THE INFLUENCE OF FIRST LANGUAGE READING STRATEGIES ON SECOND LANGUAGE READING OF ACADEMIC TEXTS

YUAN XIN

UNIVERSITI TEKNOLOGI MALAYSIA
THE INFLUENCE OF FIRST LANGUAGE READING STRATEGIES ON SECOND LANGUAGE READING OF ACADEMIC TEXTS

YUAN XIN

A thesis submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy

Language Academy
Universiti Teknologi Malaysia

JUNE 2017
To

my dear parents
ACKNOWLEDGEMENTS

Many people have contributed to the completion of this thesis. First of all, I wish to extend my heartfelt appreciation to my main supervisor Dr. Fauziah, for her patient guidance, encouragement as well as her inspiring on each revision of the thesis. I also like to thank my co-supervisor Dr Azian for her valuable advices, guidance and motivation. Without their continued support and company, I would not have come this far in my PhD journey.

I am also thankful to my friends Mr Chen and Mr Peng for helping me arranging and organizing their students in the process of my questionnaire survey. I also appreciate the help and kindness of all the participants who voluntarily participated in my study.

Lastly, I wish to extend my appreciation to all my family members who have supported me in my thesis writing. I am particularly indebted to my parents who have given me unconditional love and continuous encouragement.
ABSTRACT

A review of literature indicates that an improved understanding on the use of first language (L1) reading strategies in second language (L2) reading contributes to the general understanding of reading process. However, to date, it remains an insufficiently explored issue in terms of the extent of L1 reading strategies use in L2 reading and how they influence L2 reading. The present study examined the links between reading strategies in L1 and L2 academic reading. The focus is on the connection of three categories of reading strategies: metacognitive, cognitive and support strategies between L1 and L2 academic reading and the factors leading to strategy patterns in L1 and L2 academic reading. A mixed methodology was adopted in the study. 106 participants were selected using purposive sampling method for the questionnaire survey and 23 of them volunteered and participated in the interview sessions. Data derived from survey of reading strategies, think-aloud protocol and simulated recall interview were analyzed using paired sample t-test and thematic analysis. The study found that, in general, L2 strategies were adopted on a more frequent basis as compared to L1 strategies in academic reading. The influence of L1 reading strategies on L2 reading varied on strategy categories with metacognitive strategies being the most influential category of strategies. Limited L2 proficiency and test-oriented reading approach were identified as the major two factors influencing the L2 strategy patterns and contributing to the similarities and differences in L1 and L2 academic reading. The present study adds to the existing field of study on the relationship between L1 and L2 reading strategy patterns in academic reading by identifying factors shaping L2 reading strategy use. This study has highlighted the complexity of L2 reading in the way that it is jointly affected by L1 reading, L2 proficiency and different reading purposes.
ABSTRAK

# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECLARATION</td>
<td>ii</td>
<td></td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iii</td>
<td></td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iv</td>
<td></td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>v</td>
<td></td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>vi</td>
<td></td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vii</td>
<td></td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xii</td>
<td></td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xvi</td>
<td></td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xvii</td>
<td></td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td>xvii</td>
<td></td>
</tr>
</tbody>
</table>

1 INTRODUCTION 1

1.0 Introduction 1
1.1 Background of Study 4
1.2 Statement of the Problem 6
1.3 Research Objectives 8
1.4 Research Questions 9
1.5 Definition of Terms 10
   1.5.1 L1 Reading and L2 Reading 10
   1.5.2 EFL and ESL 10
   1.5.3 Chinese College Student 11
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5.4</td>
<td>Reading Strategies</td>
<td>11</td>
</tr>
<tr>
<td>1.5.4.1</td>
<td>Metacognitive Reading Strategies</td>
<td>11</td>
</tr>
<tr>
<td>1.5.4.2</td>
<td>Cognitive Reading Strategies</td>
<td>12</td>
</tr>
<tr>
<td>1.5.4.3</td>
<td>Support Reading Strategies</td>
<td>12</td>
</tr>
<tr>
<td>1.5.5</td>
<td>Academic Texts</td>
<td>13</td>
</tr>
<tr>
<td>1.6</td>
<td>Scope of the Study</td>
<td>13</td>
</tr>
<tr>
<td>1.7</td>
<td>Significance of the Study</td>
<td>14</td>
</tr>
<tr>
<td>1.8</td>
<td>Theoretical Framework</td>
<td>15</td>
</tr>
<tr>
<td>1.9</td>
<td>Conceptual Framework</td>
<td>16</td>
</tr>
<tr>
<td>1.10</td>
<td>Summary of Chapter 1</td>
<td>20</td>
</tr>
</tbody>
</table>

### 2 LITERATURE REVIEW

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>Introduction</td>
<td>21</td>
</tr>
<tr>
<td>2.1</td>
<td>Major Reading Models</td>
<td>21</td>
</tr>
<tr>
<td>2.2</td>
<td>Theories Underlying the Connection Between L1 and L2 Reading</td>
<td>24</td>
</tr>
<tr>
<td>2.2.1</td>
<td>The Linguistic Interdependence Hypothesis</td>
<td>24</td>
</tr>
<tr>
<td>2.2.1.1</td>
<td>Empirical Evidence on Interdependence Hypothesis</td>
<td>25</td>
</tr>
<tr>
<td>2.2.2</td>
<td>The Threshold Hypothesis</td>
<td>28</td>
</tr>
<tr>
<td>2.2.2.1</td>
<td>Empirical Evidence on Threshold Hypothesis</td>
<td>29</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Implications Interdependence and Threshold Hypothesis</td>
<td>33</td>
</tr>
<tr>
<td>2.3</td>
<td>Reading Comprehension Strategies</td>
<td>34</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Reading Strategies</td>
<td>34</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Classification of Reading Strategies</td>
<td>36</td>
</tr>
<tr>
<td>2.3.2.1</td>
<td>Classification of Reading Strategies Based on Reading models</td>
<td>36</td>
</tr>
</tbody>
</table>
2.3.2.2 Classification of Reading Strategies Based on Metacognition 37
2.3.2.3 Other types of Reading Strategies Classification 39
2.3.3 Reading Strategies Use of Good and Poor Readers 41
2.3.4 Chinese Reading Strategies 42
2.3.5 Comparison of L1 and L2 Reading Strategies 44
   2.3.5.1 L1 and L2 Reading Strategies for Alphabetic Readers 44
   2.3.5.2 L1 and L2 Reading Strategies for Chinese Readers 49

2.4 Summary of Chapter 2 54

3 METHODOLOGY 55

3.0 Introduction 55
3.1 Research Design 55
3.2 Participants 58
   3.2.1 Technique of Sampling 59
   3.2.2 Participants 60
3.3 Research Instruments 62
   3.3.1 Survey of Reading Strategies (SORS) 63
   3.3.2 Think aloud Protocol (TAP) 65
   3.3.3 Stimulated Recall Interview Guide (SRIG) 67
   3.3.4 Academic Texts 68
3.4 Research Procedure 69
   3.4.1 Pilot Study 70
     3.4.1.1 Pilot Study on SORS 71
     3.4.1.2 Pilot Study on TAP 72
3.4.1.3 Pilot Study on SRIG 74
3.4.2 Implementation of the Actual Study 75
3.4.2.1 Research Procedure 75

3.5 Data Analysis 76
3.5.1 Data Analysis for SORS 77
3.5.2 Data Analysis for TAP 78
3.5.2.1 Transcribing and Translating TAP 78
3.5.2.2 Segmenting TAP into Idea Units 80
3.5.2.3 Coding and Categorizing TAP Units 81
3.5.2.4 Intra-Rater Reliability 82
3.5.2.5 Inter-Rater Reliability 82
3.5.3 Data Analysis for Stimulated Recall Interview (SRI) 83
3.5.4 The Use of Nvivo as Organization Tool 84

3.6 Summary of Chapter 3 84

4 FINDINGS AND DISCUSSIONS 86

4.0 Introduction 86

4.1 Reading Strategies Adopted by Mainland College Students in L1 and L2 Academic Reading 87

4.1.1 Pattern of Metacognitive Strategies in L1 and L2 Academic Reading 88

4.1.1.1 Metacognitive Strategies Pattern in L1 Academic Reading 88

4.1.1.2 Metacognitive Strategies Pattern in L2 Academic Reading 93

4.1.2 Pattern of Cognitive Strategies in L1 and L2 Academic Reading 99
4.1.2 Cognitive Strategies Pattern in L1 Academic Reading 100
4.1.2.2 Cognitive Strategies Pattern in L2 Academic Reading 106
4.1.3 Pattern of Support Strategies in L1 and L2 Academic Reading 112
4.1.3.1 Support Strategies Pattern in L1 Academic Reading 113
4.1.3.2 Support Strategies Pattern in L2 Academic Reading 117
4.2 Influence of L1 Reading Strategies in L2 Reading 124
4.2.1 Influence of L1 Metacognitive Strategies in L2 Reading 125
4.2.1.1 Similarities of L1 and L2 Metacognitive Strategies 125
4.2.1.2 Differences of L1 and L2 Metacognitive Strategies 128
4.2.2 Influence of L1 Cognitive Strategies in L2 Reading 137
4.2.2.1 Similarities of L1 and L2 Cognitive Strategies 138
4.2.2.2 Differences of L1 and L2 Cognitive Strategies 143
4.2.3 Influence of L1 Support Strategies in L2 Reading 149
4.2.3.1 Similarities of L1 and L2 Support Strategies 150
4.2.3.2 Differences of L1 and L2 Support Strategies 155
4.3 Factors Influencing L2 Reading Strategies 159
4.3.1 Limited L2 Proficiency (LLP) 160
4.3.1.1 Influence of LLP in Metacognitive Strategies Use 160
4.3.1.2 Influence of LLP in Cognitive Strategies Use 168
4.3.1.3 Influence of LLP in Support Strategies Use 174

4.3.2 Test-oriented Reading Approach (TORA) 180
4.3.2.1 Influence of TORA in Metacognitive Strategies Use 180
4.3.2.2 Influence of TORA in Support Strategies Use 188

4.4 Challenges in L2 Reading 192
4.4.1 Inadequate Vocabulary 193
4.4.2 Difficult Sentence Structure 195

4.5 Summary of Chapter 4 197

5 CONCLUSION AND IMPLICATIONS 199
5.0 Introduction 199
5.1 Summary of Study 199
5.2 Summary of Findings 200
5.3 Implications 214
5.3.1 Implications for L1 and L2 Reading Research 214
5.3.2 Implications for ELT 215
5.3.3 Implications for Mainland Chinese College Students 217
5.4 Limitations 219
5.5 Directions for Future Research 221
5.6 Conclusion 223

REFERENCES 226
Appendices A-H 243-254
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Information on Three Reading Models</td>
<td>23</td>
</tr>
<tr>
<td>2.2</td>
<td>Empirical Evidence on the Interdependence Hypothesis</td>
<td>27</td>
</tr>
<tr>
<td>2.3</td>
<td>Past Studies on the Threshold Hypothesis</td>
<td>32</td>
</tr>
<tr>
<td>2.4</td>
<td>Classification of Reading Strategies</td>
<td>40</td>
</tr>
<tr>
<td>2.5</td>
<td>Reading Strategies Use among Good and Poor Readers</td>
<td>42</td>
</tr>
<tr>
<td>2.6</td>
<td>Reading Strategies Use among Readers with Alphabetic L1 Background</td>
<td>48</td>
</tr>
<tr>
<td>2.7</td>
<td>L1 and L2 Reading Strategies for Chinese Readers</td>
<td>53</td>
</tr>
<tr>
<td>3.1</td>
<td>Criteria and Rationale for Selection of Participants</td>
<td>61</td>
</tr>
<tr>
<td>3.2</td>
<td>Participants for SORS Pilot Study</td>
<td>61</td>
</tr>
<tr>
<td>3.3</td>
<td>Participants for TAP and SRIG Pilot Study</td>
<td>61</td>
</tr>
<tr>
<td>3.4</td>
<td>Overview of How Research Instruments Assist in Addressing Research Questions</td>
<td>62</td>
</tr>
<tr>
<td>3.5</td>
<td>Criteria for Think-aloud Academic Texts Selection</td>
<td>68</td>
</tr>
<tr>
<td>3.6</td>
<td>Comparison of Selected Academic Texts for TAP Pilot Study</td>
<td>72</td>
</tr>
<tr>
<td>3.7</td>
<td>Data Analysis Method</td>
<td>77</td>
</tr>
<tr>
<td>3.8</td>
<td>Types of Data in TAP</td>
<td>79</td>
</tr>
<tr>
<td>3.9</td>
<td>Selection of Appropriate TAP Segmenting Unit</td>
<td>81</td>
</tr>
<tr>
<td>4.1</td>
<td>Metacognitive Strategies Pattern in L1 Reading</td>
<td>89</td>
</tr>
<tr>
<td>4.2</td>
<td>Metacognitive Strategies Pattern in L2 Reading</td>
<td>94</td>
</tr>
<tr>
<td>4.3</td>
<td>Cognitive Strategies Pattern in L1 Reading</td>
<td>100</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>4.4</td>
<td>Cognitive Strategies Pattern in L2 Reading</td>
<td>107</td>
</tr>
<tr>
<td>4.5</td>
<td>Support Strategies Pattern in L1 Reading</td>
<td>113</td>
</tr>
<tr>
<td>4.6</td>
<td>Support Strategies Pattern in L2 Reading</td>
<td>118</td>
</tr>
<tr>
<td>4.7</td>
<td>Metacognitive Strategies with similar Frequency Range in L1 and L2 Reading</td>
<td>126</td>
</tr>
<tr>
<td>4.8</td>
<td>Metacognitive Strategies with similar Frequency in L1 and L2 Reading</td>
<td>127</td>
</tr>
<tr>
<td>4.9</td>
<td>Descriptive Statistics on more Frequently Used L2 Metacognitive Strategies</td>
<td>129</td>
</tr>
<tr>
<td>4.10</td>
<td>Metacognitive Strategies with Statistically Significant Difference in L1 and L2 Reading</td>
<td>131</td>
</tr>
<tr>
<td>4.11</td>
<td>Cognitive Strategies with Similar Frequency Range in L1 and L2 Reading</td>
<td>138</td>
</tr>
<tr>
<td>4.12</td>
<td>Cognitive Strategies with Different Frequency Range in L1 and L2 Reading</td>
<td>143</td>
</tr>
<tr>
<td>4.13</td>
<td>Support Strategies with Similar Frequency Range in L1 and L2 Reading</td>
<td>150</td>
</tr>
<tr>
<td>4.14</td>
<td>Support Strategies with Different Frequency Range in L1 and L2 Reading</td>
<td>156</td>
</tr>
<tr>
<td>4.15</td>
<td>Influence of LLP on Metacognitive Strategies Use</td>
<td>167</td>
</tr>
<tr>
<td>4.16</td>
<td>Influence of LLP on Cognitive Strategies Use</td>
<td>174</td>
</tr>
<tr>
<td>4.17</td>
<td>Influence of LLP on Support Strategies Use</td>
<td>180</td>
</tr>
<tr>
<td>4.18</td>
<td>Influence of TORA on Metacognitive Strategies Use</td>
<td>187</td>
</tr>
<tr>
<td>4.19</td>
<td>Influence of TORA on Support Strategies Use</td>
<td>192</td>
</tr>
<tr>
<td>5.1</td>
<td>Reading Strategies Use in Chinese Academic Reading</td>
<td>200</td>
</tr>
<tr>
<td>5.2</td>
<td>Reading Strategies Use in English Academic Reading</td>
<td>202</td>
</tr>
<tr>
<td>5.3</td>
<td>Metacognitive Strategies with Similar Frequency Range in L1 and L2 Reading</td>
<td>204</td>
</tr>
<tr>
<td>5.4</td>
<td>Metacognitive Strategies with Similar Frequency in L1 and L2 Reading</td>
<td>204</td>
</tr>
<tr>
<td>5.5</td>
<td>Cognitive Strategies with Similar Frequency Range in L1 and L2 Reading</td>
<td>205</td>
</tr>
<tr>
<td>5.6</td>
<td>Support Strategies with Similar Frequency Range in</td>
<td>206</td>
</tr>
</tbody>
</table>
L1 and L2 Reading

5.7 Influence of LLP on Reading Strategies in L2 Academic Reading 208

5.8 Influence of TORA on Reading Strategies in L2 Academic Reading 209
**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>FIGURE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Theoretical Framework of the Study</td>
<td>16</td>
</tr>
<tr>
<td>1.2</td>
<td>Conceptual Framework of the Study</td>
<td>19</td>
</tr>
<tr>
<td>2.1</td>
<td>The Iceberg Analogy</td>
<td>25</td>
</tr>
<tr>
<td>3.1</td>
<td>Overview of Research Design</td>
<td>58</td>
</tr>
<tr>
<td>3.2</td>
<td>Academic Texts Selection</td>
<td>69</td>
</tr>
<tr>
<td>3.3</td>
<td>Process of Pilot Study</td>
<td>70</td>
</tr>
<tr>
<td>3.4</td>
<td>Procedure on SORS Pilot Study</td>
<td>71</td>
</tr>
<tr>
<td>3.5</td>
<td>Procedure on TAP Pilot Study</td>
<td>74</td>
</tr>
<tr>
<td>3.6</td>
<td>Procedure of Actual Study</td>
<td>76</td>
</tr>
<tr>
<td>3.7</td>
<td>Procedure of Quantitative Data Analysis</td>
<td>77</td>
</tr>
<tr>
<td>3.8</td>
<td>Procedure of TAP Data Analysis</td>
<td>78</td>
</tr>
<tr>
<td>3.9</td>
<td>Procedure of SRI Data Analysis</td>
<td>84</td>
</tr>
</tbody>
</table>
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFL</td>
<td>English as Foreign Language</td>
</tr>
<tr>
<td>ESL</td>
<td>English as Second Language</td>
</tr>
<tr>
<td>L1</td>
<td>First Language</td>
</tr>
<tr>
<td>L2</td>
<td>Second Language</td>
</tr>
<tr>
<td>LLP</td>
<td>Limited L2 Proficiency</td>
</tr>
<tr>
<td>SORS</td>
<td>Survey of Reading Strategies</td>
</tr>
<tr>
<td>SRI</td>
<td>Stimulated Recall Interview</td>
</tr>
<tr>
<td>SRIG</td>
<td>Stimulated Recall Interview Guide</td>
</tr>
<tr>
<td>TAP</td>
<td>Think-aloud Protocol</td>
</tr>
<tr>
<td>TORA</td>
<td>Test-oriented Reading Approach</td>
</tr>
</tbody>
</table>
# LIST OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Background Information Questionnaire</td>
<td>229</td>
</tr>
<tr>
<td>B</td>
<td>Survey of Reading Strategies (SORS) for English Reading</td>
<td>230</td>
</tr>
<tr>
<td>C</td>
<td>SORS for Chinese Reading</td>
<td>232</td>
</tr>
<tr>
<td>D</td>
<td>Instruction Note on Think-aloud Protocol</td>
<td>233</td>
</tr>
<tr>
<td>E</td>
<td>Think-aloud Passage for Chinese Reading</td>
<td>234</td>
</tr>
<tr>
<td>F</td>
<td>Think-aloud Passage for English Reading</td>
<td>236</td>
</tr>
<tr>
<td>G</td>
<td>Stimulated Recall Interview Guide</td>
<td>238</td>
</tr>
<tr>
<td>H</td>
<td>Nvivo Analysis</td>
<td>250</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

1.0 Introduction

Understanding academic texts is a required and important skill for college students all over the world. “Success in college depends to a considerable degree upon students’ ability to engage in strategic reading of extensive academic or informational text” (Carverly et al., 2004:25). In other words, strategic reading ability is essential for college students to conduct academic research and assignments. Students at college level need to conduct extensive academic reading not only to write research paper and prepare for tests (Carverly et al., 2004), but also to keep up with the accelerated evolution of knowledge in all fields (Pugh et al., 2000). In this sense, the ability to read academic texts not only contributes to academic success, but also to later career development.

However, for first language (L1) readers, academic reading at college level is not an easy task (Ruzic, 2001). Both text characteristics and reader characteristics contribute to this phenomenon (Durwin and Sherman, 2008). On the one hand, academic reading texts at college level are complex in nature. Pugh et al. (2000) summarized several important features of college textbook including high conceptual
density, comprehension of information, and use of special terminology. On the other hand, large number of students enter college underprepared for academic reading demands, thus facing many problems in the process of academic reading (Moss and Bordelon, 2007). These text-initiated factors and reader-initiated factors make academic reading a complicated issue.

Among the various reading problems confronting L1 college students, a lot of them are reading strategy related in nature as reading strategies have an important role to play in understanding academic texts for they are considered as actions, plans or behaviors that facilitate readers’ comprehension of reading information or help readers accomplish their reading tasks or goals (Anderson, 1991; Pritcharad, 1990). Some strategy-related reading problems for L1 readers might include deficiency in information processing (Pressley et al., 1997), taking a surface approach to reading (Hermida, 2009), inability to reconstruct and elaborate on their assigned readings (Maaka and Ward, 2000). In light of this, effective reading strategy instruction for college students is essentially important (Ruzic, 2001; Carverly et al., 2004; Hermida, 2009). In other words, it is of significance to help students realize their reading problems and specific reading strategies targeting at their problems.

L1 reading strategies also played a vital role in improving students’ academic performance in various aspects. Past studies proved that training on the strategy of repeated readings had great facilitating effect on poor readers’ recall of idea units (Taylor et al., 1985); certain strategies like previewing could help students to increase their reading fluency (Mastropieri et al., 1999); strategies facilitate students’ comprehension on increasingly sophisticated texts (Dole et al., 1991); a positive and consistent relationship was also found between strategy use and students grade point average (GPA) (Taraban et al., 2000). All these studies affirmed the positive role reading strategies play in academic reading.

With the fast increasing number of English as Foreign Language (EFL) learners and English as second language (ESL) learners in universities, the ability to
read English academic texts has become one of the most important skills that EFL and ESL college students need to acquire (Levine et al., 2000). Like native English speakers, ESL and EFL readers face various difficulties and challenges in English reading. These problems include limited vocabulary (Huang, 2005); incomplete understanding on certain words and inability to cope with difficult syntactic structure (Kim, 1995); lack of grammatical knowledge (Zhang, 2001); lack of understanding on cultural difference (Drucker, 2003). All these problems pose great challenge for ESL and EFL readers.

In helping EFL and ESL students to improve their English reading, L2 reading strategies, among other measures, have proven to be effective in enhancing second language reading (Carrell et al., 1989). In fact, training on L2 reading strategies has led to increased overall reading ability (Dreyer and Nel, 2003); increased reading performance and autonomous reading behavior (Aghaie and Zhang, 2012). Many factors influence L2 reading strategies use. Among the many factors, perhaps the one found to exert a significant influence on L2 reading strategies is L1 reading strategies. For example, Tang (1997) detected an interdependent relation between L1 and L2 reading strategies; Taillefer and Pugh (1998) found similar pattern of L1 and L2 reading strategies for ESL readers. A strong link has also been detected between perceived L1 and L2 reading strategies (Yau, 2009). Thus, the issue of comparing reading strategies across L1 and L2 is of significance (Harris and Grenfell, 2004; Aghaie and Zhang, 2012).

In spite of some studies on comparing L1 and L2 reading strategies, the extent of L1 reading strategies use in L2 reading and the types of L1 reading strategies being used varied in different studies (Schoonen et al., 2003). Furthermore, researchers are still debating on the types of L1 reading strategies being used in L2 reading (Davis and Bistodeau, 1993; Kong, 2006). In addition, few of the studies have been conducted on L1 reading strategies used by Chinese college students, in particular, college students studying in mainland China in their L2 reading. Mainland
China has a large EFL learner population, and mainland Chinese college students are an important part of it. Given the fact that Chinese and English are drastically different languages in terms of orthography and ways of learning, more research are needed on the influence of mainland Chinese college students’ L1 reading strategies on their L2 reading.

Therefore, this study aims to explore influence of L1 reading strategies on L2 reading of academic texts by Chinese college students studying in mainland China. Findings of this study maybe used to propose an instructional program which may guide Chinese college students in utilizing effective L1 strategies in L2 reading by overcoming challenges influencing their strategy use in academic reading.

1.1 Background of the Study

China is the country with the largest English learning population in the world. Three hundred and thirty million people are learning or have learned English in China (Bolton, 2008). English is an important subject for students at various levels in China, with college students, in particular. Reading has always been the focus of college English teaching and consequently, enormous efforts have been made to improve Chinese college students’ EFL reading ability (Jin and Cortazzi, 2002).

Despite enormous efforts in improving English reading teaching method, the teacher-centered, grammar-translation method is still widely adopted in colleges throughout mainland China (Dooley, 2001; Cheng and Wang, 2012). The grammar-translation method has been defined as “a way of studying a language that approaches the language first through detailed analysis of its grammar rules, followed by application of this kind of knowledge to the task of translating sentences and texts into and out of the target language” (Richards and Rodgers, 2001:5).
Guided by this method, reading teachers in China will help the students to go over bilingual lists of new words which will appear in the reading text, presenting allocations and example sentences containing these words to demonstrate how they are used, followed by grammatical and semantical, sentence-by-sentence analysis of the text, explaining all the language points in detail (Hu, 2003). Thus, the grammar-translation method might be one important factor influencing Chinese college students’ strategy use, leading them to focus on words and grammar rules (Abbott, 2006).

One possible factor influencing L2 reading teaching method in mainland China might be its L1 reading teaching manner which is characterized by a focus on text-teaching, teacher-centered instructional manner with direct knowledge transmission (Lau, 2006). In other words, teachers in L1 reading class in mainland China spend a lot time explaining the text in great details. L1 reading class is dominated by teachers in the sense that their imparting direct knowledge to students serves as the primary L1 reading instructional approach. Students are, in most cases, passive receivers of knowledge and their active participation in L1 reading class is not encouraged. This above-mentioned L1 reading instructional approach might have significant impact on L2 reading teaching in mainland China and might be a reason to the similarities between L1 and L2 reading instructional approaches in mainland China.

Another factor influencing Chinese college students’ use of reading strategies in English academic texts might be their Chinese reading strategies as the use of various extent of first language (L1) reading strategies has been detected in second language (L2) reading in previous studies (Schoonen et al., 2003; Kong, 2006; Pritchard and Hara, 2008). Yau (2009) found metacognitive reading strategies were readily shared in L1 and L2 in addition to similar preference patterns in cognitive, metacognitive and support reading strategies between the two languages. Two more recent studies by Brantmeier and Yu (2014) and Jou (2015) have partially addressed
this issue. Both studies have identified the close connection between metacognitive reading strategies adopted by Chinese native speakers in both their L1 and L2 reading. All these studies stressed the importance of L1 reading strategies L2 reading context and provided evidence on the significant influence of L1 reading strategies on L2 reading. However, none of these studies have examined the detailed connection between L1 and L2 reading strategies adopted by Chinese college students in mainland China. In light of this situation, the current study aims to conduct an in-depth investigation in this regard.

1.2 Statement of the Problem

Whether strategy use is universal across languages has been one of the central issues in L1 and L2 reading research (Yau, 2009). As reading strategies are defined as actions, mental process or behavior (whether conscious or unconscious) employed by readers in facilitating their comprehension or accomplishing reading tasks (Alexander and Judy, 1988; Abbott, 2006; Pritchard, 1990), they directly reflect the nature of reading process. Therefore, comparing reading strategies employed by L2 readers in their L1 and L2 reading sheds light on the similarities or differences in L1 and L2 reading process, helping gaining great insight on the understanding of L1 and L2 reading in general.

Past studies have provided evidence that students’ awareness on reading strategies contributes to reading success (Carrell, 1989; Zhang, 2002, 2008). In other words, given the role of reading strategies which is mainly to facilitate reading process, understanding how reading strategies work help readers to improve their reading performance. On a similar note, raising awareness on the adoption of L1 strategies in L2 reading might prove helpful to L2 readers. Reading strategies acquired in L1 could be a valuable asset in facilitating L2 reading. In other words, if
the strategies prove effective in L1 reading, they are likely to be helpful in L2 reading (Tang, 1997; Maarof and Yaacob, 2011). Therefore, an improved understanding on the use of L1 strategies and how they are used in L2 reading is of significance to both L2 readers and L2 reading teachers.

Although voluminous studies have been conducted on the connection over the past two decades between L1 and L2 reading strategies, the issue itself is complicated. To date, how L1 strategies influence L2 reading remain a debated and insufficiently explored issue (Brevik et al., 2016). For example, Different extent of L1 strategies use in L2 reading has been noted in past research (Davis and Bistodeau, 1993; Taillefer and Pugh, 1998; Yau, 2009). Contradictory findings were observed from research concerning the use of L1 reading strategies in L2 context (Taillefer and Pugh, 1998; Lin and Yu, 2011). Also, the type of strategies being employed in L2 reading varied across studies (Schoonen et al., 2003; Kong, 2006; Pritchard and Hara, 2008).

The complexity of the influence of L1 reading strategies on L2 reading might be a result of the complexity in comparing L1 and L2 reading. Linguistic differences like differing amounts of grammatical and discourse knowledge and varying L2 proficiencies among L1 and L2 readers make the issue of comparing L1 and L2 reading extremely complex (Grabe and Stoller, 2011). Therefore, it is necessary to take into consideration the difference in subjects’ background knowledge when investigating the connection between L1 and L2 reading strategies. However, most of past literature in this regard has adopted subjects with varying background in terms of academic knowledge and L2 proficiency, which might negatively influence the research results. In addition, these studies have either focused on relatively small number of participants (Tang, 1997; Kong, 2006), or used a self-reported survey method which might inflate the actual use of participants’ reading strategies (Tsai et al., 2011). As reading is a complex cognitive process, a multi-angle investigating method might be necessary to gain more comprehensive information in this regard.
Another complexity in comparing L1 and L2 reading might be caused by the more complex nature of L2 reading as it involves the interaction of two languages (koda, 2007). Multiple factors are observed in shaping the use of L2 reading strategies which could further lead to the complexity of L2 reading (Grabe and Stoller, 2011). These factors might well explain the similarities or differences found between L1 and L2 reading in past studies. A detailed investigation into the factors influencing L2 reading and what role they play in L2 reading might provide great insight on L2 reading process and connection between L1 and L2 reading (Koda, 2007). However, most studies in this regard have only looked at the superficial connection between L1 and L2 reading strategies without investigating in detail the factors leading to the connection. Therefore, a more in-depth exploration is needed.

On the few studies comparing L1 and L2 reading strategies for Chinese readers (Tang, 1997; Kong, 2006; Tsai et al., 2010; Lin and Yu, 2013), none of them were conducted in mainland China. In addition, despite the fact that Chinese English learners from mainland China are confronted with various problems or challenges like vocabulary and sentence structures noticed for Chinese college students in their L2 academic reading, little attention has been given in this regard in past literature. (Cheng and Wang, 2012). “The available research into People’s Republic of China (PRC) EFL learners is disproportionate with the country’s foreign-language needs” (Zhang, 2001: 268). As mainland China has the largest English readers in the world, studies on the largest population of EFL learners are of great significance (Cheng, 2008).

1.3 Research Objectives

The overall research objective is to examine influence of L1 reading strategies on L2 reading of academic texts. The study will focus on the effects of L1
reading strategies on L2 reading strategy of Chinese EFL college students studying at mainland China. The study will also explore other possible factors and challenges confronting mainland Chinese college students’ English strategy use in academic reading. The more specific objectives are as follows:

1) To examine the strategies adopted by mainland Chinese college students in reading academic texts
   a: to examine the reading strategies adopted by mainland Chinese college students in reading Chinese (L1) academic texts
   b: to examine the reading strategies adopted by mainland Chinese college students in reading English (L2) academic texts
2) To examine the influence of L1 reading strategies in L2 academic reading of mainland Chinese college students
3) To explore factors that influence mainland Chinese college students’ reading strategies in reading English academic texts
4) To investigate the challenges perceived by mainland Chinese college students in reading English academic texts

1.4 Research Questions

In response to the research objectives, this study has the specific research questions as follows:

1) What are the reading strategies adopted by mainland Chinese college students in reading academic texts?
   a: what are the reading strategies adopted by mainland Chinese college students in reading L1 academic texts?
   b: what are the reading strategies adopted by mainland Chinese college
students in reading L2 academic texts?

2) How do L1 reading strategies influence L2 academic reading of mainland Chinese college students?

3) What factors influence mainland Chinese college students’ reading strategies in reading English academic texts?

4) What challenges do mainland Chinese college students perceive in reading English academic texts?

1.5 Definition of Terms

This section will provide the definition on all the key issues related to the research topic in this study.

1.5.1 L1 reading and L2 reading

L1 reading means reading in one’s own language or first language. In this study, L1 reading means reading Chinese academic texts. L2 reading refers to reading in one’s second language or foreign language. In this study, L2 reading means reading English academic texts.

1.5.2 EFL and ESL

EFL refers to English as foreign language and ESL refers to English as second language. In the current study, the two terms are used interchangeably as they
both belong to the bigger category of L2.

1.5.3 Chinese College Students

Chinese college students are students studying in colleges in China. In this study, they refer to non-English major college students studying in mainland China. They are proficient L1 readers and reached basic English proficiency level as judged by their score on College English Test, band 4 (CET4).

1.5.4 Reading Strategies

Based on previous description among reading researchers (Alexander and Judy, 1988; Abbott, 2006; Pritchard, 1990), reading strategies in this study refer to actions, mental process or behavior (whether conscious or unconscious) employed by readers in facilitating their comprehension or accomplishing reading tasks. In this study, there are three types of reading strategies: metacognitive strategies, cognitive strategies and support strategies.

1.5.4.1 Metacognitive Reading Strategies

According to Sheorey and Mokhtari (2001), “metacognitive strategies are those intentional, carefully planned techniques by which learners monitor or manage their reading. Such strategies include having a purpose in mind, previewing the text as to its length and organization” (436). The metacognitive strategies in this study are
adapted from the survey of reading strategies (SORS) developed by Sheorey and Mokhtai (2001). They include read with a purpose in mind, preview text before reading, check whether content fits purpose, analyze and evaluate information, noting text characteristics like length or organization, decide what to read and what to ignore, predict what the text is about, check if guesses about the text is right, check understanding when coming across conflicting information.

1.5.4.2 Cognitive Reading Strategies

According to Sheorey and Mokhtai (2001), cognitive reading strategies refer to “the actions and procedures readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information”(436). In this study, the cognitive reading strategies are adapted from the items in the survey of reading strategies (SORS) developed by Sheorey and Mokhtai (2001) and they include read slowly and carefully to make sure what is read, try to get back on track when concentration is lost, adjusting one’s speed of reading based on reading content, pay close attention to text when it is becoming difficult, read difficult parts aloud to help understand, stop from time to time and think about reading, visualize information, re-read difficult parts to increase understanding, and inference.

1.5.4.3 Support Strategies

According to Sheorey and Mokhtari (2001), “Support strategies are basically support mechanism intended to aid the reader in comprehending the text such as using a dictionary, taking notes, or underlining or highlighting the text to better
comprehend it” (436). In this study, support strategies are adapted from the items in the survey of reading strategies (SORS) developed by Sheorey and Mokhtari (2001) and they include take notes while reading, underlie or circle important information, summarize what has been read, use reference materials, go back and forth in the text to find relationship among ideas, translate, ask oneself questions, and paraphrase.

1.5.5 Academic Texts

Academic texts are texts used for academic purposes like reading comprehension tests or in academic setting like textbook articles in classroom. The academic texts in this study are expository in nature. Expository texts are articles written with the purpose to communicate information to the readers (Weaver and Bryant, 1995). In other words, the main purpose of expository texts is to inform or describe. The common expository text structures include description, sequence, comparison and contrast, cause and effect, and problem and solution (Moss, 2004).

1.6 Scope of the Study

This study will examine the effects of L1 reading strategies and other factors on L2 reading strategies among Chinese college students when reading English academic texts. It will also explore the challenges perceived by Chinese college students in reading English academic texts. The reading strategies in this study refer to strategies employed in reading academic texts, the classification of strategies is based on survey of reading strategies (SORS) developed by Sheorey and Mokhtari (2001).
Academic texts in this study are expository texts with the purpose to inform the readers. The English academic texts are selected from the reading comprehension passages in college English test (CET) in China. The CET was designed in accordance with the National College English Teaching Syllabus in China and is the largest and most authoritative language test in mainland China (Yan and Huizhong, 2006). The Chinese academic texts are selected from the reading comprehension passages in national entrance examination to colleges (NEEC) which is the most authoritative Chinese tests for mainland Chinese students.

Chinese college students from this study are from two medical colleges in Changsha, capital city of Hunan province. Each college has roughly 20,000 students at undergraduate level. They are grade 3 students majored in Chinese medicine. Students of identical major and grade are chosen to ensure they have similar background knowledge. Their English proficiency is judged by their college English test, Band 4 (CET4). CET 4 is for non-English major students who have completed College English Courses Band 1-4 (Zheng and Cheng, 2008). Their CET 4 score is in the range of 425 to 500 (equivalent to 60 to 70 out of 100-mark system).

1.7 Significance of the Study

The findings of the current study are of significance, first of all, to L1 and L2 reading research in general. The influence of L1 reading strategies on L2 academic reading of mainland Chinese college students will extend previous studies on the connection between L1 and L2 reading for English learners in mainland China, an English acquisition-poor environment. The factors influencing mainland Chinese college students’ L2 academic reading and challenges confronting them in L2 reading will also shed light on the complicated and interactive L2 reading process.
The findings of the study are also of direct interests and significance to two groups of people: mainland Chinese college students and the mainland Chinese college English teachers teaching in general. Firstly, mainland Chinese college students’ awareness on the factors influencing their English academic reading will deepen their understanding on their English reading in general and help them identify possible negative or positive factors interacting with their English reading so as to better guide themselves to improve their English reading efficiency.

English teachers of mainland Chinese college students, with increased understanding on the factors and challenges influencing mainland Chinese college students reading strategy use in their English reading will help teachers to better realize the factors leading to their students’ positive or negative reading behavior and the source of reading problems and work on the best solutions in this regard.

1.8 Theoretical Framework

The purpose of the theoretical framework is to lay out the structure which can hold or support the theory of the current study (Swanson and Chermack, 2013). This section introduces and describes the related theories which underpin the research problems in the current study.

Two theories underlie the relationship of reading in L1 and L2. One of them is common underlying proficiency (Cummins, 1981), the other is threshold hypothesis (Cummins, 1976). The common underlying proficiency theory believes there is a common underlying reading proficiency across languages; this makes possible the transfer of L1 reading proficiency to L2. The threshold hypothesis theory believes a certain threshold L2 proficiency level is the prerequisite for the transfer of L1 reading proficiency to L2 reading to occur. The two theories are illustrated in Figure 1.1.
1.9 Conceptual Framework

A conceptual framework is of great importance as it presents all the key concepts and ideas which underpin a study. It will help the researcher to stay focused on the research topic by forming a logic connection of all the relevant concepts.

Reading models are the basis for further understanding on reading and reading strategies. Three major reading models are listed in the framework: the bottom-up reading model proposed by Gough (1972); the top-down reading model proposed by Goodman (1967); and the interactive model proposed by Rumelhart
In addition, understanding on categorization of reading strategies is a key component in this study. The classification of reading strategies in this study is adapted from Sheorey and Mokhtari (2001)’s survey of reading strategies (SORS). Sheorey and Mokhtari (2001)’s SORS has been selected for the purpose of this study as it offers a comprehensive framework in classifying reading strategies. SORS was adapted from the metacognitive awareness of reading strategies inventory (MARSII) developed by Mokhtari and Reichard (2002). MARSII was based on a body of work on metacognition and reading comprehension by researchers like Baker and Brown (1984), Alexander and Jetton (2000) and drew on Pressley and Afflerbach’s (1995) notion of constructively responsive reading and validated with 825 students (Mokhtari and Reichard, 2002). The SORS was also validated with 147 ESL students (Sheorey and Mokhtari, 2001).

There are three major types of reading strategies in SORS: they are the metacognitive strategies including setting purpose, previewing, checking whether content fits purpose, analyze and evaluate information, noting text characteristics like length or organization, decide what to read and what to ignore, predict what the text is about, check if guesses about the text is right, check understanding for conflicting information. The cognitive strategies include: adjusting reading speed, read slowly and carefully, try to get back on track when concentration is lost, pay close attention to difficult text, read difficult texts aloud, stop from time and time to think about reading, visualize information, re-read difficult texts, inference, and use background knowledge. The support strategies include: taking notes, underlining important information, summarize, use reference materials, go back and forth to find relationship among ideas, ask oneself questions, and paraphrase. The specific information on reading strategies categorization is demonstrated in Figure 1.1.
Based on the two theories underlying L1 and L2 reading connection and the classification of reading strategies, this study explores the connection of L1 and L2 reading strategies under certain circumstances. First, the participants for this study are Chinese college students with average English proficiency level. Second, the study will examine reading strategies adopted in reading Chinese and English academic texts.

A number of key issues need to be addressed are the similarities and differences between Chinese and English reading strategies for mainland Chinese college students, the use of Chinese strategies in English reading, the factors influencing strategy use and the challenges facing the Chinese students in their English academic reading. The logical connection among each concept in this study is best illustrated in Figure 1.2.
Figure 1.2 Conceptual Framework of the Study
1.10 Summary of Chapter 1

This chapter highlights the gap in previous studies concerning the influence of L1 reading strategies on L2 reading of academic texts. Although there are some studies on L1 and L2 reading strategies, most of them focus on readers with alphabetic L1 and L2 background; very few of them has investigated readers with drastically different L1 and L2 background like Chinese and English. In addition, although L1 reading strategy use in L2 reading has been noted in previous research, the extent of L1 reading strategy use and the type of L1 reading strategies being employed in L2 reading varied in different studies. Thus, the understanding on the interaction between L1 and L2 is insufficient. Thirdly, among the few studies on comparing L1 and L2 reading strategies for Chinese students, none of them investigated students studying in mainland China and few of them explored factors leading to mainland Chinese college students’ L2 reading.


to read across languages: Cross-linguistic relationships in first-and second-language literacy development, 1-9.


