the super nose

Gar why?

*Kwa because your car is a super nose look like a dog. (*You look like a dog but i see a car he is a car can know other people thinking so u don't need nose)

Dal can agree because the car can hear the danger too

*Gar let on next (judging Young)

*Kwa Next what next is

*Dal is it talking

Ok choose

The end

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**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 like...

*Kwa And the money won't be enough for us to buy all. So we'll have to decide on the most important items (reading & interpreting the notes)

*Dal We need to prioritize, the upcoming discussion. Let's turn to page two (giggling)

*Kwa Next is x-rays eyes that help you see things very clearly in the dark.

*Dal Right next. Let's talk about the grammar, things like that that might be needed in the upcoming discussion. Let's turn to page two (giggling).

*Kwa Yes, second page.

*Kwa Right. Let's consider reasons for supporting or not supporting the item now.

*Dal Well, we've considered them already (laughing). Let's assume?

*Dal What about words we don't know?

*Dal -Talk more things (giggling; pulsating to Gar to talk) (Gar is ignoring Dal)

*Kwa I agree I agree

*Dal U haven't got the reason (challenging tone)

*Kwa Must say it

*Dai Why?

*Dal Because

*Dal U are

*Dai (think) stranger or

*Kwa Face face (ok. I'm not an objection or)

*Dal (objection too or must meet the reason)

*Dai You I haven't got any out the reason

*Kwa But (I'm not.) he say

*Dal Nothing

*Kwa Ya

*Dal Um Because we can get many things and (because we have strong legs u will be the.) I think u can help other people to (job) something like help your mother to buy things or do something like that

*Kwa Two reason

*Dal Two reason

*Dal I can get many thing (help other people)

*Dal Get many thing (help other people)

*Dal Hand

*Dal Objection

*Dal Objection

*Dal Objection Objection have the reason too. Why?

*Dal Objection use (I can help people mistake) I always help people

*Dal But (I have) haven't strong legs

*Dal Need no need thing

*Dal No strong legs (he can help people too)

*Dal But not very helpful

*Dal U can help him to

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93

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94
danger and u can
*Yes run away
*Gar keep your keep yourself (.)safe and u won't die easily

*Gar But
*Dal But or when u can hear other people think (.),can u feel the danger too
*Gar I like the nose (.).But not the ear.
*Gar But the ear can
*Gar More ugly then the ears (.).the ears are more ugly ok

*Dal But u can hear hear other people think (.).and u can hear danger but er u can hear hear other things too
*Gar But I don't want to hear people think (.).because it is er something in the head u can't see (.).and the reason is...
*Gar Something (.).Somebody afraid ghost but has the why u can't see ghost voice.
*Gar Ghost go die ghost.Ghost is not (.).I'm not easy to see it
*Gar You haven't (.).Hasn't got (.).
*Gar A thing not a thing in some pollution u know
*Dal Prove it world have ghost u know may be so
*Dal Let me see me see say The this second reason is um (.).Isn't um (.).If u got or
*Gar If u got what
*Gar U can not people in the (.).In the dark need u want to to
*Gar(Kill) cage u (.).can go away chinese
*Gar I agree
*Dal Yes I agree
*Gar The super nose can
*Dal That u can smell other things too
*Gar Only smell
*Dal Only danger but other thing u cannot (yes I think x my eyes
*Gar No 4 because u can smell the danger and u can keep yourself safe and do other things and other things you ok ok 5 6 no no 6 (smooth but murmuring,realy unenthusiastic)

*Dal Ya may be be
*Dal Ya and I think this one is the Super hair
*Dal Hair
*Gar whose need
*Dal No need
*Dal No need
*Gar But if old u no hair very ugly (like like bong bok kuen kelvin
But sometime a case u can
Is Kelvin
Need not a short
*Gar The super nose can
*Dal Yes I agree
*Di dal may be may be
*Dal Ya and I think this one is the Super hair
*Dal Hair
*Gar whose need

*Gar but if old u no hair very ugly (like like bong bok kuen kelvin
But sometime a case u can
Is Kelvin
Need not a short
*Gar The super nose can
*Dal Yes I agree

*Kwa But if old u no hair very ugly (like like bong bok kuen kelvin
But sometime a case u can
Is Kelvin
Need not a short
*Gar The super nose can
*Dal Yes I agree

What is mark?
end
what's that

*Dal unsennset(M) I don't think mark is very ugly
*Gar ok sixteen
*Gar ok
*Gar ok because u have the handsome face
*Gar we still only eleven
*Gar handsome than no hair
*Gar eleven
*Gar eleven ok
*Gar eleven ok
*Gar eleven ok
*Gar eleven ok
*Gar your teeth in
*Gar u can kill teeth
*Gar but when this time u haven't got anything to eat u can eat something you (.).your teeth one ok (.).because u have a strong teeth and u eat it
*Gar I think like son
*Gar Ok

*Gar U haven't got said
*Kwa Yes. In no. 5
*Kwa No. 6
*Gar The can no
*Gar Yes u can eat anything
*Gar Powerful legs
*Gar When other people let u u haven't got anything on your head u can

*Gar Silly
*Gar Silly
*Gar Silly
*Gar The no 7 is
*Gar The fire
*Gar Yes 5

*Gar I don't think this time he go with it to play (unknow)

*Gar No 8
*Gar Ok
*Gar Ok
*Gar No 8
*Gar I think
*Gar Um um
*Gar Only 4
*Gar Can we try
*Gar Bone
*Gar Broken broken ar
*Gar Because in broken (.).bone is very (.).
*Gar Important (giveshelp)
*Gar yes (because broken u may be not work (.).How when you have powerful muscle but u haven't got bone just (.).something like jelly
*Gar yes but a last for
*Gar um um (something)
*Gar It is important (giveshelp)
*Gar yes other is more important more important (But this is important too ya
*Gar no bone will
*Gar ya not important we don't will be bring buy
*Gar we don't argue
*Gar Yeah i think it is important because yeah jelly

*Gar Bone
*Dal Because
*Dal when a old (.).your bone or
*Gar will be weak (giveshelp)
*Dal Yeah, because

The end
Appendix /2 A coded sample of an English discussion (Performance Data)

Q.S.R. NUD.IST Power version, revision 4.0.
Licensee: HKIED.


+++ 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) (4 19) /Direct/stall
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) /Nontarget/repeatothers
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/stall (5 1) /Nontarget/seekmean
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) /Nontarget/seekmean
23 =why (5 1) /Nontarget/seekmean
24 u help people u will running and help people to get something(.).or help people to get back (4 2) /Direct/para (4 19) (5 7) /Nontarget/clarifself
25 Ok Next next next next (4 19) /Direct/selrep (5 19) /Nontarget/clarifself
26 x ray eye is the second (1) /Nontarget/seekmean
27 =cheating cheating ok oh u want to cheating (4 19) (5 21) /Direct/selrep
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 (4 2) /Direct/para
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 book what do u feel (5 12) /Nontarget/respond
er the thief the thief copy book u can see in the book shop la (4 18) /Direct/stall
you don't need to buy la to buy la (.) (4 19) /Direct/selrep
save many money la (5 6) /Direct/selrep
yes (5 12) /Nontarget/elab
Next next (4 19) /Direct/selrep
But this is not (.) never mind la (1) /Nontarget/facprog
Never mind never mind (4 19) /Direct/selrep (5 2) /Nontarget/repeatothers
Er I think a computer er (4 18) /Direct/stall (5 14) /Nontarget/mesaban
Extra tra (putting a paper strip forward) (5 14) /Direct/selrep
Extra strong lung (5 6) /Nontarget/elab
No (lung) lung lung why (4 19) /Direct/selrep (5 1) /Nontarget/seekmean
oh I know because the air pollution is very bad <givehelp> (3 11) /Indirect/givehelp (5 7) /Nontarget/clarifself
Yes in this time (5 12) /Nontarget/respond (5 14)
Yes u can (5 12) /Nontarget/respond
Yes (.) everybody (5 14) /Nontarget/mesaban
fresh* (3 11) (5 12) /Indirect/givehelp
ya (5 6) /Nontarget/respond
more than 100 (5 6) /Nontarget/elab
another (5 12) /Nontarget/facprog
fresh air u can (5 14) /Nontarget/mesaban
ya ya ya I agree (4 19) /Direct/selrep (5 12) /Nontarget/respond
strong hand strong hand u in (4 19) /Direct/selrep
I think the lung is the first one ya (changing the order of paper strips) yes ok agree (5 19) /Direct/selrep
agree ok ok (5 2) /Nontarget/response um becaus
strong hand is more agree ok agree (4 18) /Direct/stall (5 12) /Nontarget/seekmean
strong hand strong hand (4 19) /Direct/selrep (5 2) /Nontarget/repeatothers
high power (1) /Nontarget/response
why does the strong hand (stopping Gary from putting the paper strips) (4 19) /Direct/selrep
ask reason I don't (....) (5 14) /Nontarget/mesaban
Kill people kill the people <using gestures> (3 11) /Indirect/givehelp (4 19) /Direct/selrep (5 4) /Nontarget/gesture
no (5 12) /Nontarget/respond
at the time I don't like people kill (.) kill (.) people (4 19) (5 12) /Nontarget/respond
Ok (5 12) /Nontarget/respond
No kill myself (yes agree) save myself (.) save myself? (4 3) /Direct/selfcor
Ok agree (4 19) /Direct/selrep (5 12)
Yes ok (5 12) /Nontarget/respond
Agree (5 12) /Nontarget/respond
ok (5 12) /Nontarget/respond
Super strong er (....) (putting paper on desk) (4 18) /Direct/stall (5 14)
Ar hands (1) /Nontarget/repeatothers
Hand (5 2) /Nontarget/repeatothers
hand (5 2) /Nontarget/repeatothers
No I don't want that (yeah) but when you every people die only (.) u is living (.) is not like (.) (4 3) /Direct/selfcor
is the bad one (5 12) /Nontarget/gesture
I think this ... (5 4) /Nontarget/respond
ok (5 12) /Nontarget/respons
What what what is this (3 12) /Indirect/askhelp (4 19)
Super (5 3)
Very clever (5 3)
Oh very clever (5 2)
Very clever u can find many money (5 6)
Clever (5 2)
Clever?
Yes
No no
Clever than the computer
Yes mean
Yes clever than the computer
Yes ok, you can find many money buy this and buy this ok
=Ya super skin
=Handsome (putting a paper strip forward) Handsome
=Yes u can have a beautiful wife
No
Why no
Why
U don't know?
Yes mean
=Yes clever than the computer
Why
Handsome people and the (. ) animal (no)
Yes ok
Handsome girl and the (. ) animal (. ) never mind stupid people
Disagree ok
=Super skin
Super skin why superskin
When u die (. ) u can u c an keep your face <using gestures>
No when u get get fire u can keep yourself
Ok next
But u (. ) er (. ) thief a lot of (. . . ) steal
=but we have a super lung u know
=only buy one (. ) if you a super lung
we buy this one first (first) shut up (. ) what do er
=objection
=I sup powerful eyes but we have ex tra
Extra teeth (putting a paper strip forward) no food to eat (. ) u must die
but this is eat any food u can?
=yeah what do u want to eat
eat your self
er no
ok agree agree
like *ghost like *ghost la
=no if u eat *ghost (. ) your teeth your teeth can eat the *ghost but your lung
=lung lung
=only lung (. . ) your teeth your teeth can eat the *ghost but your lung
I think the ok (. ) a super nose is (. ) better (no) because (. ) you can (. ) smell (. ) the danger
=(only smell ) danger
=Danger
Ok Ok and the ear I like the ear I like the ear
where is the ear (ear ear) because er u can (. ) hear other people what they think and they want to
kill (u can) u u can know
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
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
139 =high powerful what (3 12) /Direct/selrep (5 3) /Nontarget/taskknow
140 =stronger high power er muscles (3 11) /Indirect/givehelp (4 18) /Nontarget/taskknow
141 what's that? (3 12) /Indirect/askhelp (5 3) /Nontarget/taskknow (4 19) /Direct/stall
142 muscles (putting a paper strip forward) (3 11) /Indirect/givehelp /Nontarget/taskknow
143 muscles (touching Gary's arm) (5 2) /Nontarget/repeatothers
144 muscles like me muscles (4 19) /Nontarget/taskknow (5 3) /Nontarget/repeatothers
145 oh u haven't got any u know (4 18 1) /Nontarget/elab (5 12) /Nontarget/eltalk (5 6) /Nontarget/elab
146 u can hit the bad people ok keep (.) (5 14) /Nontarget/mesaban
147 =hit the bad people (5 2) /Nontarget/repeatothers
148 =keep safe (5 6) /Nontarget/elab
149 hey hit the good people too (5 6) /Nontarget/elab
150 and then this la (5 19) /Nontarget/taskknow
151 this la ok (5 2) /Nontarget/repeatothers
152 what's that (3 12) /Indirect/askhelp (5 3) /Nontarget/taskknow
153 er u can (can) u can what? (reading from the notes) (4 18) /Indirect/stall
154 u can what u don't know (3 12) /Indirect/askhelp (5 3) /Nontarget/repeatothers
155 oh what is this? (5 21) /Nontarget/taskknow
156 I see (1) /x
157 a powerful stomach stomach (4 19) /Direct/selrep
158 stomach oh (5 6) /Nontarget/elab
159 u can eat anything (5 6) /Nontarget/repeatothers
160 ya (5 12) /Nontarget/eltalk
161 but I think this is gooder than the teeth lei (5 12) /Nontarget/resou
162 teeth (5 2) /Nontarget/repeatothers
163 nose (1) /x
164 teeth (1) /x
165 nose (1) /x
166 never mind (Chinese) this is lei better than the teeth (1) /x
167 what is this strong bone (showing paper strips to friends) (3 12) /Indirect/askhelp
168 bone (5 2) /Nontarget/repeatothers
169 bone um (4 18) /Direct/stall (5 2) /Nontarget/repeatothers
170 is very poor er (4 18) /Direct/stall (5 12) /Nontarget/resou
171 but u have muscles <using gestures> (5 4) /Nontarget/resou
172 last forever (ready to put forward paper strips for ranking) (4 6) /Direct/resou
173 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/resou
174 very good ok (5 12) /Nontarget/resou
175 very good ok (5 12) /Nontarget/resou
176 what's that (3 12) /Indirect/askhelp (5 3) /Nontarget/taskknow (5 14) /Nontarget/mesaban
177 =powerful (5 3) /Nontarget/taskknow
178 powerful what? (4 1) /Direct/seekclarif
179 =legs *liver (5 3) /Nontarget/taskknow (5 7) /Nontarget/clariself
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
183 Yes ok very useful ok (um um) very useful (pushing the group to move forward)
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 (5 12) /Nontarget/respond
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
214 X ray (1) /x (3 5) /Indirect/eval (4 19) /Direct/selrep (5 14) /Nontarget/mesaban
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/clariself
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 (.) (4 19) /Direct/selrep (5 12) /Nontarget/respond
223 =Ok high power ok high power (4 19) /Direct/selrep (5 12) /Nontarget/respond
224 =Hit (3 5) /Indirect/eval (5 12) /Nontarget/respond
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
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
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 (.)
Other place to find <givelp>

=Yes () Other place to find the job if take the thing and running and running too there as

=Indirect/eval (3 5) /Direct/selrep (5 14) /Nontarget/mesaban

Ok ok

Next

A loss and (....) (3 5) /Direct/selrep (3 14) /Nontarget/mesaban

No no need to think back (4 19) /Direct/selrep (5 12) /Nontarget/respond

Too perfect perfect (4 19) /Direct/selrep (5 6) /Nontarget/elab

No need? We need to to think back help we to do in the last time is gooder

Ok ok not the powerful legs (joint hand) is different () muscles first (reshuffling paper strips)

why

because muscle is important (why why) because when u have powerful muscle u can running
running () fast too but er (....) (3 5) /Direct/stall (4 18) /Direct/selrep (5 7) /Nontarget/clarifself

er but u have the () (last one) leg is faster than the er u have the muscle know but still fast
the muscles ya (3 5) /Direct/stall (4 18) /Direct/selrep (4 19) /Direct/stall/filler

I think pretty () handsome face is not () no use

But in in the world all u can () people see your face u know <making gestures>

If u If u () are clever () (3 5) /Direct/selrep (5 12) /Nontarget/respond

no need () no need the handsome face

U are not clever no handsome face can't meet girl u know (3 5) /Direct/stall/filler (5 12) /Nontarget/respond

Now girl like the clever boy u know (3 5) /Direct/stall/filler (5 12) /Nontarget/respond

But the but the (but) see you first see your face first (3 5) /Direct/stall/filler (4 19) /Direct/selrep (4 19) /Direct/stall/filler

Yes when u go to find job they will see 'oh too ugly' (3 5) /Direct/stall/filler (4 19) /Direct/selrep (5 12) /Nontarget/respond

Fail

Seven leg nothing nothing I want to eat my lunch u know (3 5) /Direct/stall/filler (5 12) /Nontarget/elab

U are in fire u are in fire (3 5) /Direct/selrep (4 19) /Direct/stall/filler

Ya (3 5) /Direct/elab (4 19) /Direct/selrep (4 19) /Direct/stall/filler

Ok I think the handsome face is important () (3 5) /Direct/selrep (4 19) /Direct/stall/filler

Ok nothing nothing (3 5) /Direct/selrep (4 19) /Direct/stall/filler

We think back (think ar think ar) what did we need to think back er when we do the

This is more important (changing the order of the paper strips) (3 5) /Direct/stall/filler (5 12) /Nontarget/mesaban

What?

This is more important (3 5) /Direct/selrep (4 19) /Direct/stall/filler

Yes more important (3 5) /Direct/selrep (5 12) /Nontarget/respond

Why?

Because

This is more important (changing the order of the paper strips) (3 5) /Direct/selrep (5 14) /Nontarget/mesaban
But u (.)
U won't die (.) for 100 years
But every people die
=Yes I will be very happy
=Only 100 years only 100 years
100 years u know
people die
are u sure
not all but when u old (.) the (.) friend will be (.) how to say it
=your friend will die here <givehelp>
=you 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
yes
ha ok sorry
ok
change powerful e e
=ears
and the super nose
why?
=because your ear e u use super nose u look like a dog
look like a dog
but u u use ear u hear
=I agree because the ear can hear the danger too
Yes
Yes ok next (nudging Yeung)
Next what next what
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.

++++++ 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's make the best of the time now. What should we 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) /probidentaskknow
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.

R/So then what? Come on. Let's do more planning.

V/I also want to ask the same question.

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.

J/The stomach. (Checking dictionary)

R/This is tummy.

J/No this is stomach. Tummy is belly.

R/Then what should we do now?

V/Hey I've seen this word in Geography lessons.

J/Really. A powerful legs

V/soil (?)

J/No you must have remembered wrongly.

V/No I definitely remember having memorised the word.

J/You must remember to speak. OK?

J/Nutrients. It means they are good for our body. Liver turns food into nutrients.

V/Make you fat. (laughing)

J/Fatty acid makes you fat. (laughing)

V/Anything else we don't understand?

J/This one means perfect.

S/Then liver should be ranked last. We don't need to be so perfect.

V/Now I feel x ray eyes can be considered the most important. Let's put it the first.

J/Brain is good not that we could be smart but that we can maintain our thinking capability.
In tests and exams we get higher marks.
But if we think too much we will be very sad and painful.
No powerful ears is terrible. If we know what others are thinking it will be very painful.
What about this? You read aloud all the words here once to us? Let’s practise pronunciation.
You must be crazy.
Muscles. /High power ...
This is not useful for us. Muscles are for men.
But you can stop the cars.
'A boy is crossing the road'? What body part is this related to?
We should now discuss how we should do the discussion task. OK?
Well we take turns to talk about one item at a time.
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.
Then what to do?
One person should speak first to lead us.
It should be OK if each of us is prompt to respond and speak.
Who should take the lead then?
Jazzy should.
why?
We are good pals. (jokingly and laughing)
No more.
We can all start now.
But we should all laugh madly first.
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 speaker suggests using some relaxation methods (e.g., laughing) before starting the discussion proper.

1. "But we should all laugh madly first."

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

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?"

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?"

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."

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.

<table>
<thead>
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<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<td>24 Ray</td>
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<td>15 E1</td>
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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 if 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 at 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, er, to prepare for my turn to say something./ (criterion 4)

Strategy: 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)
3. /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)
4. /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

*** 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
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) /givelpa (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 halfway 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./

*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) /abanmes/

*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 there 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

<table>
<thead>
<tr>
<th>Direct strategy</th>
<th>E1 (N=15) Proportion</th>
<th>C (N=12) Proportion</th>
<th>Difference in % between E1 and C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>8/15 53%</td>
<td>2/12 17%</td>
<td>+36</td>
</tr>
<tr>
<td>Using fillers</td>
<td>11/15 73%</td>
<td>5/12 42%</td>
<td>+31</td>
</tr>
<tr>
<td>Using self repetition</td>
<td>9/15 60%</td>
<td>2/12 17%</td>
<td>+43</td>
</tr>
<tr>
<td>Asking for repetition</td>
<td>4/15 27%</td>
<td>2/12 17%</td>
<td>+10</td>
</tr>
<tr>
<td>Seeking confirmation</td>
<td>6/15 40%</td>
<td>4/12 33%</td>
<td>+7</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>3/15 20%</td>
<td>2/12 17%</td>
<td>+3</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>5/15 33%</td>
<td>4/12 33%</td>
<td>0</td>
</tr>
<tr>
<td>Seeking clarification</td>
<td>3/15 20%</td>
<td>4/12 33%</td>
<td>-13</td>
</tr>
</tbody>
</table>

A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Target, Direct Strategies

<table>
<thead>
<tr>
<th>Direct strategy</th>
<th>E1 (N=15) Proportion</th>
<th>C (N=12) Proportion</th>
<th>Difference in % between E1 and C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>4/15 27%</td>
<td>5/12 42%</td>
<td>+15</td>
</tr>
<tr>
<td>Using fillers</td>
<td>6/15 40%</td>
<td>6/12 50%</td>
<td>+10</td>
</tr>
<tr>
<td>Using self repetition</td>
<td>4/15 27%</td>
<td>4/12 33%</td>
<td>+6</td>
</tr>
<tr>
<td>Asking for repetition</td>
<td>3/15 20%</td>
<td>3/12 25%</td>
<td>+5</td>
</tr>
<tr>
<td>Seeking clarification</td>
<td>7/15 47%</td>
<td>5/12 42%</td>
<td>-5</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>9/15 60%</td>
<td>6/12 50%</td>
<td>-10</td>
</tr>
</tbody>
</table>

Gain in INCREASE Gain in DECREASE Total difference in % between E1 and C

<table>
<thead>
<tr>
<th>Element</th>
<th>E1 (N=15)</th>
<th>C (N=12)</th>
<th>E1 - C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>36</td>
<td>15</td>
<td>+21</td>
</tr>
<tr>
<td>Using fillers</td>
<td>31</td>
<td>1</td>
<td>+30</td>
</tr>
<tr>
<td>Using self repetition</td>
<td>18</td>
<td>5</td>
<td>+13</td>
</tr>
<tr>
<td>Seeking confirmation</td>
<td>7</td>
<td>10</td>
<td>-3</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>0</td>
<td>6</td>
<td>-6</td>
</tr>
<tr>
<td>Asking for repetition</td>
<td>10</td>
<td>-5</td>
<td>+5</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>3</td>
<td>-10</td>
<td>-13</td>
</tr>
<tr>
<td>Seeking clarification</td>
<td>-13</td>
<td>-5</td>
<td>+8</td>
</tr>
</tbody>
</table>

A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Perceptions of Effectiveness of Target, Direct Strategies

<table>
<thead>
<tr>
<th>Direct strategy</th>
<th>E1 (N=15) Proportion</th>
<th>C (N=12) Proportion</th>
<th>Difference in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using fillers</td>
<td>8/15 53%</td>
<td>2/12 17%</td>
<td>+36</td>
</tr>
<tr>
<td>Asking for repetition</td>
<td>5/15 34%</td>
<td>0/12 0%</td>
<td>34</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>9/15 60%</td>
<td>4/12 33%</td>
<td>27</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>10/15 67%</td>
<td>6/12 50%</td>
<td>17</td>
</tr>
<tr>
<td>Seeking confirmation</td>
<td>5/15 33%</td>
<td>2/12 17%</td>
<td>16</td>
</tr>
<tr>
<td>Seeking clarification</td>
<td>4/15 27%</td>
<td>2/12 17%</td>
<td>10</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>2/15 13%</td>
<td>3/12 25%</td>
<td>54</td>
</tr>
<tr>
<td>Resourcing</td>
<td>2/15 13%</td>
<td>3/12 25%</td>
<td>54</td>
</tr>
</tbody>
</table>

A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Target, Direct Strategies

<table>
<thead>
<tr>
<th>Element</th>
<th>E1 (N=15)</th>
<th>C (N=12)</th>
<th>E1 - C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>3/15 20%</td>
<td>6/12 50%</td>
<td>30</td>
</tr>
<tr>
<td>Using fillers</td>
<td>5/15 33%</td>
<td>5/12 42%</td>
<td>9</td>
</tr>
<tr>
<td>Using self repetition</td>
<td>0/15 0%</td>
<td>1/12 8%</td>
<td>8</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>3/15 20%</td>
<td>3/12 25%</td>
<td>5</td>
</tr>
<tr>
<td>Asking for repetition</td>
<td>2/15 13%</td>
<td>1/12 8%</td>
<td>5</td>
</tr>
<tr>
<td>Seeking clarification</td>
<td>6/15 40%</td>
<td>3/12 25%</td>
<td>-15</td>
</tr>
<tr>
<td>Resourcing</td>
<td>8/15 53%</td>
<td>2/12 17%</td>
<td>-36</td>
</tr>
</tbody>
</table>

Gain in INCREASE Gain in DECREASE OVERALL gain in %

<table>
<thead>
<tr>
<th>Element</th>
<th>E1 (N=15)</th>
<th>C (N=12)</th>
<th>E1 - C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>10</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>27</td>
<td>5</td>
<td>32</td>
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<tr>
<td>Using fillers</td>
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<td>Using self repetition</td>
<td>16</td>
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<tr>
<td>Seeking clarification</td>
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<tr>
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<td>Resourcing</td>
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<td>-56</td>
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</table>
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

<table>
<thead>
<tr>
<th>Direct, non-target strategy</th>
<th>Proportion</th>
<th>%</th>
<th>Proportion</th>
<th>%</th>
<th>Gain in INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 (N=15)</td>
<td>E1 (N=12)</td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>47</td>
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A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Self-perceptions of Use of Non-target, Direct Strategies

<table>
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<th>Direct, non-target strategy</th>
<th>Proportion</th>
<th>%</th>
<th>Proportion</th>
<th>%</th>
<th>Gain in DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 (N=15)</td>
<td>E1 (N=12)</td>
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<td>6/12</td>
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</tr>
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<td>4/15</td>
<td>27</td>
<td>5/12</td>
<td>42</td>
<td>15</td>
</tr>
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<td>2/15</td>
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<td>1/12</td>
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<td>-5</td>
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<td>47</td>
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<td>6/15</td>
<td>40</td>
<td>3/12</td>
<td>25</td>
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</tbody>
</table>

A Comparison of E1 and C Groups in Terms of the Proportion of INCREASE in Perceptions of the Effectiveness of Non-target, Direct Strategies

<table>
<thead>
<tr>
<th>Direct, non-target strategy</th>
<th>Proportion</th>
<th>%</th>
<th>Proportion</th>
<th>%</th>
<th>Difference in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 (N=15)</td>
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<td></td>
<td></td>
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<td>47</td>
<td>3/12</td>
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<td>4/12</td>
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</table>

A Comparison of E1 and C Groups in Terms of the Proportion of DECREASE in Perceptions of Effectiveness of Non-target, Direct Strategies

<table>
<thead>
<tr>
<th>Direct, non-target strategy</th>
<th>Proportion</th>
<th>%</th>
<th>Proportion</th>
<th>%</th>
<th>Difference in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 (N=15)</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>9</td>
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<td>4/15</td>
<td>27</td>
<td>3/12</td>
<td>25</td>
<td>-2</td>
</tr>
<tr>
<td>14</td>
<td>6/15</td>
<td>40</td>
<td>4/12</td>
<td>33</td>
<td>-7</td>
</tr>
<tr>
<td>3</td>
<td>8/15</td>
<td>53</td>
<td>5/12</td>
<td>42</td>
<td>-11</td>
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</tbody>
</table>

Direct, non-target strategy | Gain in INCREASE | Gain in DECREASE | OVERALL gain in % |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
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<td>30</td>
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<td>23</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>-11</td>
<td>8</td>
</tr>
<tr>
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<td>-7</td>
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## 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

<table>
<thead>
<tr>
<th>Indirect strategy</th>
<th>E2 (N=17)</th>
<th>C (N=12)</th>
<th>Gain in INCREASE</th>
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<tr>
<td>Proportion %</td>
<td>Proportion %</td>
<td>Difference in %</td>
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<td>12/17 71</td>
<td>1/12 6</td>
<td>63 32</td>
</tr>
<tr>
<td>8</td>
<td>11/17 65</td>
<td>4/12 33</td>
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</tr>
<tr>
<td>11</td>
<td>8/17 47</td>
<td>2/12 17</td>
<td>30 20</td>
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<td>8 4</td>
</tr>
<tr>
<td>13</td>
<td>7/17 41</td>
<td>4/12 33</td>
<td>8 4</td>
</tr>
<tr>
<td>5</td>
<td>5/17 29</td>
<td>3/12 25</td>
<td>4 10</td>
</tr>
<tr>
<td>10</td>
<td>9/17 53</td>
<td>6/12 50</td>
<td>3 160</td>
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</table>

Gain in INCREASE Gain in DECREASE OVERALL gain in %

Gain in INCREASE Gain in DECREASE OVERALL gain in %

Gain in INCREASE Gain in DECREASE OVERALL gain in %

Gain in INCREASE Gain in DECREASE OVERALL gain in %

Gain in INCREASE Gain in DECREASE OVERALL gain in %

Gain in INCREASE Gain in DECREASE OVERALL gain in %
## 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

<table>
<thead>
<tr>
<th>Indirect strategy</th>
<th>E2 (N=17) Proportion</th>
<th>C (N=12) Proportion</th>
<th>Gain in Increase in %</th>
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<tbody>
<tr>
<td>2</td>
<td>7/17</td>
<td>3/12</td>
<td>25 16</td>
</tr>
<tr>
<td>7</td>
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<td>8/17</td>
<td>4/12</td>
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<tr>
<td>12</td>
<td>5/17</td>
<td>3/12</td>
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</tr>
<tr>
<td>3</td>
<td>6/17</td>
<td>4/12</td>
<td>33 2</td>
</tr>
<tr>
<td>9</td>
<td>4/17</td>
<td>3/12</td>
<td>25 -1</td>
</tr>
</tbody>
</table>

### A Comparison of E2 and C Groups in Terms of the Proportion of Decrease in Self-perceptions of Use of Non-target, Indirect Strategies

<table>
<thead>
<tr>
<th>Indirect strategy</th>
<th>E2 Proportion</th>
<th>C Proportion</th>
<th>Gain in Decrease in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>4/17</td>
<td>5/12</td>
<td>42 18</td>
</tr>
<tr>
<td>9</td>
<td>6/17</td>
<td>6/12</td>
<td>50 15</td>
</tr>
<tr>
<td>12</td>
<td>7/17</td>
<td>6/12</td>
<td>50 9</td>
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<tr>
<td>4</td>
<td>3/17</td>
<td>3/12</td>
<td>25 7</td>
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<tr>
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<td>5/17</td>
<td>4/12</td>
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</tr>
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<td>3</td>
<td>6/17</td>
<td>4/12</td>
<td>33 -2</td>
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<tr>
<td>7</td>
<td>6/17</td>
<td>3/12</td>
<td>25 -10</td>
</tr>
</tbody>
</table>

### A Comparison of E2 and C Groups in Terms of the Proportion of Increase in Perceptions of the Effectiveness of Non-target, Indirect Strategies

<table>
<thead>
<tr>
<th>Indirect strategy</th>
<th>E2 Proportion</th>
<th>C Proportion</th>
<th>Gain in Increase in %</th>
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</thead>
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<tr>
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<td>33 20</td>
</tr>
<tr>
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</tr>
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<td>6/17</td>
<td>5/12</td>
<td>42 -7</td>
</tr>
<tr>
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<td>4/17</td>
<td>4/12</td>
<td>33 -9</td>
</tr>
<tr>
<td>14</td>
<td>3/17</td>
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<td>4/17</td>
<td>6/12</td>
<td>50 -26</td>
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</tbody>
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### A Comparison of E2 and C Groups in Terms of the Proportion of Decrease in Perceptions of Effectiveness of Non-target, Indirect Strategies

<table>
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<tr>
<th>Indirect strategy</th>
<th>E2 Proportion</th>
<th>C Proportion</th>
<th>Gain in Decrease in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>4/17</td>
<td>5/12</td>
<td>42 18</td>
</tr>
<tr>
<td>12</td>
<td>4/17</td>
<td>3/12</td>
<td>25 1</td>
</tr>
<tr>
<td>2</td>
<td>3/17</td>
<td>2/12</td>
<td>17 -1</td>
</tr>
<tr>
<td>4</td>
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</tr>
<tr>
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<td>8/17</td>
<td>5/12</td>
<td>42 -5</td>
</tr>
<tr>
<td>14</td>
<td>10/17</td>
<td>3/12</td>
<td>25 -34</td>
</tr>
</tbody>
</table>

### A Comparison of E1 and C Groups in Terms of the Proportion of Decrease in Perceptions of Effectiveness of Non-target, Indirect Strategies

<table>
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<tr>
<th>Indirect strategy</th>
<th>E1 Proportion</th>
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<td>16</td>
</tr>
<tr>
<td>9</td>
<td>-4</td>
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<td>4</td>
<td>14</td>
<td>-4</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>-7</td>
<td>-1</td>
<td>-8</td>
</tr>
<tr>
<td>3</td>
<td>-9</td>
<td>-5</td>
<td>-14</td>
</tr>
<tr>
<td>12</td>
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<td>-25</td>
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<tr>
<td>14</td>
<td>-15</td>
<td>-34</td>
<td>-49</td>
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</tbody>
</table>
### Appendix 19

**Effects matrix: Annie’s reported use of target and non-target strategies across phrases (case 1)**

<table>
<thead>
<tr>
<th>Target (direct) strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resourcing (1)</strong></td>
<td>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.</td>
<td>Resourcing (3)</td>
<td>Resourcing (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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. The ideas on the second page were useful. 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.</td>
<td>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'. 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.</td>
</tr>
<tr>
<td><strong>Paraphrasing (1)</strong></td>
<td>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'.</td>
<td>Paraphrasing (0)</td>
<td>Paraphrasing (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Using fillers (0)</strong></td>
<td>/</td>
<td>Using fillers (2)</td>
<td>Using fillers (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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’.</td>
<td>I believe that if the discussion had been in Cantonese, it would have sustained much longer. Here I just said &quot;um&quot;, &quot;er&quot;, &quot;ok&quot;, &quot;actually&quot; to gain time since I was using English and I found it difficult to say more.</td>
</tr>
<tr>
<td><strong>Self correction (0)</strong></td>
<td>/</td>
<td>Self correction (0)</td>
<td>Self correction (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Self repetition (0)</strong></td>
<td>/</td>
<td>Self repetition (0)</td>
<td>Self repetition (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>...or trying to say it again.</td>
</tr>
<tr>
<td><strong>1st Total</strong></td>
<td>2/13 (15.4%)</td>
<td>5/18 (27.8%)</td>
<td>6/10 (60%)</td>
</tr>
</tbody>
</table>

*<1st total>* denotes the frequency and (proportional frequency %) of target strategies reported per phase

*<2nd total>* denotes the frequency and (proportional frequency %) of non-target strategies reported per phase

</> denotes nil occurrences of reported strategy use
<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seeking meaning (0)</strong></td>
<td>/</td>
<td>Seeking meaning (0)</td>
</tr>
<tr>
<td><strong>Planning ideas (1)</strong></td>
<td>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.</td>
<td>/</td>
</tr>
<tr>
<td><strong>Evaluation (0)</strong></td>
<td>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.</td>
<td>/</td>
</tr>
<tr>
<td><strong>Monitoring contribution (0)</strong></td>
<td>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.</td>
<td>/</td>
</tr>
<tr>
<td><strong>Turn taking (3)</strong></td>
<td>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.</td>
<td>/</td>
</tr>
<tr>
<td><strong>Simplification (0)</strong></td>
<td>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.</td>
<td>/</td>
</tr>
</tbody>
</table>

| 2nd Total | 6/13 (46.2%) | 9/18 (50%) | 1/10 (10%) |
**Appendix 20  Effects matrix: Cynthia’s reported use of target and non-target strategies across phrases (case 2)**

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing (0)</td>
<td></td>
<td>Resourcing (3)</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Using self correction (0)</td>
<td></td>
<td>Using self correction (1)</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td>He was talking about x ray eyes. I felt that my grammar wasn't right. I was sure that my grammar was wrong cm I said 'it it doesn’t... isn’t useless'. So I corrected it.</td>
<td></td>
</tr>
<tr>
<td>Paraphrasing (0)</td>
<td></td>
<td>Paraphrasing (0)</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Total</td>
<td>0/9 (0%)</td>
<td>4/12 (33.33%)</td>
<td>2/8 (25%)</td>
</tr>
</tbody>
</table>

<1st total> denotes the total number of target strategies reported per phase

<2nd total> denotes the total number of non-target strategies reported per phase

</> denotes nil occurrences of reported strategy use
<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning ideas (0)</td>
<td>Planning ideas (1)</td>
<td>Planning ideas (0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I was also thinking of what other reasons to give, em to prepare for my turn to say something.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitating progress (1)</td>
<td>We had nothing to say. Er so I suggested 'strong heart'.</td>
<td>Facilitating progress (0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asking for help (1)</td>
<td>Asking for help (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn taking (1)</td>
<td>Turn taking (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking risks (1)</td>
<td>Taking risks (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using gesture (1)</td>
<td>Using gesture (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abandoning messages (1)</td>
<td>Abandoning messages (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focusing on task (1)</td>
<td>Focusing on task (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>They were arguing and so I was listening attentively to them and to think about what they're talking about.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring contribution (0)</td>
<td>Monitoring contribution (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking views (0)</td>
<td>Seeking views (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Total</td>
<td>6/9 (66.67%)</td>
<td>5/12 (41.67%)</td>
<td>3/8 (37.5%)</td>
</tr>
</tbody>
</table>
### Effects matrix: Kwok's reported use of target and non-target strategies across phrases (case 3)

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paraphrasing (2)</strong></td>
<td>At that time, I wanted to say that the hands could hold things, <em>but I used the wrong word</em>. The right word was not so difficult, but I just forgot it at that time. I forgot the word &quot;hold&quot;, so I said &quot;to keep something&quot; instead.</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Using Fillers (0)</strong></td>
<td></td>
<td>Using Fillers (1) Um I really couldn't think of saying any more in English. So I said 'er', 'um', 'well' to stall (giggling).</td>
<td>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 &quot;um&quot; &quot;well&quot; so that we could move on to discuss the next one.</td>
</tr>
<tr>
<td><strong>Resourcing (0)</strong></td>
<td></td>
<td>Resourcing (0)</td>
<td>Resourcing (3) Here I said, &quot;I don't think so&quot;. 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 &quot;I don't think so&quot;. At that point, the two body parts were not that important. So I chose &quot;I don't think so&quot; to change the order of the last two body parts.</td>
</tr>
<tr>
<td><strong>Using Self Correction (0)</strong></td>
<td></td>
<td>Using Self Correction (0)</td>
<td>Using Self Correction (1) I said &quot;like ghost in the night&quot;. 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.</td>
</tr>
<tr>
<td>1st Total</td>
<td>2/8 (25%)</td>
<td>2/8 (25%)</td>
<td>7/13 (61.5%)</td>
</tr>
</tbody>
</table>

<1st total> denotes the total number of target strategies reported per phase  
<2nd total> denotes the total number of non-target strategies reported per phase  
<\> denotes nil occurrences of reported strategy use
<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activating Background Knowledge (4)</strong></td>
<td>I remembered that I had learnt the words &quot;breathe air&quot; in the Integrated Science lesson, <em>so when we were talking about breathing, I could say these words easily and naturally.</em></td>
<td>Activating Background Knowledge (2) 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.</td>
<td>Activating Background Knowledge (0)</td>
</tr>
<tr>
<td><strong>Giving Help (1)</strong></td>
<td>I was <em>offering the word 'attract’ to him. He's dragging on for a while. It seemed that he couldn't express himself.</em></td>
<td>Giving Help (0)</td>
<td>Giving Help (0)</td>
</tr>
<tr>
<td><strong>Elaborating (0)</strong></td>
<td></td>
<td>Elaborating (1) At that time, I didn't know what I was thinking about. I simply couldn't focus my attention. <em>So I depended on Lucy. She said a few words and then I supplemented them with my own.</em></td>
<td>Elaborating (0)</td>
</tr>
<tr>
<td><strong>Facilitating Atmosphere (0)</strong></td>
<td></td>
<td>Facilitating Atmosphere (1) Here they had nothing much to say. <em>So I sort of cheered up the atmosphere by making some light-hearted remarks (giggling).</em></td>
<td>Facilitating Atmosphere (0)</td>
</tr>
<tr>
<td><strong>Taking Risks (0)</strong></td>
<td></td>
<td>Taking Risks (0)</td>
<td>Taking Risks (1) 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. <em>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.</em></td>
</tr>
<tr>
<td><strong>Monitoring Contributions (0)</strong></td>
<td></td>
<td>Monitoring Contributions (0)</td>
<td>Monitoring Contributions (2) At that time, I was using eye contact to signal to my group mates to speak more. I felt that they should say something.</td>
</tr>
<tr>
<td><strong>Repairing (0)</strong></td>
<td></td>
<td>Repairing (0)</td>
<td>Repairing (1) 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. <em>So I asked Lucy what her feeling was if she had no hair.</em></td>
</tr>
<tr>
<td><strong>2nd Total</strong></td>
<td>5/8 (62.5%)</td>
<td>4/8 (50%)</td>
<td>4/13 (38.5%)</td>
</tr>
</tbody>
</table>
## Appendix 22. Effects matrix: Ng’s reported use of target and non-target strategies across phrases (case 4)

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resourcing (0)</strong></td>
<td>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.</td>
<td><strong>Resourcing (0)</strong></td>
</tr>
<tr>
<td>1st Total</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>Non-target strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Abandoning Messages (2)</strong></td>
<td>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.</td>
<td>Abandoning messages (2) I said one sentence only. I felt that my organization was not right at all. No one understood me. ... em em also my expression was very unclear. 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.</td>
</tr>
<tr>
<td>2nd Total</td>
<td>4/5 (80%)</td>
<td>4/10 (40%)</td>
</tr>
</tbody>
</table>

<1st total> denotes the total number of target strategies reported per phase
<2nd 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)

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning ideas in advance (1)</td>
<td>I was thinking what in general I was going to say in the discussion. If you know 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.</td>
<td>Planning ideas in advance (0)</td>
<td>Planning ideas in advance (0)</td>
</tr>
<tr>
<td>Problem identification (2)</td>
<td>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 required to do in the task.</td>
<td>Problem identification (3) 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.</td>
<td>Problem identification (5) 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'.</td>
</tr>
<tr>
<td>Functional planning (0)</td>
<td></td>
<td>Functional planning (3) 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.</td>
<td>Functional planning (0)</td>
</tr>
<tr>
<td>Giving help (0)</td>
<td></td>
<td>Giving help (0)</td>
<td>Giving help (1) 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.</td>
</tr>
<tr>
<td>Asking for help (1)</td>
<td>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 by asking you will benefit. We all have different ways of thinking and so we might help each other.</td>
<td>Asking for help (0)</td>
<td>Asking for help (0)</td>
</tr>
<tr>
<td>Positive self talk (0)</td>
<td></td>
<td>Positive self talk (1) At that time, I felt that &quot;think positive&quot; might be helpful so I suggested trying it.</td>
<td>Positive self talk (0)</td>
</tr>
</tbody>
</table>

| 1st total:                               | 4/15 (26.7%)                                                           | 7/14 (50%)                                                             | 6/15 (40%)                                                             |

<1st total> denotes the total number of target strategies reported per phase
<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing task knowledge (6)</td>
<td>There I asked what words we didn't understand. I thought that 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 was thinking that we should make the best use of our preparation time to check all unfamiliar words.</td>
<td>Enhancing task knowledge (4)</td>
<td>I was finding out if there were any words which I didn't know about the meaning or pronunciation.</td>
</tr>
<tr>
<td>Resourcing (1)</td>
<td>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.</td>
<td>Resourcing (0)</td>
<td>Resourcing (0)</td>
</tr>
<tr>
<td>Monitoring contributions (0)</td>
<td>/</td>
<td>Monitoring contributions (0)</td>
<td>/</td>
</tr>
<tr>
<td>Suggesting turn taking tactics (1)</td>
<td>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.</td>
<td>Suggesting turn taking tactics (0)</td>
<td>/</td>
</tr>
<tr>
<td>Facilitating progress of preparation talk (2)</td>
<td>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.</td>
<td>Facilitating progress of prep talk (2)</td>
<td>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.</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; total:</td>
<td>10/15 (66.7%)</td>
<td>6/14 (42.8%)</td>
<td>7/15 (46.8%)</td>
</tr>
</tbody>
</table>

<sup>2<sup>nd</sup> total</sup> denotes the total number of non-target strategies reported per phase  
<sup>/</sup> denotes nil occurrences of reported strategy use
Appendix 24  
**Effects matrix: Rickie’s reported use of target and non-target strategies across phases (case 6)**

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong></td>
<td><strong>Phase 2</strong></td>
</tr>
<tr>
<td>Problem identification (0)</td>
<td>Problem identification (2)</td>
</tr>
<tr>
<td>/</td>
<td>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.</td>
</tr>
<tr>
<td>Planning ideas in advance (0)</td>
<td>Planning ideas in advance (1)</td>
</tr>
<tr>
<td>/</td>
<td>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.</td>
</tr>
<tr>
<td>Functional planning (0)</td>
<td>Functional planning (1)</td>
</tr>
<tr>
<td>/</td>
<td>I was thinking about the word ‘digest’ I meant how to pronounce it.</td>
</tr>
<tr>
<td><strong>1st total:</strong></td>
<td><strong>4/15 (26.67%)</strong></td>
</tr>
<tr>
<td>0/2 (0%)</td>
<td>4/15 (26.67%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong></td>
<td><strong>Phase 2</strong></td>
</tr>
<tr>
<td>Enhancing task knowledge (2)</td>
<td>Enhancing task knowledge (2)</td>
</tr>
<tr>
<td>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.</td>
<td>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’.</td>
</tr>
<tr>
<td>Resourcing (0)</td>
<td>Resourcing (1)</td>
</tr>
<tr>
<td>/</td>
<td>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.</td>
</tr>
<tr>
<td>Taking risks (0)</td>
<td>Taking risks (1)</td>
</tr>
<tr>
<td>/</td>
<td>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.</td>
</tr>
<tr>
<td><strong>2nd total:</strong></td>
<td><strong>4/15 (26.67%)</strong></td>
</tr>
<tr>
<td>2/2 (100%)</td>
<td>4/15 (26.67%)</td>
</tr>
</tbody>
</table>

*<1st total> denotes the total number of target strategies reported per phase<br><2nd total> denotes the total number of non-target strategies reported per phase<br></ > 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. /*
### Appendix 25  
**Effects matrix: Dale's reported use of target and non-target strategies across phases (case 7)**

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking for help (1)</td>
<td>I was thinking that we should ask for help if needed and should not feel shy during the task.</td>
<td>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.</td>
<td>Asking for help (0)</td>
</tr>
<tr>
<td>Problem identification (0)</td>
<td>/</td>
<td>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.</td>
<td>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'.</td>
</tr>
<tr>
<td>Functional planning (0)</td>
<td>/</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Planning ideas in advance (0)</td>
<td>/</td>
<td>Planning ideas in advance (0)</td>
<td>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. 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.</td>
</tr>
</tbody>
</table>

| 1° total: | 1/13 (7.69%) | 5/8 (62.50%) | 5/8 (62.50%) |

### Non-target strategies

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Resourcing (1) After I was 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.</td>
<td>Resourcing (0)</td>
<td>Resourcing (0)</td>
</tr>
<tr>
<td>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.</td>
<td>Facilitating the preparatory talk (0)</td>
<td>Facilitating the preparatory talk (0)</td>
</tr>
</tbody>
</table>

| 2° total: | 10/13 (76.92%) | 3/8 (37.50%) | 2/8 (25.00%) |

<1° total> denotes the total number of target strategies reported per phase  
<2° total> denotes the total number of non-target strategies reported per phase  
< / > denotes nil occurrences of reported strategy use
Appendix 26

Effects matrix: Gary's reported use of target and non-target strategies across phases (case 8)

<table>
<thead>
<tr>
<th>Target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional planning (1)</td>
<td>I was reading the teacher's notes er about the 'handsome face' and er thinking of how to say it.</td>
<td>Functional planning (0)</td>
<td>Functional planning (0)</td>
</tr>
<tr>
<td>Problem identification (0)</td>
<td>/</td>
<td>Problem identification (1)</td>
<td>Problem identification (0)</td>
</tr>
<tr>
<td>Planning ideas in advance (0)</td>
<td>/</td>
<td>Planning ideas in advance (2)</td>
<td>Planning ideas in advance (0)</td>
</tr>
<tr>
<td>Asking for help (0)</td>
<td>/</td>
<td>Asking for help (2)</td>
<td>Asking for help (0)</td>
</tr>
<tr>
<td>Relax and think positive (0)</td>
<td>/</td>
<td>Relax and think positive (1)</td>
<td>Relax and think positive (0)</td>
</tr>
<tr>
<td>1st total:</td>
<td>1/8 (12.50%)</td>
<td>6/10 (60%)</td>
<td>/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-target strategies</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing task knowledge (3)</td>
<td>I was mostly reading the notes to see what the words and sentences meant.</td>
<td>Enhancing task knowledge (3) I asked them and checked if they knew the meaning of the words. I was worried that they might not understand the meaning very well.</td>
<td>Enhancing task knowledge (1) Em... here I was reading the notes to see if there were any words I didn't know.</td>
</tr>
<tr>
<td>Facilitating preparatory talk (0)</td>
<td>/</td>
<td>Facilitating preparatory talk (1) 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 ...um ..to discuss again the content of the notes.</td>
<td>Facilitating preparatory talk (0)</td>
</tr>
<tr>
<td>2nd total:</td>
<td>3/8 (37.5%)</td>
<td>4/10 (40%)</td>
<td>1/2 (50%)</td>
</tr>
</tbody>
</table>

<1st total> denotes the total number of target strategies reported per phase
<2nd 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)

<table>
<thead>
<tr>
<th>Effects of strategy training on observable strategy use/ reported strategy use/ perceived strategy effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observable Use in English Group Discussions (Audio Recordings)</strong></td>
</tr>
</tbody>
</table>
| **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. |
| **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. |
| **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 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.

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**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.

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**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.**

---

**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

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**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
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 a 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.

---

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 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.

---

**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)

<table>
<thead>
<tr>
<th></th>
<th>Pre-post gains in mean ratings (on a 6-point scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High and low groups combined</td>
</tr>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Whole class task</td>
<td>'English' score</td>
</tr>
<tr>
<td></td>
<td>'Task effectiveness' score</td>
</tr>
<tr>
<td>Pull-out group task</td>
<td>'English' score</td>
</tr>
<tr>
<td></td>
<td>'Task effectiveness' score</td>
</tr>
</tbody>
</table>

- 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)

<table>
<thead>
<tr>
<th>Effects of strategy training on observable strategy use/ reported strategy use/ perceived strategy effectiveness</th>
<th>Reported use (Stimulated Recall Interviews)</th>
<th>Reported use and perceived strategy effectiveness (Questionnaires)</th>
</tr>
</thead>
</table>
| **Observable Use in Cantonese Preparatory Talks (Audio Recordings)** | **Whole Sample of Target Strategies**  
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 English group discussions provide further evidence that there was a dramatic increase in the use of indirect strategies at Phase 2 but not Phase 3.  
*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.*  
**Individual Target Strategies**  
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.  
*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.*  
Regarding the teachability of individual strategies, for | **Whole Sample of Target Strategies**  
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.  
*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.*  
**Individual Target Strategies**  
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.  
*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.*  
Regarding the reporting of individual strategies, for the C group, there were no discernible trends across Phases 1, 2 | **Whole Sample of Target Strategies**  
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.  
*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.*  
**Individual Target Strategies**  
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:  
- Asking for help (+76%) p=0.001  
- Problem Identification (+50%) p=0.099  
- Planning ideas in advance (+20%) p=0.096  
In terms of perceived effectiveness of the strategies, only ‘Problem Identification’ had |
E2, there were dramatic increases in the use of *Problem Identification* 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 *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. In addition, results from English group discussions indicated that, for E2, there was a dramatic rise in the use of *Evaluation* at Phase 2 as compared with C and E1. Apart from *Evaluation*, the use of the other target strategies was minimal and does not warrant meaningful comparisons across groups and phases. The findings suggest that training in the use of indirect strategies had the greatest impact on the uptake of *Problem identification*. In addition, 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.

### Whole Sample of Non-Target Strategies

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.

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.

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 *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.

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.

### Whole Sample of Non-Target Strategies

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. 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.

### Whole Sample of Non-Target Strategies

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.

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...
Individual non-target strategies
Analysis by treatment conditions indicated that, for both C and E1, they showed increasing use of one obvious strategy Rehearsal ranking. 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 Rehearsal ranking at all at Phase 3. Instead, 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. On the other hand, for both C and E1, there was no sign of increase in the use of any of these three strategies.

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.

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.

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.

Whole Sample of Target Strategies (By proficiency)
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 effectiveness of more than half of the number of non-target strategies.

Individual non-target strategies
Analysis by treatment indicated that, for the C group, there was an increasing trend in the reporting of Rehearsal ranking 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 Facilitating progress over time and to increase in the identification of both Monitoring contributions and Suggesting turn-taking tactics 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.

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.

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.

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.

Whole Sample of Target Strategies (By proficiency)
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.

The findings suggest that strategy training had greater

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.

<table>
<thead>
<tr>
<th>Effects of Training in the Use of Indirect strategies on Task Performance (Group Discussions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-post gains in mean ratings (on a 6-point scale)</strong></td>
</tr>
<tr>
<td><strong>High and low groups combined</strong></td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>Whole class task</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Pull-out group task</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- 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 ‘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.

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.
Appendix 28  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

<table>
<thead>
<tr>
<th>Observable Use in English (Audio Recordings)</th>
<th>Reported use (Stimulated Recall Interviews)</th>
<th>Reported use (Questionnaires)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analysis by treatment</strong></td>
<td><strong>Analysis by treatment</strong></td>
<td><strong>Analysis by treatment</strong></td>
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<tr>
<td>E1, the target group, maintained frequency of use of target strategies at more or less the same level, increased in the variety of target strategies, increased in the use of Resourcing over time.</td>
<td>E1, the target group, had consistent and dramatic increases in the frequency of reported use of the target strategies, displayed evidence of an upward trend in the variety of reported strategies as well as big increases in the reported use of Resourcing across the three phases.</td>
<td>There were overall gains in favour of E1 over C in the self-perceived use of 6 out of 8 target strategies. Moreover, there was a near statistically significant gain in 'Resourcing' (+51%) p=0.058</td>
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<tr>
<td>There were no discernible patterns regarding the use of non-target strategies.</td>
<td>There was decreased reporting in the majority of non-target strategies across Phases 1, 2 and 3.</td>
<td>There were gains in favour of E1 in 4 out of 6 non-target strategies. There were statistically significant gains in 'Attentive listening' (+66%) p=0.028 and 'Paying more attention to content than language' (+60%) p=0.007</td>
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<tr>
<td><strong>Analysis by proficiency</strong></td>
<td><strong>Analysis by proficiency</strong></td>
<td><strong>Analysis by proficiency</strong></td>
</tr>
<tr>
<td>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 'Resourcing' over time, the L-subgroup showed a much more dramatic increase than the H-subgroup at Phase 3.</td>
<td>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 Resourcing as compared with the H-subgroup.</td>
<td>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 Resourcing as compared with the H-subgroup.</td>
</tr>
<tr>
<td>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.</td>
<td>The L-subgroup identified higher proportions of non-target strategies than its H-subgroup at all phases.</td>
<td>Effects of Training in the Use of Direct Strategies on Task Performance</td>
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<td>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 'English' scores but not on 'Task effectiveness' scores on both the whole class task and the 'pull-out' group task.</td>
</tr>
</tbody>
</table>
**Indirect strategy use**

Effects of strategy training on observable strategy use/ reported strategy use in SRIs/ reported strategy use in questionnaires

<table>
<thead>
<tr>
<th>Observable Use in Cantonese Preparatory Talks (Audio Recordings)</th>
<th>Reported use (Stimulated Recall Interviews)</th>
<th>Reported use (Questionnaires)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analysis by treatment</strong></td>
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<td><strong>Analysis by treatment</strong></td>
</tr>
<tr>
<td>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. 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.</td>
<td>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. 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.</td>
<td>There were overall gains in favour of E2 over C in 6 out of 7 target strategies. 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</td>
</tr>
<tr>
<td>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. 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.</td>
<td>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 Rehearsing ranking at Phase 3. Yet, there was steady increase in the reporting of Facilitating progress, Monitoring contributions and Suggesting turn-taking tactics over time particularly at Phase 3.</td>
<td>There were only moderate gains in favour of E2 over C in 6 out of 7 non-target strategies. However, none had an effect size that is statistically significant.</td>
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<td><strong>Analysis by proficiency</strong></td>
<td><strong>Analysis by proficiency</strong></td>
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<tr>
<td>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. 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.</td>
<td>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.</td>
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<td>For E2, the L-subgroup was more active than the H-subgroup in the use of familiar, non-target strategies i.e. Enhancing task knowledge, Checking meaning. On the other hand, the H-subgroup used less familiar, non-target strategies i.e. Monitoring contributions, Suggesting turn-taking tactics, and Facilitating progress whereas the L-subgroup did not use much of these.</td>
<td>For E2, the L-subgroup reported higher proportions of familiar, non-target strategies (Enhancing task knowledge, Rehearsing ranking). The H-subgroup, on the other hand, identified higher proportions of less familiar, non-target strategies such as Monitoring contributions, Suggesting turn-taking tactics and Facilitating progress at all phases.</td>
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</tr>
</tbody>
</table>

**Effects of Training in the Use of Indirect Strategies on Task Performance**

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.