Copyright Statement

The digital copy of this thesis is protected by the Copyright Act 1994 (New Zealand). This thesis may be consulted by you, provided you comply with the provisions of the Act and the following conditions of use:

- Any use you make of these documents or images must be for research or private study purposes only, and you may not make them available to any other person.
- Authors control the copyright of their thesis. You will recognise the author's right to be identified as the author of this thesis, and due acknowledgement will be made to the author where appropriate.
- You will obtain the author's permission before publishing any material from their thesis.

To request permissions please use the Feedback form on our webpage.
http://researchspace.auckland.ac.nz/feedback

General copyright and disclaimer

In addition to the above conditions, authors give their consent for the digital copy of their work to be used subject to the conditions specified on the Library Thesis Consent Form
FORM-FOCUSED INSTRUCTION
IN L2 FRENCH

ROSEMARY MAY ERLAM

A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
THE UNIVERSITY OF AUCKLAND, 2003
DEPARTMENT OF APPLIED LANGUAGE STUDIES
AND LINGUISTICS
ABSTRACT

While substantial evidence lends support to an explicit focus on form in language programme design, there is a need for systematic investigation of the relative effectiveness of subtypes of explicit L2 instruction (Norris & Ortega, 2000). This study considers planned approaches to form-focused instruction, that is, focus-on-forms (Long, 1991). It contrasts grammar instruction that is deductive (i.e., involving rule presentation and metalinguistic information) with instruction that is inductive (i.e., instruction that focuses student attention on form but includes no rule presentation).

Language instruction traditionally focuses on giving students opportunities to produce the particular language forms that have been the focus of instruction. Recent research claims that instruction that gives students the opportunity to process language input is more effective (e.g., VanPatten, 1996, 2002a). This study compares the relative effectiveness of structured input and output-based instruction.

Most research investigates the effectiveness of instruction in terms of overall group gains. A particular instructional method may not, however, benefit all learners uniformly. This study establishes whether there is any relationship between the effectiveness of the instructional methods investigated and learner aptitude.

The study was conducted in a New Zealand high school and the structure targeted was direct object pronouns in L2 French. Students ($N = 92$) were assigned to four groups: (a) structured input instruction; (b) output-based/deductive instruction; (c) inductive instruction (input/output-based); (d) control. They were assessed on listening
comprehension, reading comprehension, written production and oral production tasks. All but one of these language measures required a pressured response. Students were also assessed on measures of language aptitude: (a) language analytic ability, (b) phonemic coding ability and (c) working memory.

Results reveal significantly greater gains for the Deductive instruction group than for the Inductive instruction group. The students who received output-based instruction also performed better overall than the students who received structured input instruction. There is some evidence to suggest that deductive instruction that gives students the opportunity to produce language output may level out individual differences in language aptitude.

With respect to the testing procedures used, the study highlights the difficulty of designing language measures that access implicit language knowledge.
To my father

who has always loved and supported me
and championed all my academic
endeavours.
ACKNOWLEDGEMENTS

This thesis would not have been possible without the help of many individuals. In particular I would like to thank the following.

Professor Rod Ellis, firstly, for giving me the confidence to believe in my abilities and secondly for the excellent scholarship that has guided and inspired me throughout the study.

Glenn Ekambi for her friendship and support and, in particular, her help with all the practical details of the study: design of instructional and testing materials and careful editing of many documents.

Heather Richards and the teachers at the school where the study was conducted, who made this study possible and helped me with numerous practical details.

My colleagues of the Department of Applied Language Studies and Linguistics, many of whom have given me valuable help and advice and all of whom have contributed to creating an environment supportive of research.

Those colleagues in the French department who assisted me with the pilot study and/or the main study and without whose help neither would have been possible.

The French department of the University of Auckland for providing the financial assistance that I needed to carry out the study.
The Foundation for Science, Research and Technology for providing me with a Bright Futures Scholarship, allowing me to concentrate on my doctoral studies.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xiv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xv</td>
</tr>
<tr>
<td>LIST OF ACRONYMS</td>
<td>xviii</td>
</tr>
<tr>
<td>CHAPTER ONE INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Overview</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Definition of terms</td>
<td>1</td>
</tr>
<tr>
<td>1.2.1 Form-focused instruction</td>
<td>1</td>
</tr>
<tr>
<td>1.2.2 Implicit/explicit language knowledge</td>
<td>2</td>
</tr>
<tr>
<td>1.3 A historical overview of form-focused instruction</td>
<td>3</td>
</tr>
<tr>
<td>1.4 The case for form-focused instruction</td>
<td>4</td>
</tr>
<tr>
<td>1.5 Assessing explicit and implicit language knowledge</td>
<td>7</td>
</tr>
<tr>
<td>1.6 Second language teaching within the New Zealand context</td>
<td>9</td>
</tr>
<tr>
<td>1.7 Form-focused instructional approaches</td>
<td>11</td>
</tr>
<tr>
<td>1.8 Thesis outline</td>
<td>12</td>
</tr>
<tr>
<td>CHAPTER TWO DEDUCTIVE AND INDUCTIVE INSTRUCTION</td>
<td>15</td>
</tr>
<tr>
<td>2.1 Overview</td>
<td>15</td>
</tr>
<tr>
<td>2.2 Definition of terms</td>
<td>15</td>
</tr>
<tr>
<td>2.3 Research in deductive and inductive instruction</td>
<td>16</td>
</tr>
<tr>
<td>2.3.1 Operationalisation of instructional treatments</td>
<td>17</td>
</tr>
<tr>
<td>2.3.2 Inductive instruction practice activities</td>
<td>20</td>
</tr>
<tr>
<td>2.3.3 Deductive instruction practice activities</td>
<td>21</td>
</tr>
<tr>
<td>2.3.4 Choice of target structure</td>
<td>21</td>
</tr>
</tbody>
</table>
2.3.5 Target population........................................................................................... 22
2.3.6 Assessment of instructional treatments.......................................................... 22
2.3.7 Investigation of effectiveness of instruction in relation to individual learner
differences............................................................................................................... 23
2.3.8 Results of research conducted to date............................................................ 23
2.3.9 Limitations of deductive/inductive research.................................................. 24
2.4 Conclusions........................................................................................................... 24

CHAPTER THREE STRUCTURED INPUT INSTRUCTION.............................................. 27
3.1 Overview............................................................................................................... 27
3.2 Input versus output-based instruction................................................................. 27
3.3 Input-based instruction ......................................................................................... 29
3.4 Input processing instruction and structured input instruction defined............... 30
3.5 Input processing instruction.................................................................................. 31
    3.5.1 Research in input processing instruction....................................................... 33
    3.5.2 Criticism of input processing instruction....................................................... 36
3.6 Structured input instruction .................................................................................. 38
    3.6.1 Research in structured input instruction ........................................................ 40
3.7 Conclusion ............................................................................................................ 49
    3.7.1 Input processing research............................................................................... 49
    3.7.2 Structured input instruction ........................................................................... 49

CHAPTER FOUR LANGUAGE APTITUDE....................................................................... 51
4.1 Overview............................................................................................................... 51
4.2 Relationship between language aptitude and instructional outcomes. .............. 51
4.3 Components of language aptitude....................................................................... 52
4.4 Phonemic coding ability ....................................................................................... 55
4.5 Language analytic ability ...................................................................................... 55
4.6 Memory................................................................................................................. 56
  4.6.1 Working memory........................................................................................... 57
    4.6.1.1 The central executive .............................................................................. 57
    4.6.1.2 The phonological loop ............................................................................ 58
  4.6.2 The importance of working memory in second language acquisition........... 62
  4.7 Research investigating aptitude by treatment interaction............................... 63
  4.8 Conclusion ............................................................................................................ 66

CHAPTER FIVE METHODOLOGY ............................................................................ 68
  5.1 Overview............................................................................................................. 68
  5.2 Research questions.............................................................................................. 68
    5.2.1 Deductive instruction (output-based) / inductive instruction (input/output-based)... 68
    5.2.2 Structured input instruction / output-based instruction.............................. 69
    5.2.3 Language aptitude....................................................................................... 69
  5.3 Pilot study .......................................................................................................... 70
    5.3.1 Participants.................................................................................................. 70
    5.3.2 Research method......................................................................................... 72
    5.3.3 Instructional treatments.............................................................................. 72
    5.3.4 Testing ......................................................................................................... 75
      5.3.4.1 Comprehension tests ........................................................................... 75
      5.3.4.2 Production tests................................................................................... 76
      5.3.4.3 Reliability of testing instruments.......................................................... 78
    5.3.5 Results......................................................................................................... 79
    5.3.6 Discussion.................................................................................................... 80
  5.4 The main study .................................................................................................. 82
    5.4.1 Participants.................................................................................................. 82
    5.4.2 Target structure........................................................................................... 85
    5.4.3 Procedure ................................................................................................... 85
    5.4.4 Instructional treatments.............................................................................. 89
5.4.4.1 Deductive instruction (output-based) versus Inductive instruction (input/output-based)........................................................................................................ 89
5.4.4.2 Structured input instruction versus Output-based instruction........... 90
5.4.4.3 Explicit information............................................................................ 91
5.4.4.4 Input-based activities......................................................................... 92
5.4.4.5 Production activities ......................................................................... 96
5.4.4.6 Sequence of activities ....................................................................... 97
5.4.4.7 Control group.................................................................................... 98
5.4.5 Testing .................................................................................................. 99
  5.4.5.1 Listening comprehension test .......................................................... 101
  5.4.5.2 Reading comprehension test............................................................... 103
  5.4.5.3 Written production test ..................................................................... 104
  5.4.5.4 Oral production test .......................................................................... 106
  5.4.5.5 Test reliability and validity ................................................................. 109
5.5 Language aptitude................................................................................... 112
  5.5.1 Testing ................................................................................................ 114
    5.5.1.1 Language analytic ability................................................................. 114
    5.5.1.2 Phonemic coding ability ................................................................. 116
    5.5.1.3 Working memory ............................................................................. 117

CHAPTER SIX DEDUCTIVE VS. INDUCTIVE INSTRUCTION ..................... 122
  6.1 Overview................................................................................................ 122
  6.2 The instructional process ...................................................................... 122
  6.3 Results.................................................................................................... 125
    6.3.1 Summary of results .......................................................................... 133
  6.4 Discussion............................................................................................... 135
    6.4.1 Overall comparison of performance of Deductive and Inductive groups with the Control group ................................................................. 135
    6.4.2 Effects of deductive and inductive instruction on comprehension of the target structure ................................................................. 137
6.4.3. Effects of deductive and inductive instruction on production of the target structure .............................................................. 138
6.4.4 Effects of deductive and inductive instruction on learning of morphological and syntactical language features .............................................................. 139
6.4.5 Variability in scores ..................................................................... 141
6.4.6 Maintenance of gains over testing episodes ....................................... 143
6.5 Conclusion .......................................................................................... 143

CHAPTER SEVEN STRUCTURED INPUT VS. OUTPUT-BASED INSTRUCTION .............................................................. 146

7.1 Overview .......................................................................................... 146
7.2 The instructional process ...................................................................... 146
    7.2.1 Structured input instruction and input processing instruction differentiated .............................................................. 146
7.3 Results .............................................................................................. 148
    7.3.1 Summary of results ...................................................................... 158
7.4 Discussion .......................................................................................... 161
    7.4.1 Comparison of performance of Structured input and Control groups .... 161
    7.4.2 Comparison of performance of Output-based instruction and Control groups .............................................................. 162
    7.4.3 Comparison of performance of Structured input and Output-based instruction groups .............................................................. 163
    7.4.4 Effects of structured input instruction and output-based instruction on learning of morphological and syntactical language features .................. 171
    7.4.5 Conclusion .................................................................................. 172

CHAPTER EIGHT RELATIONSHIP BETWEEN INSTRUCTIONAL METHODS AND MEASURES OF LANGUAGE APTITUDE .............................................................. 175

8.1 Overview .......................................................................................... 175
8.2 Measures of language aptitude .......................................................... 175
LIST OF FIGURES

Figure 1: Traditional Explicit Grammar Instruction in Foreign Language Teaching (VanPatten & Cadierno, 1993a) ................................................................................................. 28

Figure 2: Input-based Language Instruction in Foreign Language Teaching (adapted from VanPatten & Cadierno, 1993a) ................................................................. 28

Figure 3: Coding Process ................................................................................................ 77

Figure 4: Sequence of Testing Administrations and Treatments ................................. 100
LIST OF TABLES

Table 1: Approaches and Options Relating to the Form-focused Instructional Treatments Operationalised in this Study. ................................................................. 13
Table 2: Operationalisation of Instruction in Deductive/Inductive Research............. 17
Table 3: Summary of Traditional vs. Processing Instruction. ..................................... 33
Table 4: Differences between Input Processing Instruction and Structured Input instruction. .............................................................................................................. 39
Table 5: Summary of Research that Investigates the Effectiveness of Structured-input Instruction 1996-2002 ..................................................................................... 42
Table 6: Relationship of Components of Language Aptitude to Stages of Information Processing (based on Skehan, 1998). ................................................................. 54
Table 7: Descriptive Statistics for the Performance of Pilot Study Groups. ............... 80
Table 8: Direct Object Pronoun Chart. ...................................................................... 92
Table 9: Sequence of Instructional Activities............................................................ 98
Table 10: Native Speaker Trialling of Oral Production Tests. .................................... 106
Table 11: Results of T-tests from Trialling of Versions of Tests ............................... 110
Table 12: Reliability Measures and Standard Deviations of Tests ............................. 112
Table 13: Number of Occurrences of Specific Metalinguistic Terms during Instructional Treatment Sessions. .................................................................................. 123
Table 14: Descriptive Statistics and Effect Sizes for Comprehension Tests............... 126
Table 15: Analysis of Variance for Listening Comprehension tests. ....................... 127
Table 16: Analysis of Variance for Reading Comprehension tests. ......................... 127
Table 17: Descriptive Statistics and Effect Sizes for Production Tests. ....................... 128
Table 18: Analysis of Variance for Written production Tests Scored for Pronoun Frequency ........................................................................................................... 129
Table 19: Analysis of Variance for Written Production Tests Scored for Pronoun Form ............................................................................................................... 130
Table 20: Analysis of Variance for Written Production Tests Scored for Pronoun Placement...................................................................................................................... 131

Table 21: Analysis of Variance for Oral Production Tests Scored for Pronoun Frequency...................................................................................................................... 132

Table 22: Summary of Significant Between-group Differences. ......................................................... 133

Table 23: Summary of Within-group Differences over Time. ......................................................... 135

Table 24: Significant Differences between Variances of Deductive and Inductive/Control groups on Levene’s Test of Homogeneity of Variance................. 142

Table 25: Descriptive Statistics and Effect Sizes for Comprehension Tests......................... 149

Table 26: Analysis of Variance for Listening Comprehension tests........................................... 150

Table 27: Analysis of Variance for Reading Comprehension Tests............................................ 151

Table 28: Descriptive Statistics and Effect Sizes for Production Tests..................................... 152

Table 29: Analysis of Variance for Written Production tests Scored for Pronoun Frequency...................................................................................................................... 153

Table 30: Analysis of Variance for Written Production Tests Scored for Pronoun Form......................................................... 155

Table 31: Analysis of Variance for Written Production tests Scored for Pronoun Placement...................................................................................................................... 156

Table 32: Analysis of Variance for Oral Production Tests Scored for Pronoun Frequency...................................................................................................................... 157

Table 33: Summary of Significant Between-group Differences. ......................................................... 159

Table 34: Summary of Within-group Differences over Time. ......................................................... 160

Table 35: Correlations between Language Aptitude Tests......................................................... 177

Table 36: Factors, Eigenvalues and Variances Accounted For......................................................... 178

Table 37: Loadings for One Factor......................................................................................................................... 178

Table 38: Loadings for Three Factors......................................................................................................................... 179

Table 39: Descriptive Statistics for Language Aptitude Tests......................................................... 180
Table 40: Correlations between Gain and Language Aptitude Scores for the Output-based (Deductive) Instruction Group ................................................................. 183

Table 41: Correlations between Gain and Language Aptitude Scores for the Structured Input (Deductive) Instruction Group ................................................................. 185

Table 42: Results from Stepwise Regression Analyses of Written Production Immediate Posttest Scored for Pronoun Form ................................................................. 186

Table 43: Results from Stepwise Regression Analyses of Written Production Immediate Posttest Scored for Pronoun Placement ................................................................. 187

Table 44: Results from Stepwise Regression Analyses of Oral Production Immediate Posttest Scored for Pronoun Form ................................................................. 187

Table 45: Results from Stepwise Regression Analyses of Written Production Delayed Posttest Scored for Pronoun Frequency ................................................................. 188

Table 46: Results from Stepwise Regression Analyses of Written Production Delayed Posttest Scored for Pronoun Form ................................................................. 188

Table 47: Results from Stepwise Regression Analyses of Written Production Delayed Posttest Scored for Pronoun Placement ................................................................. 189

Table 48: Correlations between Gain and Language Aptitude Scores for the Inductive Instruction (Input/output-based) Group ................................................................. 190

Table 49: Summary of Significant Correlations .............................................................................. 191

Table 50: Input that Students Received in Form-Focused Instructional Treatments ... 212
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLA</td>
<td>Second Language Acquisition</td>
</tr>
<tr>
<td>L1</td>
<td>First language</td>
</tr>
<tr>
<td>L2</td>
<td>Second language</td>
</tr>
</tbody>
</table>