THE EFFECTS OF CONTENT KNOWLEDGE FROM READING ON ADULT ESL STUDENTS’ WRITTEN COMPOSITIONS IN AN ENGLISH LANGUAGE TEST USING READING AND WRITING MODULES

by

Hameed Esmaeili

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education of the University of Toronto

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ABSTRACT

The effects of content knowledge from reading on adult ESL students' written compositions in an English language test using reading and writing modules

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Hameed Esmaeili

Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education of the
University of Toronto

This study investigated how content knowledge from reading affected both the processes and the products of adult ESL (English as a second language) students' writing performance in a simulated English language test that made use of reading and writing modules. It also sought to determine if ESL students' reading performance was affected in such circumstances.

Thirty-four first year engineering students with intermediate levels of English proficiency at two universities (thirty-one from one university and three from another one) in southern Ontario participated in this study. Following a within-subjects design, they did two reading and writing tasks in two conditions counter-balanced for order of presentation, one when the reading passage was related thematically to the writing task, and the other when the reading passage was not. They also answered some interview questions and filled out a retrospective checklist of the writing strategies they used when their writing task was related thematically to their reading task.

In the thematically-related condition participants (a) achieved significantly higher scores on their written compositions, writing profiles, and summary recall protocols for reading comprehension than in the thematically-unrelated condition; (b) recalled more idea-units within a reading passage in their summary recall protocols than in the thematically-unrelated condition; (c) applied more than 8 types of writing strategies (comprising twenty-six unique strategies) in
doing their writing task; and (d) mostly (65% of them) had positive attitudes towards the use of reading and writing modules in their test. There was no correlation between participants’ self-assessments of their familiarity with the content knowledge of a reading passage and their writing scores in the thematically-related condition.

The key finding was that the present adult ESL students benefitted from reading and writing modules in doing their reading and their writing tasks. The thematic connection between reading and writing enhanced both the processes and the products of their writing tasks.
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To my dear son,

Vaheed
# TABLE OF CONTENTS

Abstract / ii
Acknowledgments / iv
Dedication / vi

**Chapter One: Introduction / 1**

- Statement of the Research Problem / 1
- English Language Tests With Thematic Links / 2
  - Test of English as a Foreign Language (TOEFL) / 5
  - International English Language Testing Service (IELTS) / 7
  - Test in English for Educational Purposes (TEEP) / 9
  - Ontario Test of English as a Second Language (OTESL) / 10
  - Certificate of Proficiency in English (COPE) / 11
- Investigating the Effects of Reading and Writing Modules or Themes on Adult ESL Students’ Language Performances / 12
- Statement of Purpose and Research Questions / 12
- Design of the Study / 15
- Organization of the Thesis / 15

**Chapter Two: Rationale for the Study in Reference to the Scholarly and Professional Literature / 17**

- Language Proficiency Testing and Writing Components / 18
  - Current Expectations for Language Testing / 18
  - Communicative Trends in Language Proficiency Testing / 23
  - Reading and Writing Modules or Themes in English Language Proficiency Tests / 24
  - Writing Components in Language Proficiency Tests Using Reading and Writing Modules or Themes / 25
  - Characteristics of Writing Tests / 27
- Prompts in Writing Components of English Language Tests / 28
  - Bare prompts / 28
  - Framed prompts / 29
  - Text-based prompts / 29
  - Theme-based prompts / 30
- Some Problems of Text or Theme-Based Prompts / 31
  - Construct validity / 31
  - Component dependency / 32
  - Predictive validity / 34
  - Fairness / 35
  - Comparability / 36
- Some Prompt Variables Influencing Writing Task Performance / 36
Contextual variables / 39
Content variables / 39
Linguistic variables / 39
Task variables / 40
Rhetorical variables / 41
Evaluation variables / 41

How Are Reading and Writing Interconnected? / 42
  Reading-Writing Connections / 42
  Three Hypotheses about Reading-Writing Connections / 44
Writing Strategies / 45
  Flower and Hayes’ model of the writing process / 45
  Bereiter and Scardamalia’s knowledge-telling and knowledge-
  transforming models / 46
  What is summarizing? / 48
  What is synthesizing? / 48

Research Methods / 49
  Oral Summary Recall Protocols / 49
  Within-Subjects Designs / 50
  Structured Interviews and Verbal Data / 51
    Structured interviews / 51
    Verbal data / 52

Summary / 53

Chapter Three: Methods / 54
  Participants / 54
  Instruments / 56
    Reading Texts, Essay Prompts, and Tasks / 56
    Structured Interviews / 58
    Checklist of Writing Strategies / 59
  Procedures for Data Collection / 62
  The Pilot Study / 65
    Some Drawbacks of the Pilot Study / 66
  Preparation of Data and Coding / 68
  Coding Interviews / 68
  Exploratory Factor Analyses / 69
  Scoring / 70
    Rating Compositions / 70
    Scoring Summary Recall Protocols / 71
      Semantic maps / 71
      Scoring summary recall protocols / 76
  Data Analysis / 76
Chapter Four: Results / 80
Results for Question 1. A / 81
Results for Question 1. B / 82
Results for Question 1. C / 84
Factor A: Considering task problems and weaknesses / 87
Factor B: Content and form considerations / 88
Factor C: Monitoring text production / 89
Factor D: Goal-oriented summarizing / 90
Factor E: Adjusting style and plans / 91
Factor F: Goal-oriented revision / 92
Factor G: Generating supplementary content / 92
Factor H: Revising arguments / 93
Item 14 and 22 of the checklist / 94
Results for Question 1. D / 95
Results for Question 1. E / 97
Results for Question 2. A / 97
Results for Question 2. B / 98

Chapter Five: Three Case Studies / 103
Case study One / 104
  Jane's Writing / 104
  Jane's Reading / 106
Case study Two / 107
  Mike's Writing / 107
  Mike's Reading / 109
Case study Three / 110
  Ali's Writing / 110
  Ali's Reading / 111
Observations / 112

Chapter Six: Implications / 115
Summary of the Findings / 115
Theoretical Implications / 119
Practical Implications / 120
  Using Thematic Links / 120
  The Newly Developed Checklist of Writing Strategies / 120
  ESL Examinees' Understanding of Prompts in an English Language Test Using Reading and Writing Modules / 121
  Adjusting Writing Rating Scales to Suit Rating ESL Examinees' Written Compositions in an English Language Test Using Reading and Writing Modules / 122
  Positive Washback Effects / 122
Limitations of the Study / 123
Suggestions for Further Research / 126
   English Writing Assessment / 127
   English Reading Assessment / 128
   English Language Performance / 129
   Reading-writing connections and validity issues / 129

References / 132

Appendices / 152
   Appendix A: Six Tests’ Specifications / 152
   Appendix B: Hamp-Lyons’ (1991) rating scale / 156
   Appendix C: UCLA Examinations and Task Instructions / 159
   Appendix D: A Sample of One Interview / 164
   Appendix E: Checklist of Writing Strategies / 166
   Appendix F: Letter to Solicit Participants / 168
   Appendix G: Three Cases’ Writing Strategies and Recalls of Idea-units of Reading
             Passages / 170
   Appendix H: Participant Number 29’s (Mike’s) Task Performances / 172
LIST OF TABLES

Table 1.1 Summary of the Use of Thematic Links in Seven Popular English Language Tests / 4
Table 2.1 A Summary of Research on the Effects of Different Writing Prompts / 37
Table 3.1 Characteristics of Participants / 55
Table 3.2 Some of the Characteristics of Reading Texts / 57
Table 3.3 Design of the Study and Data Collection Procedures / 65
Table 3.4 Assigned Scores for ‘Group Minds’ / 75
Table 3.5 Assigned Scores for ‘Some Close Encounters of a Mental Kind’ / 76
Table 3.6 Summary of the research questions, data collected, and data analyses / 77
Table 4.1 Descriptive Statistics on Global Writing Scores / 82
Table 4.2 Results of a Repeated Measures ANOVA on Global Writing and Reading Scores / 82
Table 4.3 Descriptive Statistics on Writing Profile Scores / 83
Table 4.4 Results of a Repeated Measures MANOVA on Writing Profile Scores / 83
Table 4.5 Descriptive Statistics on 26 Writing Strategies / 85
Table 4.6 Factor Loadings for Writing Strategies in the Checklist / 86
Table 4.7 Eight Factors of Writing Strategies / 87
Table 4.8 Descriptive Statistics: Factor A Strategies: Considering Task Problems and Weaknesses / 88
Table 4.9 Descriptive Statistics: Factor B Strategies: Content and Form Considerations / 89
Table 4.10 Descriptive Statistics: Factor C Strategies: Monitoring Text Production / 90
Table 4.11 Descriptive Statistics: Factor D Strategies: Goal-oriented Summarizing / 91
Table 4.12 Descriptive Statistics: Factor E Strategies: Adjusting Style and Plans / 91
Table 4.13 Descriptive Statistics: Factor F Strategies: Goal-oriented Revision / 92
Table 4.14 Descriptive Statistics: Factor G Strategies: Generating Supplementary Content / 93
Table 4.15 Descriptive Statistics: Factor H Strategies: Revising Arguments / 94
Table 4.16 Descriptive Statistics on Items 14 and 22 / 95
Table 4.17 Participants’ Attitudes Towards Reading and Writing Modules in the Thematically-related Condition / 96
Table 4.18 Descriptive Statistics on Overall Summary Recalls / 98
Table 4.19 Descriptive Statistics on Participants’ Recalls of Idea-units of the Reading Texts / 99
Table 4.20 Results of a Repeated Measures MANOVA on Participants’ Recalls of Idea-units / 99
Table 4.21 Summary of the research questions, data collection and analyses, and results / 100
Table 5.1 Profiles of Three Case Studies / 104

LIST OF FIGURES

Figure 3.1 Semantic Map of ‘Group Minds’ / 73
Figure 3.2 Semantic Map of ‘Some Close Encounters of the Mental Kind’ / 74
CHAPTER ONE

INTRODUCTION

The purpose of this study was to investigate the effects of content knowledge from reading on writing when a writing task was related thematically to a reading passage in an English language test. I looked for effects both in the processes and the products of participants’ writing performance. I also sought to see how participants’ awareness of the thematic relationship between their reading and writing tasks affected their summary recall protocols for reading comprehension. In this chapter I outline the rationale for the study, the research questions, and the expected results.

Statement of the Research Problem

In 1996 I applied for the Ph.D. program in Second Language Education at the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT). Coming from a non-English speaking country I had to give evidence of proficiency in English. I took the Certificate of Proficiency in English (COPE) Test (University of Toronto, 1996) administered by the University of Toronto. The test was thematically organized, like those I describe later on in this chapter. After having taken the test, I had many questions and was curious about the effect(s) of its thematic organization on ESL students’ English language performance. Particularly, I was interested to know if it might be either advantageous or disadvantageous to some ESL students.

In doing this thesis study on the effects of the thematic organization of a language test on examinees’ performances, I have focused on the English language because of its widespread use around the world, particularly in higher education and professional and vocational contexts. I also focused only on academic contexts because as I discuss later on in this chapter, language
tests with a thematic organization are mostly used in academic contexts, primarily for screening students when they seek admission to colleges and universities. Furthermore, I chose to study the writing component of an English language test because of (a) the complexity that would have resulted from including any more language skills in my investigation and their probable effects on the validity of the study and (b) the common belief that examinees benefit from a thematic link in a language test mostly in their writing, as I discuss later on in this chapter. However, I also assessed participants’ reading comprehension through their oral summary recall protocols because I wanted to make sure that they would carefully read a passage prior to their writing, and to see if their purposes in doing so might enhance their reading comprehension.

After reviewing the available related literature. I was convinced of a need to investigate the effects of the thematic organization of English language tests on ESL students’ performance:

Too little is known at present as to whether the advantage of enhanced validity gained by using an integrated format is outweighed by the possible contaminating influence on test scores. It may well be that the latter can be avoided through careful design but at present any claim for integrated tests being the panacea for testing within a communicative paradigm must be tentative. In the customary fashion we can only point to the need for future research to shed light on this. (Weir. 1990, p. 85)

Before introducing my thesis study, I think it is important first to take stock of the main tests that make use of a thematic organization: What are those English language tests which make use of a thematic organization? In what forms do they appear? For what purposes are they used? And what are the documented rationales for their development?

**English Language Tests With Thematic Links**

At present, several popular English language tests such as ‘International English Language Testing Service’ (IELTS) (University of Cambridge Local Examination Syndicate,
1996). ‘The Language Ability Assessment System’ (LAAS) (Bachman, Lynch & Mason, 1995), ‘Ontario Test of English as a Second Language’ (OTESL) (Wesche, 1987), ‘Test in English for Educational Purposes’ (TEEP) (Rea, 1987), and ‘UCLA Subject A Examination’ (University of California, 1995) have some kind of thematic link between two or more of their components. They make use of either reading and/or listening modules or themes to simulate the authentic needs of learners and to assess realistic discourse in academic-type tasks. The writing components of these tests, as direct assessments of writing, appear in certain particular forms.

Table 1.1 shows that a common rationale cited for all tests that have a thematic organization is that the modules and the themes lead students to write about the topics that are related to their academic needs:

> Include content that is relevant to the academic contexts in which EPA students will be studying, and that will provide thematic unity to all parts of the test. (Bachman. et al., 1995. p. 243)

> It was also thought that this approach could yield useful diagnostic information about student performance in relevant academic contexts. (Wesche. 1987. p. 32)

Moreover, people have suggested that examinees can benefit from the information provided in other components of the tests, helping them in their writing tasks:

> The thematic unity of the tests allows you to concentrate on one general subject instead of having to think about three different subjects. Furthermore, the Reading and Listening parts of the COPE test will provide you with vocabulary and ideas related to a theme. Since the subject of the Writing test will be related to the same theme, you will be able to focus more easily on your writing. You are not expected to remember the information in the Reading and Listening tests, but you will be better prepared to deal with the content of the Writing test. (University of Toronto. 1996. p.3)

Table 1.1 summarizes the use of the reading and writing modules or themes in seven popular English language tests. I am also including TOEFL because of its widespread use and its
upcoming changes towards the use of a thematic link between two or three of its components (Chapelle et al., 1997; Hamp-Lyons & Kroll, 1997).

Table 1.1: Summary of the Use of Thematic Links in Seven Popular Academic English Language Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Link</th>
<th>Rationale(s)</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IELTS</td>
<td>Writing component is related to some input in the form of a diagram or table or both.</td>
<td>Recently the use of reading and writing modules was abandoned. It was feared that some examinees would copy too much.</td>
<td>Charge &amp; Taylor (1997) Wallace (1997) Clapham (1996)</td>
</tr>
<tr>
<td>OTESL</td>
<td>Reading, listening, and writing are related thematically.</td>
<td>Relevance to academic tasks, high face and predictive validity, and positive washback.</td>
<td>Wesche (1987)</td>
</tr>
<tr>
<td>LAAS</td>
<td>A thematic link between reading, listening, and writing components.</td>
<td>Relevance to academic tasks and high predictive validity.</td>
<td>Bachman et al. (1995)</td>
</tr>
<tr>
<td>UCLA Subject A Examination</td>
<td>A thematic link between a reading passage and a writing task.</td>
<td>Relevance to academic tasks</td>
<td>University of California (1995)</td>
</tr>
<tr>
<td>COPE</td>
<td>A thematic link between listening, reading, and writing components.</td>
<td>No rationale is documented. Examinees are said to perform better than they do in a test with no thematic link.</td>
<td>University of Toronto (1996)</td>
</tr>
</tbody>
</table>

The tendency to integrate reading and writing modules or themes in certain English language proficiency tests, as shown in Table 1.1, did not appear overnight; but it developed over
several decades. To illustrate this trend, I provide readers with a brief description of the components of five popular English language tests. These included the Test of Written English (TWE), now called the TOEFL essay as a component of the ‘Test of English as a Foreign Language’ (TOEFL), ‘International English Language Testing Service’ (IELTS), ‘Test in English for Educational Purposes’ (TEEP), ‘Ontario Test of English as a Second Language’ (OTESL), and ‘Certificate of Proficiency in English’ (COPE). I focus particularly on their writing components and their historical developments to show why and how the test designers and test developers decided to apply a thematic connection between all or two (reading and writing) of their tests' components (see Appendix A for tables of specifications of these tests). This description provides readers with an outline of the context in which my thesis study aimed to investigate the effects of content knowledge from reading on writing in a simulated testing situation. In the next chapter, I elaborate on the concepts and definitions presented here.

**Test of English as a Foreign Language (TOEFL).** The Test of English as a Foreign Language (TOEFL) is, arguably, the most internationally recognized second language proficiency test in use today. In tracing its history and rationale, Spolsky and Oller (1979) identified the demand for an appropriate method of assessing the English language competence of foreign students applying for admission to universities in the United States and the diversity of methods in assessing language ability as keys to its development. Spolsky (1995) considered TOEFL’s objectivity and cost effectiveness to be its main advantages over subjective and expensive testing approaches. He also referred to its efficiency and technical reliability as reasons for its widespread use.

In 1961, the Center for Applied Linguistics, the Modern Language Association of
America, the Institute of International Education, and the National Association of Foreign Student Advisors sponsored a conference in Washington where professors and embassy officials expressed support for TOEFL development. Then, in 1963, test planning and test writing committees decided on a multiple-choice format for scoring feasibility and reached an agreement on the five parts of the test.

All the components of the first TOEFL had multiple-choice questions. Moreover, even in the writing component, which consisted of two tasks, students were not required to write anything, but rather to choose the right alternatives in a multiple-choice format. As Spolsky and Oller (1979) noted, TOEFL was subsequently revised. The five sections were reduced to three sections, but retaining a multiple-choice question format, even for its writing component.

The Test of Written English (TWE) was added as a supplement to the TOEFL in 1986. Raimes (1990) stated that the purpose of the new writing component was to provide candidates with an opportunity to demonstrate their writing ability in English. Raimes mentioned that the TWE had four features:

1. Two topic types were selected. In one the student "compare/contrasts two opposing points of view and defends a position in favor of one"; in the other, the student describes and interprets a chart or graph (Stansfield & Webster, 1986, p.17).
2. Only one topic type appears on each test for a 30-minute response.
3. Scoring of the TWE is on a holistic 6-point scale by two readers.
4. Scores are reported to individual colleges. (Raimes, 1990, pp. 432-433)

Raimes (1990, pp. 427-442) highlighted seven major causes for concern about the TWE:

(1) "the comparability of the topic types selected": between topic types for both native and nonnative speakers: and between those used for different administrations. (2) candidates are to write on only one topic type. (3) lack of differentiation between graduate and undergraduate
candidates, (4) scoring procedures, (5) validity of the test, and (6) the redundancy of the TWE (assuming that the TOEFL adequately measures candidates' English proficiency).

At present, writing has become one of the four mandatory components, in addition to listening, language structure, and reading, of the computer-based TOEFL (TOEFL, 1999). Moreover, more changes are expected to come. According to Chapelle, Grabe, and Berns (1997) as well as Hamp-Lyons and Kroll (1997) revisions to the TOEFL after the year 2000 will aim to develop a writing component based on some kind of thematic organization and integration with reading and listening tasks. This rationale is reportedly to make the test resemble more closely academic-type tasks.

**International English Language Testing Service (IELTS).** According to Hamp-Lyons (1991), the underlying assumption of the English Language Testing Service (ELTS) has been that students' language proficiency is divisible into 'study' proficiency, which is based on the demands of different academic disciplines, and 'general' proficiency:

The ELTS is based on an underlying construct that just views the language proficiency of college students as divisible into "general" proficiency and "study" proficiency and, seconds, views "study" proficiency as separable into different proficiencies for different disciplinary areas. (Hamp-Lyons, 1991, p. 129)

Hamp-Lyons (ibid.) added that the ELTS (1980-1989) had six Modules; namely, Social Science, Life Science, Physical Science, Medicine, Technology, and General Studies Modules. These Modules were developed based on analyses of the applications forms which the British Council received from people outside of the United Kingdom intending to study at British universities.

However, the British Council revised the test to address problematic issues in test design.
developing new items, and the issue of parity across disciplinary areas discussed by some researchers (see Alderson, Foulkes, Clapham, Wylie & Ingram, 1990). Therefore, the test with its new name, International English Language Testing Service (IELTS) and international focus to include Australia as well as the United Kingdom, consisted of just three Modules (Hamp-Lyons, 1991). According to Clapham (1995), Business Studies and Social Sciences (BSS), Life and Medical Sciences (LMS), and Physical Science and Technology (PST) were the three Modules, which testees could take to fit their academic expertise or interests.

Clapham (1996) traced the development processes of IELTS, stating that ELTS was primarily based on Munby’s (1978) model of needs analysis and English for specific purposes (ESP) testing. The use of reading and writing modules and a discipline-based approach in IELTS aimed to assess academic-type tasks:

Why a discipline-specific academic writing test? In the first case the argument is that testees will perform more closely in line with their “true” ability to handle the English language in academic contexts if they are tested with tasks related to those they will encounter in the academy...In the second case the argument is that testees will perform more closely in line with their ability to handle the English language in academic contexts if they are tested with tasks somewhat related to their disciplinary area rather than with general academic tasks. (Hamp-Lyons, 1991, pp. 129-130)

Hamp-Lyons (1991) claimed that using a discipline-based approach in ELTS made it a fairer test to students than general tests of English were:

The ELTS, aims to be fairer to students than general tests by providing a variety of tasks depending on the disciplinary area the test candidate is familiar with. The assumption is that, particularly at the graduate level, students will write better when they can write about what they know than when they must write about subjects unrelated to their studies. (Hamp-Lyons, 1991, p. 96)

However, according to the 1996 IELTS Handbook and Clapham (1996), IELTS was again revised in 1995. There are now two compulsory tasks in each Module in the writing component.
All candidates do the same thing in task two but on different subjects. All four components are equally weighted. Charge and Taylor (1997, p. 375) asserted that one of the changes was the removal of the thematic link between the reading and writing modules. Wallace (1997, pp. 370-373) opposed the changes to IELTS and recommended that the test go back to its former format so it would be ‘fairer’ and ‘more realistic’ for assessing the academic language abilities of international students. Charge and Taylor (1997), however, pointed out that the link between the reading and writing tasks was not completely removed in the new version of IELTS:

The first of the two tasks in the Writing Module still depends upon some input in the form of non-verbal material such as a diagram or table, and both tasks still offer scope for candidates to demonstrate the important study skills of paraphrasing, synthesis, and summary. (Charge & Taylor, 1997, p. 376)

Test in English for Educational Purposes (TEEP). Based on the same assumptions and modelled after ELTS, another thematic proficiency test was developed: Test in English for Educational Purposes (TEEP). According to Rea (1987), TEEP is a test for nonnative speakers of English who intend to study at universities or colleges in the United Kingdom. Examinees are to write on two different topics in the TEEP. One topic is a general topic, whereas the second one is more specific and related to the examinee’s preferred academic subjects. The writing task in the TEEP is an essay; namely, it directly assesses the writing skills of examinees.

Rea (1987) stated that writing subsets are assessed based on criteria such as relevance and adequacy of content, composition organization, cohesion, adequacy of vocabulary for purpose, grammar, punctuation, and spelling. Rea added that:

TEEP addresses the construct of communicative competence by presenting candidates with discourse-based language processing tasks that assess both the “constituent-enabling skills underlying abilities in reading, listening, and writing”...and the product of language proficiency through thematically and causally related assignments in which input from a
reading and/or listening task are integrated in the performance of a global writing task. (Rea, 1987, P. 78)

According to Hamp-Lyons (1991) and Marion Tyacke (personal communication, 1996), TEEP (especially its writing test) was a model for the Ontario Test of English as a Second Language (OTESL) and later on for the Certificate of Proficiency in English (COPE) Test.

Ontario Test of English as a Second Language (OTESL). According to Wesche et al. (1987), the two instruments of OTESL: namely, its “Placement Test” and the “Post Admission Test”, serve two major purposes. The first instrument is for placing students in appropriate intensive ESL programmes: “It requires 45 minutes of administration time for reading, listening, and writing tasks based on the same theme, and five minutes for the related speaking test.” (Wesche, 1987, p. 32) The second instrument is for students previously admitted to tertiary education who may need further English instruction (see Appendix A):

The OTESL Post-Admission Test requires around three hours of administration time. It includes a General Academic (time reading) component taken by all students (30 minutes), and alternate Social Science and Science and Technology modules, depending on the examinee’s area of study (two hours). These present theme-related tasks [emphasis added] based on two readings and an audio-taped lecture. (Wesche, 1987, p. 32)

Examinees are allowed to choose one of the Discipline-Related Modules which includes a direct writing assessment task.

Wesche (1987, p. 34) pointed out that while the OTESL has some philosophical and conceptual similarities with its British relatives, ELTS and TEEP, it differs from them in its thematic organization: “A major departure of the OTESL from its relatives is its use of the same theme throughout the discipline-related reading-lecture-writing modules.”

Wesche (1987), who viewed the OTESL as a 'performance-based' test of English for
academic purposes, cited 'high predictive validity', 'positive washback', 'high motivational value and potential for specific', and 'context related diagnostic feedback' (p. 40) as rationales for its development:

In the OTESL project, the decision to use a performance-based approach was made with the objectives of achieving high predictive validity and positive washback. It was also thought that this approach could yield useful diagnostic information about student performance in relevant academic contexts. (Wesche, 1987, p. 32)

She added: “A third rationale for such tests involves their inherent interest to students, and resulting motivational value, so that a more valid performance can be elicited.” (Wesche, 1987, p. 31)

**Certificate of Proficiency in English (COPE).** The COPE Test was a thematic proficiency test developed for nonnative English students who intended to attend undergraduate and graduate programmes at the University of Toronto. According to Marion Tyacke (personal communication, 1996), the coordinator of the test, the COPE Test was based on the ELTS, TEEP, and OTESL for admission purposes in educational contexts.

The training booklet published by the School of Continuing Studies (University of Toronto, 1996), which provided orientation for those who wanted to take the test, stated that all the three parts of the COPE Test, namely, reading, listening, and writing, were thematically related. Possible themes included communication, technological and social change, and health. The booklet also suggested that the thematic unity of the test would help students to concentrate on one subject so that reading and listening components of the test would provide students with some necessary vocabulary and ideas about the theme which they might apply in their writing task.
Investigating the Effects of Reading and Writing Modules or Themes on Adult ESL Students’ Language Performances

As is evident from the foregoing brief review, the use of thematic connections between two or more components has been a major development in academically oriented English language tests in recent years. However, there have been several concerns regarding the justification of using modules or themes in English language tests. For instance, in the particular case of text and theme-based prompts, where the prompt for writing is in the form of reading and/or listening components of the test (I describe these prompts in more detail in Chapter Two), several issues needed to be explored further. We do not know if or how the information in the listening and/or reading components might affect qualities of ESL students’ writing products. Likewise, we do not know if or how reading and writing modules or themes might affect ESL students’ writing processes, particularly the writing strategies they use in doing their writing tasks. Further, we do not know how ESL students’ reading performance may be affected in an English language test using reading and writing modules or themes. In short, we do not know to what extent or in what ways the adopted reading and writing modules or themes might affect the construct validity of the assessments. I have intended, in this thesis study, to find some empirically based responses to these questions and concerns.

Statement of Purpose and Research Questions

The purpose of this study was to investigate the effects of content knowledge from reading on ESL students’ writing performance in exam-type situations when their writing task is related thematically to the reading component of an English language test. Probable effects both in the processes and the products of adult ESL students’ writing performances were investigated:
**Question 1.** *In an English language test, what is the relationship between the given information in a reading passage and ESL students' writing performance when their writing task is related thematically to the reading passage?*

Expected result: Both the processes and products of ESL students’ writing performance are affected when their writing task is related thematically to a reading passage.

This first research question had five subquestions:

1. a) In an English language test, how is ESL students' writing performance affected when their writing task is related thematically to a reading passage, compared to a condition for writing when prior reading is not related thematically to their writing task?

    Expected result: ESL students perform better in their writing performance when their writing task is related thematically to a reading passage, compared to a condition when their reading and writing tasks are not related thematically.

1. b) In an English language test, how are particular aspects of ESL students' compositions (i.e., communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy) affected by students having read a thematically related passage prior to writing, compared to a condition for writing when they read a passage that is not related thematically to their writing task?

    Expected result: ESL students perform better in communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy of their written compositions when their writing task is related thematically to a reading passage, compared to a condition when their reading and writing tasks are not related thematically.

1. c) In an English language test, what strategies do ESL students use when their writing task is
related thematically to a reading passage?

Expected result: ESL students try to use a variety of writing strategies in their written compositions when their writing task is related thematically to a reading passage.

1. d) In an English language test, what are ESL students' attitudes towards the use of reading and writing modules?

Expected result: ESL students have positive attitudes towards the use of reading and writing modules.

1. e) In an English language test, is there a correlation between ESL students' self-assessments of their familiarity with the content of a reading passage and the quality of their written compositions in a condition when their reading and writing tasks are related thematically?

Expected result: ESL students' familiarity with the content of a reading passage does not significantly affect their compositions when their reading and writing tasks are related thematically.

**Question 2:** In an English language test, how is ESL students' reading performance affected when they know their writing task is related thematically to a reading passage, compared to a condition when their reading and writing tasks are not related thematically?

This second research question had two subquestions:

2. a) In an English language test, how do ESL students' overall scores on their summary recall protocols for reading comprehension compare in (a) a condition when they know their writing task is related thematically to a reading passage to (b) a condition when they know the reading and writing tasks are not related thematically?

Expected result: ESL students achieve higher reading scores when the topic of a writing
task is related thematically to a reading passage, compared to a condition when their reading and writing tasks are not related thematically.

2. b) In an English language test, how do ESL students’ recalls of top, high, mid, and low levels of idea units within a reading passage compare in (a) a condition when they know their reading and writing tasks are related thematically to (b) a condition when they know their reading and writing tasks are not related thematically?

Expected result: ESL students recall more idea units at each level of text organization when their reading and writing tasks are related thematically, compared to a condition when their reading and writing tasks are not related thematically.

Design of the Study

This study was carried out through a within-subjects design. The same thirty-four adult ESL participants did two reading and writing tasks in the thematically-related and thematically-unrelated conditions respectively. To avoid possible order effects, the order in which participants did each task was counter-balanced. Half of the participants, randomly selected, did their tasks in (a) the thematically-related condition then (b) the thematically-unrelated condition. The other half did their tasks (a) in the thematically-unrelated condition then (b) the thematically-related condition (see Table 3.3 for more details on the research design). The information given in the reading component was the independent variable and participants’ scores on writing and summary recall protocols were the dependent variables, respectively.

Organization of the Thesis

In Chapter Two I review communicative language proficiency testing and writing components, literacy issues related to the thematic connection between reading and writing, and
the research methods that I used. I conclude each section with a summary of its relevance to my research questions.

In Chapter Three, I present the characteristics of the people who participated in the study, instruments that I used, design of the study, the results of a pilot study and its drawbacks, and the procedures that I followed in rating, coding, categorizing, and analyzing the data. Chapter Four presents the results of quantitative and qualitative analyses of the data obtained.

In Chapter Five, I document further observations by presenting three case studies to supplement the results in Chapter Four. In Chapter Six, I point out theoretical and practical implications of the findings, followed by discussion of the limitations of the study, and I present suggestions for further research.
CHAPTER TWO
RATIONALE FOR THE STUDY IN REFERENCE TO THE SCHOLARLY AND PROFESSIONAL LITERATURE

The main rationale for this thesis study was to investigate how an integration of reading and writing components of an English language test and 'component dependency' affected its construct validity and predictive validity.

In this study I followed a psychological perspective (e.g., Ericsson & Simon, 1984). I relied heavily on analyses of participants' writing processes and the writing strategies they applied in a condition when their reading and writing tasks were related thematically. I elicited participants' attitudes towards the use of reading and writing modules in an English language test. I asked participants for self-assessments of their familiarity with a reading passage in a condition when they had a reading-writing task. I investigated through oral summary recall protocols how reading and writing modules affected participants' attending to the different levels of idea-units in a reading passage.

To address these matters I need first to consider several issues. The first is what current expectations and trends are for English language testing, particularly regarding writing assessment; how the use of reading and writing modules might affect writing assessment; what characteristics writing assessments have; what writing prompts are and the variables they contain that might influence examinees' writing performance. The second is how reading and writing are thought to be interconnected in the published literature. Third I review how writing processes and writing strategies have been taken into account in the published literature. Finally, I offer a rationale for the research methods that I believed could best elicit the information that I needed
for this study. I define and review the key concepts and terms used in the present study under three major categories: language proficiency testing and writing components, interconnections between reading and writing, and research methods.

**Language Proficiency Testing and Writing Components**

**Current Expectations for Language Testing**

The concept of language proficiency has been controversial since long before 1963 when the TOEFL was developed. Subsequent debates, studies, and research have resulted in the development and evolution of various language proficiency tests. A recent shift from traditional tests (which focused on the linguistic component of language) to more communicative ones is clearly evident:

The view of language ability, or proficiency, that dominated the field of language testing during the 1960s and 1970s was one that derived largely from a structuralist linguistics view that saw language as being composed of discrete components (e.g., grammar, vocabulary) and skills (listening, speaking, reading, writing), and a trait psychology view of ability as a unidimensional attribute of which different individuals have greater or lesser amounts. (Bachman & Cohen, 1998, p. 4)

Bachman and Cohen (1998, pp. 5-6) added:

The view of language ability as *communicative competence* currently accepted by many LT [language testing] researchers represents a major paradigm shift from the structuralist, "skills and components," trait view outlined earlier. The notion of communicative competence, or communicative language ability, has evolved in the following four ways in the past decade:
1. Recognition of a much broader range of components
2. Recognition that these components are not discrete, and that they interact with each other
3. Consideration of how components of competence interact with other cognitive abilities and processes
4. Recognition that language ability includes the capacity for interacting with the context.

Most of these concerns and developments centre on Swain's (1985) conclusion that the
content and methods of communicative language tests need to be motivating, substantive, integrated, and interactive. This is true for the writing components of most language tests, particularly the development and evolution of writing tasks from indirect (e.g., multiple-choice) to direct (e.g., essays or other forms of written compositions) assessments (Clark, 1978).

Cumming (1997, p. 52) likewise observed that viewing language proficiency at the level of text-discourse or rhetoric rather than just at the level of conventional grammatical structures and lexicon is one reason for requiring learners to demonstrate their abilities in writing by their providing samples of meaningful, literate discourse in language tests in academic settings. In fact, proficiency in writing in a second language probably cannot be demonstrated indirectly by simply answering some multiple-choice questions on grammar and vocabulary. McNamara (1996, pp. 1 & 6) stated that the general trend in proficiency testing now is to expect learners to demonstrate what they can really do in the language in respect to their future needs.

However, despite various endeavours and much research in the past few decades, Waters (1996) asserted that more studies need to be done to determine what learners’ academic needs in the universities of North America really are. As a result, existing language proficiency tests might not be relevant to real academic tasks nor have predictive validity in such circumstances (Fletcher & Stern, 1989; Graham, 1987).

Debates among English language proficiency assessment experts have focused on the construct and predictive validities of proficiency tests for several reasons. First, these tests are usually administered on a large scale internationally (e.g., TOEFL, IELTS). Second, the decisions based on the results of these kinds of assessments are very important for students, both for admission to a college or university and for the purposes of placement into appropriate
courses (Bachman, 1990). Third, there have always been controversies over the definition of language proficiency and the diversity of language competencies.

Stern (1983, p. 357) identified two dimensions to the major proposed definitions of proficiency. One dimension of definitions deals with progressive levels of proficiency, such as beginning, intermediate, and advanced levels of proficiency. In educational practice, these progressive levels of proficiency are usually measured by tests or rating scales of people’s performance in real-life contexts or knowledge of a language. Cumming (1988, p. 32) pointed out that except for some descriptive studies (e.g., Perdue, 1984; Schumann, 1984; Stauble, 1984), there is a noticeable lack of empirical bases to these scales. Brindley (1998, pp. 46-47) addressed this dimension of language proficiency in relation to outcomes-based assessment and various ‘key indicators’ such as ‘standards’, ‘benchmarks’, ‘bandscales’, ‘attainment targets’, and ‘competencies’. Brindley questioned the validity and reliability of these existing outcome statements because they combine ‘formative assessment’ with ‘summative reporting’. Bachman and Cohen (1998, pp. 4-8) viewed the issue in the form of ‘aspects of language ability’, finding people’s interpretations of progressive levels of language proficiency as a major source of variation in studies of both second language acquisition and language testing.

Thomas (1994) found that among 157 studies of second language (L2) acquisition that she reviewed only 35 (22.3%) assessed participants’ English language proficiency by using standardized tests. The other 123 (77.6%) assessed proficiency through ‘impressionistic judgment’, ‘institutional status’, ‘in-house assessment instrument’, and ‘other’ means (p. 312). She concluded that researchers’ lack of confidence in adequately defining and measuring L2 proficiency, the inefficiency of standardized tests in assessing participants’ language competence,
the reluctance to reduce "the complexity of a learner's knowledge of L2 to a numerical characterization", the fallacy of measuring a learner's L2 knowledge "as a proportion of the knowledge of a 'typical' native speaker" (p.328), and practical constraints ("time, money, and ideal research conditions") have all discouraged researchers from empirically investigating their participants' language proficiency levels. However, despite Thomas' findings in language research, the idea of progressive levels of language proficiency is widely accepted in educational practices and has formed the bases for conventional terminology and many institutional policies (i.e., most universities and colleges around the world make use of these language proficiency levels or benchmark scores for admitting and placing ESL candidates into programs or courses).

The other dimension discussed by Stern (1983) concerns theoretical components of language proficiency, particularly different language competency models. These have been controversial for several reasons: (a) changes in definitions of and expectations for language competence over time and in differing contexts, (b) the impact of various disciplines such as sociology and psychology on language studies, (c) the shift of language teaching and learning theories from more linguistic to more communicative ones and, (d) the complexity of doing empirical research to determine and test 'absolute models' (Cummins & Swain, 1986) of communicative competence, since these models are basically theoretical.

Stern (1983, pp. 354-357) referred to a range of models: (a) single component models, such as Oller's (1979) 'expectancy grammar' and Corder's (1981) theory of learners' 'interlanguages'; (b) two-component models such as Hymes' (1972) learners' linguistic and communicative competences or Cummins' (1984) learners' cognitive-academic language proficiency and their interpersonal communicative skills; and (c) four-component models, such
as Canale and Swain's (1980) model and Canale's (1983) grammatical, sociolinguistic, discourse and strategic competences.

In the present study I used both rating scales and analytic categories to describe participants' English writing performances. The participants in this study were at an approximately intermediate level of English proficiency, as determined on the basis of their TOEFL and university placement scores. For scoring participants' writing compositions, I used the rating scale developed first by Hamp-Lyons (1991) then revised by Hamp-Lyons and Henning (1991) (see Appendix B), in which they present 'communicative writing profiles'. They argued that:

A writing profile is a description of the writer's demonstrated ability in writing (in this context, writing English as a second language) on a set of text features, with the writer's level of competence reported separately for each text feature. In this context, we call this profile communicative because the focus of judgments made on each text feature is the extent to which the writing communicates with the reader, and because the text features selected for testing are the ones that expert judges believe to be salient in the communicative context to which the test is tied. (Hamp-Lyons & Henning, 1991, p. 339)

Hamp-Lyons and Henning (1991), referring to Hamp-Lyons and Reed (1990), asserted that assigning separate scores on a 'single-item test' (composition) increases the reliability of scoring; and referring to Alderson (1981), Jacobs et al. (1981), and Hamp-Lyons (1987, 1991), they observed that the use of communicative writing profiles increases the validity of scoring because L2 learners may demonstrate better abilities at 'some component skills of writing than at others' (p. 340). Giving a single holistic score in such circumstances would conceal "variation in performance within the writing skill" (p. 340).

In this thesis study, I and a second rater scored the five scalar categories of communicative quality, organisation, argumentation, linguistic accuracy, and linguistic
appropriacy of participants' compositions separately according to Hamp-Lyons' (1991) rating scales. We also gave a global score to each participant's composition. We followed the 'multiple trait scoring' proposed by Hamp-Lyons (1991, pp. 247-261) which is considered to be both an 'analytic' and 'holistic' approach because we not only attended to a value for each of the five aspects of writing but also to the whole text of each composition (Hamp-Lyons, 1991, p. 246).

**Communicative Trends in Language Proficiency Testing**

With the advent of the communicative approach in language teaching and learning, many leading figures in the language field have tried to define the term "communicative competence or performance" (Alderson & Urquhart, 1985; Bachman, 1989; Campbell & Wales, 1970; Canale, 1983; Canale & Swain, 1980; Candlin, 1986; Carroll, 1980; Douglas & Selinker, 1985; Hymes, 1972; Kelly, 1978; Moller, 1981; Morrow, 1979; Rea, 1978; Skehan, 1988) or "capacity" as Widdowson (1983) put it, and then to find out how it related to performance in real-life situations.

Spolsky’s (1995) historical review of these and other developments in language testing stated that the Canale and Swain framework in particular widened the views of communicative competence. According to Hart, Lapkin, and Swain (1987), this framework aimed to change the traditional focus on grammar and syntax to grammatical, sociolinguistic, discourse and strategic dimensions. Bachman (1990) proposed another similar framework which further extended the Canale and Swain framework of communicative competence as well as his own inquiries. Bachman's framework includes organizational competence (grammatical competence and textual competence) and pragmatic competence (illocutionary competence and sociolinguistic
There is a distinct emphasis on learners’ communicative performance in most language tests:

The capacity or ability (see Widdowson, 1983; Bachman, 1989) to use language communicatively thus involves both competence and demonstration of the ability to use this competence. It is held that the performance tasks candidates are faced with in communicative tests should be representative of the type of task they might encounter in their own real-life situation. (Weir, 1990, p. 9)

Moreover, as Carey (1996) suggested, even TOEFL is going to become a performance-based test in the future:

The goal of performance assessment in the context of TOEFL 2000 is not to provide better instructional outcomes, the goal is to evaluate foreign students’ English language skills in a high-stakes environment, in a manner that more closely resembles the tasks they would be required to perform in an academic setting, while also improving washback. (p.1)

**Reading and Writing Modules or Themes in English Language Proficiency Tests**

The idea of thematic proficiency tests or making use of reading and writing modules originally developed in England when the British Council and the Cambridge Examinations Syndicate set up the English Language Testing Service (ELTS) (Carroll, 1981, 1985). Since then, several other English proficiency tests have been developed using reading and/or listening modules or themes in Europe and Canada (as described in Chapter One).

Clapham (1996), in discussing the development of IELTS and tracing the grounds for its development, demonstrated that English for specific purposes (ESP) and its related testing procedures were the first sources of developing not only ELTS but also the Test of English for Educational Purposes (TEEP). ESP and its branches, such as English for academic purposes (EAP) and English for occupational purposes (EOP), have closely catered to the needs of ESL
learners in real-life contexts. The intention of considering ESL learners' needs more seriously and the idea of performance testing led the English language test designers to narrow down the scope of the concept of English proficiency and their expectations of ESL learners by designing English language tests using reading and writing modules or themes.

Writing Components in Language Proficiency Tests Using Reading and Writing Modules or Themes

Looking at the writing components of the language proficiency tests described in the Tables of Appendix A, one can see the tendency to move from indirect to direct writing assessment. Moreover, it is also apparent that there has been a global attempt to assess the writing ability of second language learners in a way that an assessment would represent, if not fully predict, their future writing performance in academic contexts.

In English language proficiency tests using themes or reading and writing modules an attempt is made to provide second language learners the opportunity to write on a topic which is related either to their background knowledge in specific academic domains (e.g., in the IELTS, OTESL, and TEEP) or to the ideas presented in listening and reading components of the test (e.g., UCLA Subject A Examination). A rationale for integrative themes in language tests appear in Hamp-Lyons and Kroll's (1997) assertion that writing in academic settings is not "a stand-alone skill" but "part of the whole process of text response and creation" (p. 19). In putting forward the idea of 'academic literacy', they elaborated:

The richness of such a view of academic literacy suggests that in a TOEFL test for the new century an attempt should be made to design at least some integration between reading and writing skills. This could be done without prejudicing a fair measure of pure writing skill and reading skill by, for example, using one reading text as content input to a writing prompt, or by following a 'take a position' essay with a reading that takes one
specific position on the same issue. (p. 19)

However, Hamp-Lyons and Kroll went on to describe some of the attendant complications and needs for research:

Research would be needed to estimate the effect on test takers’ scores from doubling of skills. Weaker writers might be disadvantaged by prompts that presuppose comprehension of a reading, or weaker writers could be helped by a reading that would provide them with some information for their writing, some vocabulary to mine, some genre conventions to model a response upon, and so on. In a multiple-item writing test, the effect of a text-linked writing task could be discovered. (Hamp-Lyons & Kroll, 1997, p. 19)

From a reading assessment perspective, Hudson (1996) also examined the possibility of an integration of skills in language assessment:

Reading could be integrated with any of the other language skills. However, this should be based on the ‘literacy’ task being encountered. The test format could be such that the examinee acquires information on a particular topic from reading and/or listening, and then produces some written or oral product. For example, the examinee might read a passage and summarize the information. Summary tasks can indicate the gist in the examinee’s mind, and this may represent overall comprehension of a passage (Kintsch & van Dijk, 1978). The writing summary might be followed by a listening passage on a similar topic. The examinee might then answer selected response items related to information presented in the passage and then write an evaluative essay. Score reporting could then indicate both a reading score and a functional academic literacy score. (Hudson, 1996, p. 12)

As observed in the above quotations, the interrelationships between writing with reading and/or listening components raise certain concerns. As I discussed earlier in this chapter, the intention in adopting English language tests using reading and writing modules or themes is to more closely focus on the kind of English language ability (here writing tasks) that candidates most likely will encounter in their future studies or careers. However, although relevance to academic tasks and the predictive validity of English language tests using a thematic connection between two or more of their components are considered to be prime rationales for their
developments (Table 1.1) the principal question that emerges is, what is assessed in these language tests? In other words, what construct is being tested? To ascertain the sources of these concerns in more detail and to see whether they are justifiable, I next examine the characteristics of writing tests in general then highlight those characteristics which differentiate writing tests from each other.

**Characteristics of Writing Tests**

Hamp-Lyons (1991) defined direct writing tests as tests that assess writing through the production of writing. She contrasted them with those which claim to assess writing through other measures such as error recognition. She outlined (1991, pp. 5-6) five characteristics for direct writing tests:

1. The testees have to write (at least) one piece of coherent text of 100 words or longer.
2. The tests are accompanied by some instructions, a text, a picture, or other prompt(s).
3. Each writing test is read by one or two trained raters.
4. Ratings are based on some common yardstick or scale.
5. Ratings are indicated by a number or numbers.

In addition, these tests are usually timed. In most cases, the testees have to do the writing task in half an hour (as showed in Chapter One). During this time they need to plan, write the main and supporting ideas, and finally write their final copies which are expected to be coherent, well organised, appropriate in content, and correctly spelled. What examinees produce are essentially first draft compositions which do not fully resemble their future writing in academic contexts (Raimes. 1990, p. 435), when they can expect to have much more time and sustained study for both drafting and editing as well as reading, talking, and listening to lectures.
Among the characteristics of writing tests proposed by Hamp-Lyons, the second one, namely, the extent and quality of providing examinees with instructions, pictures, and texts (prompts) is what mainly differentiates writing tests from each other. For instance, a writing test with a framed prompt contrasts with a writing test with a text-based prompt.

**Prompts in Writing Components of English Language Tests**

All writing tests involve some reading, but of different kinds and complexity. At a minimum, reading material acts as a prompt for writing tasks, even with simple instructions on how to write the composition. Hamp-Lyons (1991) observed, for example, that a prompt can be a topic, a picture, some instructions, or a text which serves as a stimulus for a writing task. That is, examinees respond to certain stimuli called prompts. Kroll and Reid (1994) note that such prompts can be presented in three different formats: namely, bare prompts, framed prompts, and text-based prompts.

**Bare prompts.** Bare prompts, which Smith et al. (1985) called “open structure”, are presented in simple terms. They are written in a way that explicitly but concisely tells examinees what kind of a task they have to do while delimiting a particular topic (Kroll & Reid, 1994). For example, the following prompts belong to this format:

- Pollution in Large Cities. Discuss.
- Do you favour or oppose smoking in restaurants? Give your reasons.
- Write an essay and give your reasons why you like or dislike keeping animals in zoos.

I view the specification of a topic, such as ‘Pollution in Large Cities’, ‘smoking in restaurants’, and ‘keeping animals in zoos’ as prompts and directives such as ‘Discuss’, ‘Do you favour or oppose? ‘Give your reasons’, and ‘Write an essay and give your reasons why you like
or dislike' as instructions for writing. It is obvious that examinees are not provided with much stimuli in this format. However, in order to avoid ambiguity, examinees are usually given in advance detailed instructions about time requirements, required length of the essay, and the scoring procedures.

**Framed prompts.** Kroll and Reid (1994) asserted that in the format of framed prompts examinees are given some information about a situation then are asked to do a writing task relevant to that circumstance. Though prompts in these formats seem to be more complicated than bare prompts, they present examinees with details or orientations which might help them to do the writing tasks. The following example belongs to this format:

Some people believe that modern technology has caused some terrible damage to the natural environment. They think this process can result in a global crisis [prompt]. What do you think? Do you think in order to support the natural environment we should try to keep away from modern technology and stick to traditional ways of life? Discuss this issue and give your reasons [instructions for writing task].

**Text-based prompts.** Kroll and Reid (1994) also called these reading-based prompts, whereas Smith et al. (1985) referred to them as “response structure”. In text-based prompts, the given information is in some form of authentic or adapted reading materials. The length of the reading passage could range from one paragraph to several passages. It is assumed that examinees are provided with ample context and stimuli to do their writing tasks. The following is an example of this format (Kroll & Reid, 1994, p. 234):

[The prompt shown below is given after a 1,000 word passage from a text by Clyde Kluckholm. The passage is preceded by this introductory note: “Clyde Kluckholm (1905-1960) was professor of anthropology at Harvard University. The following passage, adapted from his book *Mirror for Man*, defines what anthropologists mean by culture and explains culture’s influence on how people think, feel, and behave.”] [prompt]

How does Kluckholm explain the differences and similarities among the world’s peoples? What do you think about his views? Use examples from your own experience,
reading or observation in developing your essay [instructions for writing task].
(University of California Subject A exam, 1987; cited by Frodesen, 1991)

What distinguishes this prompt from bare and framed ones is that it requires more reliance on, and understanding of, the prompt stimuli. Testees first need to understand a reading text then to think out and write their essays based on the knowledge they obtain from it. This was the case for participants in the present thesis study in the thematically-related condition, and I assessed their reading comprehension through their summary recall protocols of the reading passage.

**Theme-based prompts.** It seems to me that at least one more format exists. In the COPE Test, LAAS, OTESL, and even in IELTS for example, the given prompts are different from what Kroll and Reid have cited. The prompts in the COPE Test, LAAS, and OTESL, for instance, are not bare, framed, or just text-based. They are based on the listening and reading components of the tests. In other words, the two components act as contextualized stimuli to prompt examinees to do the writing task. With these prompts, which I call *theme-based prompts*, ample information, structures, and vocabulary are presented to help examinees handle their writing tasks more easily and their handling of this material forms part of the criteria for judging their relative success in performing the writing tasks. Although I adopted instrumentation in this study that used a text-based prompt, the results may potentially relate as well to those English language tests which make use of theme-based prompts. These prompts have one important factor in common: they consist of either the reading component of an English language test (a text-based prompt) or both the reading and listening components of the test (a theme-based prompt). In the latter cases examinees are provided with additional information in the form of listening component of the
tests, and this forms the main difference between these two kinds of writing prompts. I now
discuss text or theme-based prompts in more detail and examine both their advantages and
disadvantages.

Some Problems of Text or Theme-Based Prompts

Various concerns have been raised about text or theme-based prompts in assessing
writing abilities in educational contexts. Though one might argue that there are other
problematic issues as well, most analysts have focused on issues of the construct validity,
component dependency, predictive validity, fairness, and comparability of these kinds of writing
assessments in particular.

Construct validity. What is assessed in a writing test with a text or theme-based prompt?
Knowledge of the subject matter? Comprehension of the text-based prompt(s)? Or writing
ability in a second or foreign language? We do not know whether examinees’ writing products
are indicators of their writing skills, language proficiency (or both, as Cumming, 1990 observed),
or their knowledge of the given information in the related listening and/or reading components of
the exam. No research exists on either the processes or products of such writing tasks such as
would answer this question unambiguously. But theorists such as Hamp-Lyons and Kroll (1997)
have argued that the construct of academic writing integrally involves each of these elements
(rather than simple composition tasks without reading prompts, which foreground the construct
of writing alone as a separate skill). Studies starting to investigate this matter, such as
Clapham’s (e.g., 1996), focused mainly on the effects of the background knowledge of the
subject matter on testees’ reading performance. But to clarify the construct of academic writing
so it can be accurately assessed in a test we need to know such things as what strategies
examinees use when they write on a text or theme-based prompt, if and how their reading comprehension influences their writing, and whether their familiarity with a topic might influence their performance.

The present thesis study intended to empirically investigate these questions and concerns, albeit in a preliminary way that starts to explore the process of construct validation for this kind of task in language tests, following Angoff's (1988) definition of construct validity (cited by Cumming, 1996, p. 2) as:

A mutual verification of the measuring instrument and the theory of the construct it is meant to measure. We examine the psychological trait, or construct, presumed to be measured by the test and we cause a continuing, research interplay to take place between the score earned on the test and the theory underlying the construct.

**Component dependency.** The issue of construct validity is closely related to the measurement issue of component dependency as asserted by Charge and Taylor (1997), while discussing changes to the 1995 IELTS:

The thematic link between the Reading and Writing Modules (for Academic and General Training) was removed. A major consideration in the revision of the Reading and Writing Modules related to issues of construct validation. It was recognized that the thematic link of the original test design, although desirable in some senses, nevertheless increased the potential for confusing the assessment of reading ability with the assessment of writing ability. For example, poor performance on the reading subtest risked penalizing candidates unfairly on the linked writing task, and this was regarded as an undesirable feature. (p. 376)

Weir (1990) also argued that one disadvantage of an integrated language test could be the issue of local independence of items or of tasks:

The dangers of 'muddied measurement' are often referred to in the literature. This relates to a concern about the local independence of items or of tasks within a test battery. The feeling is that performance on one item should not interfere with performance on a subsequent item. In terms of tasks, it is felt, for example, that performance on a writing task should not be dependent on successful performance in coping with prior reading and
listening tasks. The profiling of abilities may be problematic if there is difficulty in determining where the process has broken down. If there is a need for separate skills profiling, more discrete test tasks may be required. (Weir, 1990, p. 85)

In an English language test using reading and writing modules or themes examinees’ writing abilities are typically assessed as part of their overall language knowledge. All, or at least two, of the components are interdependent in such tests. In fact, examinees typically begin doing their writing tasks after having done one or two other components, namely, reading and/or listening components. This could be a disaster for those examinees, particularly those with very low proficiency in the second language, that might not understand the reading text or theme. This lack of understanding of a reading passage may pose them a hard time in doing their writing tasks. Therefore, these tests violate the conventional measurement assumption of ‘local independence’ in test design: “Local independence means that when the abilities influencing test performance are held constant, examinees’ responses to any pair of items are statistically independent.” (Hambleton et al., 1991, p. 10) Indeed, tests using reading and writing create what I might call ‘component dependency’, which may affect examinees’ language performance as well as their test scores in unpredictable ways.

Wesche (1987) observed that lack of ‘item independence’ in thematic tests like OTESL affects ‘internal consistency measures’ requiring new ways of conceiving of examinee performance:

Reliability and validity were foremost considerations throughout OTESL development. The team continued field testing, revising and working on scoring and training procedures until acceptable internal consistency and interrater reliabilities were achieved...even while recognizing that traditional internal consistency measures are not entirely appropriate where item independence cannot be claimed. (Wesche, 1987, pp. 38-39)

For this reason, I initiated the present thesis study with the aim of starting to identify what some
of the key elements might be in examinees' performance in reading and writing modules and to evaluate how dependent or independent these might be.

**Predictive validity.** According to the available literature, the most compelling rationale for performance tests is their predictive validity (Bachman, 1990; Clark, 1975; Davies, 1986; Jones, 1979; Weir, 1981; Wesche, 1985, 1987). Indeed, these tests attempt to find out how examinees can perform certain tasks that are perceived to correspond to real-life situations. However, in regards to assessing writing ability with text or theme-based prompts, predictive validity is constrained by:

1. The variety of interactions of certain underlying competencies and skills with contexts (e.g., particular topics, particular tasks) (Bachman & Palmer, 1989; Canale & Swain, 1980; Cummins, 1981).

2. The effect of subject matter knowledge (here in the form of a text or a theme) on students' performance (Alderson & Urquhart, 1985; Erickson & Molloy, 1983; Skehan, 1984; Weir, 1983).

3. The specificity of the task and performance criteria, which in turn affects the generalizability of the construct (Carey, 1996).

Miller and Legg (1993) also expressed their scepticism about the generalizability of performance tests which are overtly context-bound. Carey (1996) highlighted this issue by pointing to situations in which students are asked to respond in writing to prompts or topics on which they may or may not have any prior knowledge; this factor might affect students' performance throughout an entire test.

Moreover, the issue of predictive validity also raises the question of educational
relevance. Raimes (1990) raised this issue in criticizing the backwash effects of ESL writing tests that do not realistically combine reading and writing together. She concurred with Purves (1988) that writing tests should be of the types of writing that students in academic contexts actually do. Cumming (1997) suggested that the inconsistency between educational practices and the format of writing assessments is a major dilemma currently facing both the fields of language assessment and of writing instruction. Without in-depth analyses of what L2 students really do on tests with text or theme-based prompts, there is little hope to try to resolve or move forward on this problem.

**Fairness.** Proponents of text or theme-based prompts in language tests have assumed that listening and/or reading components would provide examinees with information that would facilitate their doing writing tasks in a brief time frame: “The previous IELTS format, on the other hand, at least guaranteed all students some elements of background input that would be useful for performance of the written task” (Wallace, 1997, p. 371). Such arguments have assumed that assessing writing in a language test using reading-writing modules or a thematic organization is fairer to examinees than the other kinds of writing assessments are because it provides them with the same input (Wallace, 1997, p. 373).

However, the question arises: What if some examinees are not familiar with the text or theme while others are? The text or theme may be advantageous to only some of the examinees and even disadvantage others. According to Wesche (1987), among others, it is not possible to develop language tests in a way that they are totally context free and universally fair. It might be most fair (in the particular case of text or theme-based prompts) to select those texts or themes that do not create any problems of subject matter knowledge for examinees. One way to do this is to allow examinees to choose the text or theme themselves [among at least three alternatives,
as in IELTS]. Clapham (1993) found that examinees’ resulting performances on IELTS were not significantly affected by their choosing different reading modules, but it should be noted that her study mainly focused on reading tests and did not analyze writing performance in depth. However, we do not know, for sure, whether examinees would choose their topics based on familiarity with a specific theme or not and whether the idea of preparing different themes would be of benefit to examinees with all levels of language proficiency and writing abilities:

We might say that at the moment the answer to the question of whether a choice of prompt is a good or a bad thing depends less on the research evidence and more on our own philosophical and pragmatic orientations. Clearly this is an area where more research is needed. (Hamp-Lyons, 1991, p. 90)

Comparability. Concerns about fairness also relate to issues of the practicality of test design, particularly the problem of developing several parallel thematic proficiency test components with different reading and writing modules or themes (Clapham, 1996). An enormous problem for test designers and producers who might attempt to administer large numbers of language tests with reading and writing modules is assuring that reading passages, writing prompts, and the relations between them, as well as students’ familiarity with them, are all equivalent in different versions of the same test administered at different times. At present, the existing knowledge about all the complex factors that need to be accounted for to ensure such equivalency is not sufficient to guide test design.

Some Prompt Variables Influencing Writing Task Performance

Little guidance on these issues comes from the available literature on the effects of prompts on students’ writing products. Indeed, this literature shows contradictory results. Some researchers have found that different prompts had no or little impact on students’ writing performance, whereas others came to the conclusion that qualities of stimulus prompts directly affected students’ writing performance. Table 2.1 summarizes some of the studies which investigated the effects of writing prompts in English mother tongue composition assessments.
Table 2.1. A Summary of Research on the Effects of Different Writing Prompts

<table>
<thead>
<tr>
<th>Publication</th>
<th>Research</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown et al. (1991)</td>
<td>Examined prompt variation (two kinds: ten sets (a) in response to a reading passage; (b) in response to a question based on personal experience)</td>
<td>Prompts make a difference in the college freshmen’s essays.</td>
</tr>
<tr>
<td>Hoetker &amp; Brossell (1989)</td>
<td>Examined two topics which required personal and impersonal responses and differed from each other in the amount of rhetorical information.</td>
<td>No significant difference in the students’ compositions in terms of the amount of rhetorical information.</td>
</tr>
<tr>
<td>Smith et al. (1985)</td>
<td>Investigated the effects of three different topics: an open structure response, a response to a single text, and a response to three texts on the same topic.</td>
<td>Advanced group scored significantly higher on the first topic but they did not score significantly higher than the basic writing group on the third topic.</td>
</tr>
<tr>
<td>Brossell &amp; Hoetker Ash</td>
<td>Investigated the effects of 21 essay topics on university and college students’ compositions.</td>
<td>No significant difference in the students’ written compositions</td>
</tr>
<tr>
<td>(1984)</td>
<td></td>
<td>No significant differences among the six topics of the three levels of information load.</td>
</tr>
<tr>
<td>Brossell (1983)</td>
<td>Used six topics with three levels of information load.</td>
<td>No significant differences in the students’ essays</td>
</tr>
<tr>
<td>Greenberg (1981)</td>
<td>Examined the effects of topic with low (no thesis supplied but strategies are provided) or high (thesis supplied) cognitive demand task and low or high experiential demand task.</td>
<td>No significant differences in the students’ essays</td>
</tr>
<tr>
<td>Metviner (1980)</td>
<td>Investigated ‘rhetorical based’ (for publication) and ‘rhetorical deficient’ topics (for a grade).</td>
<td>‘Rhetorical deficient’ topics were more effective.</td>
</tr>
</tbody>
</table>

The available empirical evidence fails to show clearly what the effect(s) of prompt variation on writing tasks (both in processes and products) with text or theme-based prompts
might be in a real testing situation. This lack of empirical evidence warrants further research in regard to text or theme-based prompts in writing assessment: "In fact, in order to reach agreement, consensus would be needed on whether the prompt indeed makes a difference or not to the students' measured level of writing quality." (Hamp-Lyons, 1991, p. 88) Reasons for these discrepancies may be because of limitations that I tried to overcome in the design of the present thesis study:

1. All these studies investigated writing products (i.e., texts produced) but failed to investigate participants' writing processes to determine if or how different prompts may have affected these products.

2. The studies did not analyse participants' scores on subcomponents of their compositions (i.e., writing profile scores), which could have revealed if participants performed differently on the subcomponents of their compositions when they wrote with different writing prompts.

3. The design of these writing tasks were probably not comparable across the various studies. In particular, the researchers did not try to control for all of the six categories of variables that Kroll and Reid (1994) proposed that test developers must take into account and control while preparing prompts for writing tasks: contextual variables, content variables, linguistic variables, task variables, rhetorical variables, and finally evaluation variables. In designing my thesis study I wanted to make sure that the two prompts differed from each other only in providing participants' with content knowledge because I was looking for the effects of content knowledge from reading on their writing performance.
Contextual variables. According to Kroll and Reid (1994) prompt designers should provide examinees with appropriate and clear instructions in testing situations. Examinees need to be informed of all administration procedures. Moreover, both examinees and raters need to be provided with necessary information about scoring scales and the particular institution's criteria for admission or other purposes for using test scores. I considered these variables by providing participants with clear instructions for the two writing tasks in the two thematically-related and thematically-unrelated conditions (see Appendix C) and by assuring the physical conditions for participants to do the two tasks were the same for all people and conditions.

Content variables. Because much of the available literature indicates that background knowledge distinctly affects students' language performance (Alderson et al., 1985; Bachman et al., 1996; Bereiter & Scardamalia, 1984a, 1984b; Carrell & Eisterhold, 1983; Flower, 1991; Hamp-Lyons, 1991; Tedick, 1990), Kroll and Reid (1994) emphasized the importance of selecting and analyzing the topics of prompts in writing tasks. They concurred with Carson and Kuehn (1992), McKay (1989), and Peyton, Staton, Richardson, and Wolfram (1990) that examinees do their writing tasks better when they write about topics they are familiar with. For this reason I asked participants in my study to rate their familiarity with the topics they read about. Examining the effects of content variables was of prime concern in my thesis study. So I undertook detailed content analyses of the reading passages used to prompt participants' writing, using semantic maps (which I describe in Chapter Three).

Linguistic variables. Prompts for writing tasks must be worded clearly and without any potential ambiguity. Kroll and Reid (1994) cited an example from White (1988) who illustrated how one examinee, who apparently was confused about the term "concrete" (in the phrase
"concrete details"), misunderstood the topic and wrote about the making of concrete in the construction business. It is the responsibility of the prompt designer to present a prompt in such a way that is not linguistically or culturally misinterpreted. Hilgers (1982) urged prompt designers to provide examinees with enough information that they cannot misinterpret the prompt. Again, it seems to me that in regards to any potential misunderstanding of the topic, text and theme-based prompts should be of great help to examinees. Being provided with extensive context and background information may prevent confusion. I checked the feasibility of the prompts in my research through a pilot study with ESL learners whose English proficiency was less than that of the people who actually took part in the research.

Task variables. Kroll and Reid (1994) favored compositions with specific and limited writing tasks for two reasons. Firstly, examinees write better with limited writing tasks than with multiple ones and can support their opinions in a short time period. Secondly, it is easier for raters to score writing products with limited tasks more accurately than those with multiple tasks.

Cooper (1984) observed that different topics often required different skills; they made different conceptual demands on the candidates. Cumming (1988) found that different tasks led ESL students to produce slightly different qualities of writing. Similarly, Greenberg (1986) found that the compare-contrast and chart-graph formats required different cognitive and linguistic skills. These differences in tasks for writing relate to differences in genres, which as defined by Grabe and Kaplan (1996), also have an impact on writing performances:

Genres represent ways that groups of writers have managed to solve problems in writing in which conform to general expectations, which facilitate communication for both the writer and the reader, and which provide students with frames suited to communication about different sorts of knowledge and different ways of addressing the reader. (Grabe & Kaplan, 1996, p. 132)
In my research I attempted to assign the same kind of task and genre for writing in the thematically-unrelated condition as in the thematically-related condition (i.e., discussing an issue and giving reasons and examples). Therefore, in terms of tasks, there was no apparent difference between the two prompts that I used in the present thesis study. (I checked this with participants in the pilot study.)

**Rhetorical variables.** Kroll and Reid (1994, p. 239) while acknowledging the multiple meanings of ‘rhetoric’ in the field of composition studies, pointed out that the rhetorical variables in a prompt address the ways in which writers are introduced to ‘the content area of the topic’ and the ways of using information in a prompt in their written compositions. They add that there seems to be a dilemma in regards to this property of prompts. On the one hand, if there is too much specification and a lot of details, most likely all the writing products will appear similar. On the other hand, insufficient information may result in so much diversity that rating procedures may be demanding and inaccurate. A text-based prompt (which I used in the thematically-related condition) makes use of rhetorical variables more than a framed prompt does (which I used in the thematically-unrelated condition). So this is one area of potential difference in the two prompts in my thesis research.

**Evaluation variables.** By evaluation variables, Kroll and Reid (1994) meant that both examinees and raters should be aware of the scoring procedures or criteria for evaluating writing products. They argue that this awareness especially would benefit examinees in that they will write in such a way that they may gain the best results. In other words, their awareness, for example, of how raters weigh content, organization, vocabulary, language use, and mechanics (e.g., as proposed by Jacobs et al., 1981) will put them on the right path to effective writing.
In this thesis study, I provided participants and a second rater with explicit information regarding the evaluation criteria and scoring procedures so that they did not affect the results of participants' writing performance differently in the two conditions.

**How Are Reading and Writing Interconnected?**

To establish what the effects of topic knowledge from reading on writing in an English language test might be I found it necessary to briefly review what previous research and theories have had to say about reading-writing connections and how they have addressed this issue. I first present here various studies done on this topic both in L1 (first language) and L2 (second language) situations. Then I describe three important hypotheses which aim to explain reading-writing relationships in L1 and L2.

**Reading-Writing Connections**

Reid (1993) asserted that in the last two decades most research has treated reading and writing independently. It is only recently that the connection and interaction between these two language skills has been taken into consideration. Reid noted that despite this fact, the research findings in each area have echoed each other:

1. Referring to studies by Carrell (1988), Horowitz (1988), Janopoulos (1986), Rosenblatt (1988), Sarig (1988), Sternglass (1986a, 1986b), Reid concluded that the skills of reading and writing are both processes of making meaning and involve similar patterns of thinking and similar linguistic components. They both involve many subskills (as 'multifaceted complex processes'). They both depend on past experience (background knowledge or knowledge of the world).

2. Both skills trigger schemata about the language, content, and form of the topic. They
both lead to the exploration of those schemata in discovering meaning (Leki, 1993).

3. Both readers and writers have some kind of 'drafts' of meaning in their minds as they begin to read or write. They both continually revise these 'drafts' in the light of 'emerging text' (Straw, 1990).

4. Good writers are usually good readers. This reciprocal relationship between reading and writing has been investigated with both native speakers (Flower & Hayes, 1980; Meyer, 1982; Slotsky, 1983; Tierney & Leys, 1986; and Tierney & Gee, 1990) and ESL students (Carrell, 1987; Janopoulos, 1986; Johns, 1991; and Krashen, 1984).

5. According to Moffat (1968), an interaction between the writer, the text, and the reader helps the writer to anticipate the needs of the reader and the reader to anticipate the author's ideas.

Certain instructional studies in L1 such as Brown and Palincsar (1989) and Scardamalia and Bereiter (1985) have looked for parallel effects of modeling, coaching, scaffolding, and fading on children's reading and writing performances separately. In their 'Reciprocal Teaching' model, Brown and Palincsar focused on students' reading performance, while Scardamalia and Bereiter focused on students' writing performance. Zamel (1992) also observed that only recently have the reading-writing connections become an area of interest in language studies. She contended that there is a presumptuous belief in regards to their relationship: "Despite recent attempts to make connections between reading and writing, these efforts are such that we presume that reading is what makes it possible for us to write rather than the other way around."

(Zamel, 1992, p. 468) Zamel (1992, p. 481) pointed out that reading and writing are both 'acts of knowing' and complement and enhance one another.
Three Hypotheses about Reading-Writing Connections

Eisterhold (1990) viewed the L1 reading-writing relationship from three perspectives. From a directional perspective, reading and writing share 'structural components'. These components can be applied from one modality to another. This perspective supports a reading-writing model. That is, reading prior to writing enhances writing. Eisterhold added that Eckhoff's (1983), Taylor and Beach's (1984), Stotsky's (1983), and Belanger's (1987) studies support the directional hypothesis.

According to Eisterhold, from a nondirectional perspective, reading and writing derive from a 'single underlying proficiency'. Based on this interactive model, what links reading and writing is 'the cognitive process of constructing meaning'. She cited Shanahan (1989), Gordon and Braun (1982), and Hiebert, Englert, and Brennan (1983) as evidence for this model of the reading-writing relationship.

In a third model, the bidirectional hypothesis, reading-writing are both interactive and interdependent. Referring to Shanahan (1984), Eisterhold emphasised the 'interrelated processes' that govern the reading-writing relationship. Eisterhold cited Shanahan and Lomax's (1986) study as evidence for this hypothesis or model of the reading-writing relationship. In Chapter Six of the thesis, based on the data gained in this study, I argue in favour of a bidirectional hypothesis of the L2 reading-writing relationship.

Eisterhold claimed that these models can be applicable in L2 as well. However, she believed that the transferability of literacy skills from L1 to L2 acts as an individual factor in studying the reading-writing relationship. Three components of these models have to be considered when talking about the transferability of literacy skills: (a) reading and writing as
cognitive processes, (b) the underlying components of reading and writing, and (c) 'the mechanism' that makes it possible that the processes and components be transferred across modalities and languages.

In the same manner, Tierney and Shanahan (1991) pointed out that research and theories on reading-writing relationships fall into three categories: (a) the shared knowledge perspective: it is assumed that readers and writers use the same process in making meaning of a text (in reading) and in creating meaning (in writing); (b) the transactional perspective: it is believed that readers and writers consider authors’ ways of constructing meaning and readers’ needs; and (c) the collaborative perspective: the ‘cognitive dimensions’ of reading and writing are emphasised. According to Meyer and Freedle (1984), all these findings have had important pedagogical implications. They have led to the emphasis of successful reading prior to effective writing as well as an emphasis on writing as a means of students gaining deeper understanding of what they read.

Writing Strategies

In this study I used Grabe and Kaplan’s taxonomy of writing strategies to develop a checklist (see Chapter Three) for eliciting participants’ reports on the writing strategies they had used in the condition when their reading and writing tasks were related thematically. Grabe and Kaplan (1996) based much of their taxonomy on the writing process research and models of Flower and Hayes and of Bereiter and Scardamalia. In this section, I first review these models of writing processes then I describe summarizing and synthesizing as two broad writing strategies that are used when reading and writing tasks are related thematically.

91) Flower and Hayes’ theory of the writing process has three hypotheses:

. composing processes are interactive, intermingling, and potentially simultaneous;
. composing is a goal-directed activity;
. expert writers compose differently than novice writers.

The model consists of three major components: (a) the composing processor with the three operational processes of planning (generating ideas, organizing information, and setting goals), translating the ideas into ‘the language on page’, and reviewing (evaluating and editing); (b) the task environment, which interacts with the composing processor, with the two subcomponents of the rhetorical problem (‘topic and audience exigency’) and ‘text produced so far’; and (c) the writer’s long-term memory (knowledge of topic, audience, and writing plans).

Grabe and Kaplan pointed out that Flower and Hayes’ model of the writing process has been a dominant theory in composition research for more than a decade. However, it has also been criticized on several accounts: (a) the theory does not consider writers’ different ‘processing preferences’ and strategies in approaching and employing a writing task; (b) the elaboration of the model is ‘vague’, particularly the ‘translating’ component. It is not clear how the text is constructed and what linguistic constraints impose on the text construction; and (c) because the theory is based primarily on think-aloud protocol analyses in certain kinds of writing tasks only, it might not be a comprehensive theory of the writing process.

**Bereiter and Scardamalia’s knowledge-telling and knowledge-transforming models.**

According to Grabe and Kaplan (1996), Bereiter and Scardamalia’s theory of the writing process is based on the assumption that different processing models are needed to account for the processes writers perform at different developmental stages of writing. The knowledge-telling model of the writing process is used by less skilled writers. Grabe and Kaplan (1996, pp. 120-
explained that its processing, retrieval, and evaluation demands are "fairly simple":

In this model, information is generated from the assignment, the topic, the genre, and any terms or lexical items in the assignment. Idea identifiers are retrieved and memory is searched for relevant information. If retrieved information seems appropriate to the topic, the information should be written down and used (together with material retrieved through the previously identified strategies) to search memory for more things to say. The processing demands are fairly simple in this model, as are the retrieval and evaluation demands.

In this model writers mainly rely on a few strategies: (a) considering the topic and the genre of the assignment and (b) reading what has just been written to generate additional content.

Grabe and Kaplan (1996) stated that the knowledge-transforming model is intended to account for writing tasks which demand a more complex processing with considerations of information ordering and its relative importance, audience expectations, and organizing arguments in a logical way. This model has the knowledge-telling model as one of its components:

In this model, the writing task leads directly to problem analysis and goal setting. The resulting goals and problem anticipation lead to plans for the resolution of the perceived problems, whether they be problems of content generation, content integration, audience expectation, writer intention, genre form, linguistic style, organizational logic, etc. The resolution of one problem may create another. Thus, generating additional content (solving a content problem) may lead to a new rhetorical problem of how to organize the new information best in the light of the previously presented information. As problems become resolved they feed to the knowledge-telling component which generates the writing. (Grabe & Kaplan, 1996, p. 123)

Grabe and Kaplan believe that the Berieter and Scardamalia's theory of writing processes fails to account for (a) the effects of context on the writing process, (b) how and when writers make their cognitive transition from one model (knowledge-telling) to the other (knowledge-transforming), and (c) the unequal accessibility of the more complex writing process to all individual writers.
**What is summarizing?** Rumelhart (1977, pp. 277-303) and Kintsch and van Dijk (1978, pp. 372-374) defined summarizing as the act of ‘trimming’ the constituent structure of a text and leaving only the major constituents so that the meaning of the text is condensed into its gist. They declared that summarizing consists of (a) deleting, (b) generalizing irrelevant or redundant propositions, and (c) constructing new propositions. Therefore in summarizing some information (from the original text) is reproduced and some is generated (‘generation of plausible inferences’).

Brown and Day (1983) investigated this notion of summarizing and expanded it into six summarization strategies: (a) deleting trivial information, (b) deleting redundant information, (c) substituting a ‘superordinate’ term for several items or actions, (d) substituting a ‘superordinate’ action for its subcomponents, (e) selecting a topic sentence from the text, and (f) inventing a topic sentence.

**What is synthesizing?** Spivey (1990) categorized synthesizing as (a) organization: readers/writers organize the information in the reading text in their written compositions; (b) selection: readers/writers adopt some criteria such as ‘textual relevance’ and ‘intertextual relevance’ (some common information across texts) for choosing the important points in a reading text; and (c) connection of content: when reader/writers use their own background knowledge in a reading-writing task. Stein (1990) listed some demands that writers face in synthesizing, such as reading and understanding different materials on the topic, comparing and contrasting similarities and differences in the source materials, finding ways of applying background knowledge, deciding on important points, formatting, and the usual demands of a writing task.
Carson (1993) asserted that while much research on summarizing has been done by reading researchers, research on text synthesizing has been the focus of writing researchers. She preferred 'synthesizing' to 'composing from sources' used by Spivey (1990), saying that 'composing from sources' fails to convey the bilateral effects of reading and writing. Carson observed that little L2 research has been done on reading for writing and on the ways people use source materials from reading in their writing. The present thesis study investigated this issue, sensing it to be integral in understanding better how these concepts function in English language tests.

Research Methods

I selected the research methods for this thesis study for their potential to provide detailed information on the issues discussed previously in this chapter. These were oral summary recall protocols (used for measuring participants' reading comprehension); a within-subjects design (used to control for person variables); and structured interviews and retrospective verbal reports (used to document participants' perceptions of the reading and writing tasks and the strategies they used to write in reference to a reading passage). I have already discussed (on pages 21-22), the analytic rating scales I used to evaluate the quality of multiple traits of participants' written compositions in English.

Oral Summary Recall Protocols

I used oral summary recall protocols as tools for measuring participants' reading comprehension. According to Horiba et al. (1993), when a text is understood, there is a 'coherent representation' of it in memory. Raymond (1993) asserted that the meaning of a text is 'reconstructed' in the reader's mind and it is reflected in the extent and accuracy of the person's
recall: “Comprehension involves the construction of a text base. A text base is a set of propositions in the writer’s or speaker’s mind.” (Raymond, 1993, p. 11) Apparently, recall without understanding is implausible. So, recalling is an indication of comprehension and an appropriate tool for measuring one’s reading comprehension.


Traditional analyses of protocols are quantitative and attempt to measure the amount of information recalled in relation to the original text. Quantifying comprehension is achieved by breaking the original text in idea units or propositions and checking the recall against this list of idea units. (Roebuck, 1998, p. 7)

**Within-Subjects Designs**

I applied a within-subjects design in this study. I counterbalanced and randomized the conditions in which participants did the tasks to minimize potential order and carry-over effects as much as possible. Within-subjects or repeated measures designs are applied to obtain detailed, comparative data from the same participants each performing different tasks in research studies. In this way, the task variables form the basis for analyses, rather than differences in the participants.

However, possible order and carry-over effects are real threats to the validity of these
designs. Keppel (1973, pp. 394-395) stated that the main advantage of repeated-measures designs is the control of subject 'heterogeneity' or 'individual differences'. He added that the main disadvantage or difficulty with these designs, however, is 'the very possibility of carry-over effects' from one condition to another. He suggested that these designs be counterbalanced and that the order of treatments or conditions be randomized. Stevens (1992, pp. 441-442) also contended that 'increased precision' (smaller error terms) and 'economy of subjects' (the fact the same participants do all the tasks so that fewer are needed) are the two major advantages of repeated measures designs. He referred to possible order effects as potential disadvantages of these designs. He added, however, that order effects can be avoided by counterbalancing. Hand and Taylor (1987) declared that since each participant has several observations, the multivariate repeated measures analysis of variance is the appropriate statistical procedure for within-subjects designs.

**Structured Interviews and Verbal Data**

In the present thesis study I interviewed participants to elicit their verbal reports of (a) their writing strategies in a condition when the reading and writing tasks were related thematically; (b) their attitudes towards the use of reading and writing modules in an English language test; and (c) their self-assessments of their familiarity with a reading passage. I also tape-recorded their oral summary recall protocols of two reading passages to assess their reading comprehension. I transcribed, analyzed, and scored the verbal data.

**Structured interviews.** Churchill (1978), from a sociological perspective, defined interviews as measurement devices for collecting valid and reliable information. Merton et al. (1990, pp. 15-16) described three levels of structure for interviews: (a) unstructured questions: when the
stimulus and response are free (e.g., What impressed you most in this film?); (b) semistructured questions: when the response is structured, but the stimulus is free (e.g., What did you learn from this pamphlet which you hadn’t known before?) or when the stimulus is structured, but the response is free (e.g., How did you feel about the part describing Joe’s discharge from the army as a psychoneurotic?); and (c) structured question: when the stimulus and response are structured (e.g., Judging from the film, do you think that the German fighting equipment was better, as good as, or poorer than the equipment used by the Americans?). In the present study I made use of interview types ‘b’ and ‘c’. Some of the questions were structured and sought open responses (e.g., What were you thinking when you wrote this paragraph?) and some were structured and required structured answers (e.g., How did you feel when you knew that your writing task would be related to the text that you read?). My intention for the first type of questions was to allow participants freely to reveal the strategies that they used when the writing task was related thematically to the reading task. The second type of question aimed to provide complementary information regarding participants’ attitudes towards the thematic link between reading and writing tasks in the thematically-related condition.

Verbal data. Cohen (1994, pp. 680-681) described how verbal reports can be ‘valuable’ and ‘thoroughly reliable’ sources of information about people’s cognitive processes in a second language if they are carefully elicited and interpreted while considering the circumstances under which they are obtained. But Cohen also acknowledged that critics suggest verbal reports have numerous problems such as the inaccessibility of much cognitive processing, respondents’ tendency to produce socially acceptable data (i.e., what the researchers seems to want), their intrusive effects on respondents’ normal task performance, their variations resulting from the
type of given instructions, and their dependence on respondents' verbal skills. For some of these reasons, I used retrospective, rather than concurrent verbal reports, and I have treated these data in a very exploratory way, assuming they offer insights into the cognitive processes I was investigating rather than confirmations of any specific theoretical models.

Summary

New developments and trends in performance language assessment, particularly the thematic connection between two or more components of the English language tests, have been developed and widely used. But their use has brought up various concerns about their construct, content, and predictive validities as well as fairness. These concerns reflect numerous interrelated issues. What is really assessed? What do ESL students' writing products show when test developers attempt to provide them with academically relevant information in the form of a reading-writing connection? How does the component dependency affect ESL students' English language performance? What are ESL students' attitudes towards using reading and writing modules or themes in English language tests? How might familiarity with a topic affect ESL students' reading and writing performances in such English language tests? This study aimed to address these concerns and issues in a simulated testing situation.
CHAPTER THREE

METHODS

I start this chapter by describing participants' characteristics, the instruments used, and design of the study. Then I explain why and how I did a pilot study, its results, what I learned from it, and how it helped me to address some of its flaws in preparing for the main study. Finally I describe the procedures, coding, rating, and data analyses of the main thesis study. The research questions guiding the study were presented previously on pages 12-15 in Chapter One.

Participants

Thirty-four first year engineering students taking ESL writing courses at two universities in southern Ontario took part in the study as paid volunteers. I selected participants from among first year engineering students for convenience and to ensure they had some degree of homogeneity. They had already met their university prerequisite for an acceptable level of English language proficiency by taking TOEFL or another English language proficiency test and had been placed in ESL writing courses at approximately an intermediate level. Thirty-one of the participants had been given an in-house English language proficiency test consisting of summarizing the contents of a short article, followed by writing an essay on a related topic. Those at the top of the proficiency scale had moved into a writing class for native or native-like speakers; those in the middle had moved into a course for ESL writing (i.e., the participants in this study); and those at the bottom had been placed in a different course for ESL writing. The initial evaluations of participants' ESL writing had been done by the coordinator of the ESL courses at the Engineering Faculty. The other three participants, who were studying at a different nearby university in southern Ontario, were also first year engineering students taking
intermediate ESL writing courses at the time of their participation in the study.

There were 7 females and 27 males with seven different mother tongues: Mandarin (8 people), Urdu (9 people), Cantonese (5 people), Farsi (6 people), Hindi (3 people), Arabic (2 people), and Vietnamese (1 person). Table 3.1 summarizes these characteristics.

Table 3.1. Characteristics of Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>27</td>
<td>79.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>Mother Tongue</td>
<td>Mandarin</td>
<td>8</td>
<td>23.5</td>
</tr>
<tr>
<td></td>
<td>Urdu</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>Cantonese</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>Farsi</td>
<td>6</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>Hindi</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Arabic</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>Vietnamese</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>34</td>
<td>100</td>
</tr>
</tbody>
</table>

In this thesis study I did not analyze variables such as gender, L1, or ESL proficiency for three reasons: (a) there were not enough volunteers with the same L1s or gender to form separate groups which could be relied on for statistical analysis. (b) I assumed the within-subjects design of the research would counter any variation that might arise from people’s L1, gender, or English language proficiency. and (c) as mentioned above, participants had already taken a placement test that had grouped them at approximately an intermediate level of English language proficiency. They had taken TOEFL in 1997-1998 or other English language tests as a requirement for admission to their undergraduate program. Their TOEFL scores, as reported by them, were
spread over a range of 500 to 637.

The intention of inviting a few Farsi speakers to participate in the study was to have them generate summary recall protocols of the two reading texts and interviews in Farsi, my mother tongue. My assumption was that their comprehension of the reading texts could be better assessed through their mother tongue and that in this mode they could more easily document for me their writing strategies in more detail, and consequently yield more information.

**Instruments**

**Reading Texts, Essay Prompts, and Tasks**

Two publicly released UCLA Subject A Examinations (May 1989 and May 1992, University of California, 1995) were the main materials for this study. These tests were not ESL tests: however, they were good, previously validated samples of L1 composition tests in which the reading texts serve as the prompts of writing tasks. In practice, many ESL students, like the engineering students who participated in my study, had written them. The reading passages (a) were long enough to be used for the purpose of my research and (b) had relatively sophisticated vocabulary and language structures suitable for an intermediate level of English proficiency and academic contexts:

The Universitywide Subject A Examination provides students with a prose passage of some 700 to 1,000 words. This passage concerns an issue accessible to all freshmen, although it may include some perspectives or information that will be new to them. The passage is of the level of difficulty encountered in beginning University courses, and may be drawn from any of a number of disciplines. (University of California, 1995, p.1)

The original tasks for writing had been worded in a way that required examinees to use both the reading passages and their own examples and arguments in their written compositions. Table 3.2 summarizes some of the reading texts' properties and shows the condition in which
each of them were used in the study.

<table>
<thead>
<tr>
<th>Title</th>
<th>Condition in which the text was used</th>
<th>No. of words</th>
<th>No. of sentences</th>
<th>Average word length</th>
<th>Average words per sentence</th>
<th>Maximum words per sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Group Minds&quot;</td>
<td>Thematically-unrelated</td>
<td>816</td>
<td>77</td>
<td>5</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>&quot;Some Close Encounters of the Mental Kind&quot;</td>
<td>Thematically-related</td>
<td>888</td>
<td>90</td>
<td>5</td>
<td>10</td>
<td>21</td>
</tr>
</tbody>
</table>

Attached to each of the texts was a task for writing which required students to discuss or argue an issue related to the reading text (see Appendix C). I used the same task for writing in the thematically-related condition as was in the original test because it was directly related to my research questions. The task was:

How does the author attempt to shake our belief in the credibility of what we see or remember? To what extent does his essay convince you to doubt what people perceive and remember? To develop your essay you should discuss specific examples from your own experience, your observation of others, or your reading - including "Some Close Encounters of a Mental Kind" itself.

However, for the thematically-unrelated condition I had to use a different task for writing than was in the original test since it could not be related thematically. The framed prompt and task that I selected had been used in another English language proficiency test for admission purposes at a Canadian university (see Appendix C). In using this second prompt and task for writing I had in mind the effects of tasks on students' writing performance as argued in the published literature described in Chapter Two, and I intended to have a comparable type of writing task as in the thematically-related condition, which rhetorically involved discussing a viewpoint and giving examples to support the argument. Moreover, I wanted to use a task in the
thematichally-unrelated condition that would not disadvantage in any obvious way any of the participants who were studying engineering. I only counter-balanced the order of people’s doing the reading and writing tasks in the two conditions and not the tests themselves because I did not want to distort the integrity of the original test used in the thematically-related condition. The same reading passage was used in each condition, namely, ‘Group Minds’ in the thematically-unrelated condition and ‘Some Close Encounters of the Mental Kind’ in the thematically-related condition. The framed prompt and the task for writing were:

Some people believe that modern technology has caused some terrible damage to the natural environment. They think this process can result in a global crisis. [prompt] What do you think? Do you think in order to support the natural environment we should try to keep away from modern technology and stick to traditional ways of life? Discuss this issue and give your examples. [instructions for writing task]

During the pilot study (described below) I asked participants if they noticed any differences between the two tasks for writing and if they found one more difficult than the other. They declared that they did not see any difference between the two tasks in terms of difficulty. Their understanding of the tasks convinced me of the similarity in the two conditions, at least impressionistically. Both tasks required participants to discuss how they thought about an issue and to support their arguments by giving examples. They were parallel tasks rhetorically in that they both required discussing an issue and giving examples. Presumably the examining committee at UCLA had considered the two reading passages to be equivalent as well.

**Structured Interviews**

I administered a structured interview, which I had piloted initially, immediately after participants wrote their compositions in the thematically-related condition. The interview questions aimed to elicit students’ accounts of their writing strategies for the writing task related
thematically to their reading task; whether they used any specific words from the reading text; and their attitudes toward the use of reading and writing modules in the thematically-related condition. There were four main questions. In practice, I had to ask a lot of follow-up questions in order to elicit the information that I needed. The four questions were:

1. What did you think about when you wrote this paragraph?
2. When writing, did you think about the reading you had done previously to writing? In what ways? Please give details.
3. How did you feel when you knew that your writing task would be related to the text that you read?
4. Did you use any particular words from the reading text in your writing?

The first two questions were to elicit information about participants’ thoughts and strategies as much as possible. At times during the interviews I had to ask some follow-up questions to encourage participants to express themselves efficiently or to make their statements clear, or I interrupted them if they were diverging from the purpose of the questions. For instance, I asked: ‘What are those words?’ or ‘Were you comfortable? Happy?’. In short, I was flexible in asking to elicit information of those participants who did not provide initially what I was looking for (see Appendix D for a transcribed sample of one of these interviews).

**Checklist of Writing Strategies**

While doing the pilot study I noticed that participants were not able to articulate their writing strategies very well in the retrospective interviews. I came to the same conclusion when I asked a few of my colleagues to write for me their possible writing strategies if they were to write about a topic which was related thematically to a reading text. They just indicated, in a very broad way, that they would try to use the reading resource as much as possible. They specifically mentioned that they would use some of the words, structures, and ways of presenting arguments
from the text. This observation was similar to Bereiter and Scardamalia’s (1987, p. 62) observation in an L1 context when children needed some ‘sentence openers’ to stimulate them to ‘search for new nodes in memory’. As described in Chapter Two, I did not want to use concurrent verbal reports because I wanted to simulate a testing situation without distorting participants’ behavior unduly (cf. Cohen, 1994).

So I decided on an alternative approach to probe into the strategies that people used when writing in reference to a reading passage, based on a checklist of general writing strategies culled from the available research literature. I opted primarily for the list of writing strategies presented by Grabe and Kaplan (1996, p. 222) based on their review of recent research on this topic. Based on those strategies and the ones mentioned subsequently by my colleagues and participants in the pilot study (see below), I developed a checklist of 26 items of writing strategies in question form with three options to be checked off by participants as ‘yes’, ‘no’, and ‘not sure’.

I piloted the checklist by asking two ESL students taking ESL courses and five Ph. D students studying Second Language Education who had ESL and EFL teaching experiences to read the checklist and let me know of any vague items and if they thought some items should be revised. I carefully read and discussed their comments with them. After refining the checklist, I went over it with my supervisor and I implemented his suggestions as well, which led to the final version of the checklist used in the study (see Appendix E). My intention was to ensure that I would get to participants’ writing strategies even if they failed to independently articulate some of them themselves during their interviews.

In practice, I used the checklist as a structured, retrospective interview. I asked participants to explain to me why they chose each of the three options, for example:
Item No. 11. Did you have any weaknesses in writing the essay?
P. ....
R. Please give examples.
P. ...

Item No. 22. Did you accept or reject the author's point of view?
P. ....
R. Please explain why.
P. ...

Sometimes I asked them to write about their choices under the questions on the checklist.

In fact some of the items required participants to do so, as in the following:

Item No. 3. Did you notice any problems when you created additional content? Please explain.

Item No. 4. Did you have any problems while writing about this particular topic? Please describe.

Item No. 5. Did you consider different options? What did you decide to do? Did you come up with one or more ways of solving the problem? Please describe.

I used those responses as data as well.

Attached to the checklist there was another sheet with three questions:

1. Were you familiar with the topic? Please circle a number:

   Very Familiar 5 4 3 2 1 Not Familiar at all

2. Did you ever take TOEFL or any other English language proficiency test? When?

3. What was your most recent score on that test? When was that?

My intention here was to gather data that would help me to see whether familiarity with the reading text or participants' range of TOEFL scores or their scores on any other English language proficiency test could have any effects on their reading and writing performances in the thematically-related condition.
Procedures for Data Collection

To solicit participants, I needed to get both administrative consent from the Dean’s office of the faculty and consent from the ESL program coordinator. First I contacted them through e-mail. Then I met them in person and submitted a copy of my ‘Letter to Solicit Participants’ (Appendix F) which described the study in brief and which I would later distribute among students. I got their consent after describing my research questions, procedures, and the tasks that I would expect students to do.

I visited several classes where my colleagues taught ESL writing courses. Before the instructors began their routine schedules, they introduced me to their students and I explained to them the tasks and what I was looking for. I distributed copies of my ‘Letter to Solicit Participants’ and asked them to read them and sign an attached letter if they were interested in taking part in the study. I offered to pay them $25 (Canadian) for their participation. Several students from each class returned their signed consent letters with their e-mail addresses and their phone numbers.

As nobody showed up after one week, I called them and offered to pay $50 for their participation in the study. I also told them that they could do the tasks at any time either during weekdays or weekends. They came to my office mostly during the weekends. Sometimes two or three of them came at one time, so I placed them in separate rooms. It usually took me 10 to 15 minutes to explain them the purpose of the study and to orientate them with the tasks. This gap between the starting time and the fact that they began with a different condition allowed me to interview them individually, immediately after doing their tasks in the thematically-related condition.
All participants individually did two reading and writing tasks in the two (thematically-related and thematically-unrelated) conditions in one of two orders (A or B) in a simulated testing situation. They did not have access to the reading texts during the writing process. Half of them, randomly selected, were given one of the reading texts. (I had put the tests in two different formats but in one pile and with equal numbers for the two conditions in my desk drawer. Each time a participant showed up I picked up one test without knowing to which condition it belonged.) I asked them to read the text, orally summarize it (by citing as much as they could recall) in English, and for Farsi speakers in Farsi (though one Farsi speaker said that he was not able to recall in Farsi and preferred to have his summary recall protocols in English), then write one and a half pages (three to four paragraphs) in thirty-five minutes about a task which was related thematically to the information given in the reading text (thematically-related condition).

To deepen my understanding of participants’ writing strategies I interviewed them in English, and Farsi speakers in Farsi, about their writing strategies and asked them to answer the questions in the checklist. I was sitting next to them to answer their questions and explain any part that might seem vague or needed explanation. At times I asked them to explain their choices or to write some comments about their choices on the checklist sheet.

The other half of the participants read another reading text, provided me with their oral summary recall protocols in English; and for the Farsi speakers in Farsi, then wrote one and a half pages (three to four paragraphs) in thirty-five minutes about a topic which was not related thematically to the information given in the reading text (thematically-unrelated condition).

Then, participants were asked to do the other reading and writing tasks. Those first doing
the reading and writing tasks in the thematically-related condition then took the other reading and writing tests (wherein the writing task was not related thematically to the reading text: the thematically-unrelated condition). Those who first did the thematically-unrelated condition then did the reading and writing tasks in the thematically-related condition (the writing task was related thematically to the reading text). I let participants know in advance that the reading and writing tasks in the thematically-related condition were related thematically and that they were not related thematically in the thematically-unrelated condition. This is what happens in English language tests which make use of reading and writing modules or themes. In those tests, applicants are informed in advance whether two or more components of the test are related thematically to each other.

I tape-recorded and afterwards transcribed all summary recall protocols and interviews. I also translated the Farsi ones into English. These translated ones were checked by a Ph.D. student studying Second Language Education whose first language was also Farsi. Each session lasted almost three hours (including a break), during which I provided participants with some refreshments. Table 3.3 summarizes the research design of the study.
Table 3.3. **Design of the Study and Data Collection Procedures**

**Order A.** Seventeen participants did their tasks in this order:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Task Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thematically-related</td>
<td>a) Reading &amp; Summarizing (40 minutes)</td>
</tr>
<tr>
<td>condition:</td>
<td>b) Writing (the task was related thematically to the reading text) (35 minutes)</td>
</tr>
<tr>
<td>Thematical-unrelated</td>
<td>a) Reading &amp; Summarizing (40 minutes)</td>
</tr>
<tr>
<td>condition:</td>
<td>b) Writing (the task was not related thematically to the reading text) (35 minutes)</td>
</tr>
</tbody>
</table>

**Order B.** The other seventeen participants did their tasks in this order:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Task Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thematically-unrelated</td>
<td>a) Reading &amp; Summarizing (40 minutes)</td>
</tr>
<tr>
<td>condition:</td>
<td>b) Writing (the task was not related thematically to the reading text) (35 minutes)</td>
</tr>
<tr>
<td>Thematically-related</td>
<td>a) Reading &amp; Summarizing (40 minutes)</td>
</tr>
<tr>
<td>condition:</td>
<td>b) Writing (the task was related thematically to the reading text) (35 minutes)</td>
</tr>
</tbody>
</table>

**The Pilot Study**

To try out the tasks, administration, feasibility, and potential coding and rating schemes, three Korean ESL students with approximately an intermediate level of English language proficiency took part in a pilot study. Their level of English language proficiency was determined impressionistically by their English teacher. They did the tasks of reading, summarizing, and writing in two thematically-related and thematically-unrelated conditions.

Because of the very small sample (three participants), I only tried out the statistical procedures that I would follow afterwards in doing the main study. The analyses did not reveal any significant difference between the two tasks and the two conditions. However, the data from
the structured interviews supported my assumption that ESL students made use of the given information in the reading texts in their writing tasks when a writing task was related thematically to a reading passage.

These participants had positive attitudes towards the use of reading and writing modules in the thematically-related condition. They also acknowledged that they used some words from the reading text in their writing tasks. In the main study, I probed more carefully into people's use of the words from the reading text in the thematically-related condition by asking participants to indicate exactly which words they had used.

**Some Drawbacks of the Pilot Study**

The pilot study helped me to identify some drawbacks which could affect the validity of the main study. The drawbacks, and the ways that I addressed them in planning for the main study, were as follows:

1. Participants were tested together. So, I was not able to instruct them individually and introduce them to the tasks appropriately. I also had to ask two other graduate students to interview participants and this caused some discrepancy in terms of eliciting the information needed to answer the research questions. In the main study, participants were tested individually and I interviewed them myself through a structured interview.

2. I asked participants to write the main and supporting ideas in the reading text as a tool for assessing participants' reading comprehension. But this technique did not adequately reveal people's comprehension of the reading texts. They all demonstrated (in the interviews and their writing when the writing task was related thematically to their readings) that they had a good understanding of the reading text but they varied a lot in
the ways they wrote out the main and supporting ideas of the text. I feared their writing ability or English proficiency was confounded with their abilities to report on their reading comprehension in this mode. For this reason, in the main study, I used oral summary recall protocols instead of written summaries for measuring participants’ comprehension of the reading texts.

3. In the pilot study, I only analyzed participants’ global writing scores, which seemed too imprecise for my purposes. In the main study, I rated participants’ writing profile scores for their compositions then analyzed these through a repeated measures MANOVA to identify their variations from their reading scores in the thematically-related condition and if they were significantly different in the two conditions.

4. Participants did not report adequately on their writing strategies when they wrote in the thematically-related condition. In the main study, I tried to explain the purpose of the study to participants in detail, and I used a checklist and follow-up questions to help them express themselves more efficiently. I had anticipated (based on the piloting described above and Grabe & Kaplan, 1996, p.222) that their strategies would be among the following:

- A. Monitoring text production
- B. Generating additional content
- C. Considering task problems
  1. Audience considerations
  2. Purpose considerations
  3. Rhetorical considerations (discourse knowledge)
  4. Problems created by additional content
  5. Language of preference for problem consideration
- D. Using invention strategies, ‘topics’, brainstorming, free writes
E. Considering alternative solutions
F. Re-reading already produced texts
G. Using reading resources (texts)
H. Rejecting content/rhetorical information/alternatives
I. Holding in storage content/rhetorical information
J. Summarizing/paraphrasing/recording information
K. Predicting future outcomes to match goals
L. Using notes/outlines/drawings/other self-created materials [not relevant to this study]
M. Getting assistance [not relevant to this study]
N. Reassessing/changing goals
O. Recognizing mismatch with processing goals, author’s intentions
P. Editing texts
Q. Reassessing content/rhetorical revisions
S. Getting feedback from others [not relevant to this study]
T. Considering individual style concerns (voice)

In sum, the pilot study helped me to realize that I needed to refine my procedural techniques for interviewing, scoring compositions, assessing participants’ reading comprehension, and investigating their writing strategies in the theme-related condition.

**Preparation of Data and Coding**

I had two kinds of data to code: (a) tape recorded interviews which I transcribed (then translated the Farsi ones into English) and (b) the written checklist of writing strategies submitted by each participant.

**Coding Interviews**

Transcripts of participants’ responses to the first two questions of the interviews needed to be segmented then coded because they sought participants’ open-ended accounts of their writing strategies in the thematically-related condition. I segmented these verbal interview data as Bainbridge (1985, p. 203) suggested. I considered mentions of writing strategies as units of analysis whether they were in a sequence of separate phrases or group phrases. I used the 26
writing strategies in the checklist (Appendix F) as anchors for coding the transcribed data. I used the interview data in the form of examples to supplement the writing strategies in the checklist. A second coder, one of my colleagues doing an M.A. in Second Language Education with extensive experience in coding qualitative data, coded 20% of the interviews (92 segments or units, each considered as a writing strategy). The percentage agreement score between the two of us was 90%. I used the following formula from Chaudron et al. (1988) to get a percentage agreement score: \( \frac{Na}{(Na + Nd)} \times 100\% \), where ‘Na’ is ‘number of agreements’ and ‘Nd’ is ‘number of disagreements’.

I coded the transcripts of participants’ responses to the third question, which sought their feelings about the reading and writing tasks in the thematically-related condition, as either positive, indifferent, or negative attitudes towards the use of a reading and writing module in an English language test. I also tallied the most frequent words that they used from the reading text (from the transcripts of their responses to the fourth question in the interviews).

**Exploratory Factor Analyses**

The checklist consisted of 26 items with three options for participants to check off. The options were ‘yes’, ‘no’, and ‘not sure’. To see if there were some underlying factors (writing strategies) accounting for the items in the checklist, and to reduce the lengthy list of 26 strategies to a more parsimonious number, I ran exploratory factor analyses on the written checklist submitted by each participant. After having exhausted 4, 5, 6, and 7 factors and finding that several items did not load on any of them, and knowing that the 26 items of writing strategies in the checklist would spread over a number of different factors because they manifested a wide range of interrelated strategies, I chose to run factor analyses with 8 factors. This number of
factors was in accordance with Tabachnick and Fidell's (1996) recommended procedure of estimating the number of factors in such circumstances as well:

The number of components [factors] with eigenvalues greater than 1 is usually somewhere between the number of variables divided by 3 and the number of variables divided by 5 (e.g., 20 variables should produce between 7 and 4 components with eigenvalues greater than 1). (Tabachnick & Fidell, 1996, p. 672)

The extraction method was Principal Axis Factoring. The rotation method was Varimax with Kaiser Normalization. I considered a loading of ±.30 or above to be a substantial link between each item (writing strategy) and a factor. I named the eight factors based on the loadings of writing strategies (variables). Each factor consisted of four to seven strategies.

**Scoring**

**Rating Compositions**

Participants' compositions all were rated by two raters (a Ph.D. in Second Language Education and me) based on Hamp-Lyons' (1991) nine-point rating scale. Before rating we had a short meeting to review the rating scale, discussing some of the criteria and how we would approach the task. I made a mixed pile of compositions from the two conditions and presented them to the second rater in order to avoid any bias resulting from the condition in which they had been written. I also asked him not to penalize students' scores if they used phrases or ideas from the reading texts. We agreed that based on Hamp-Lyons' rating scale participants' 'giving wrong information' would affect their scores on 'communicative quality' and 'argumentation' of their essays as it would be 'insensible' and 'irrelevant'.

We gave each composition a global score and five profile scores for Communicative Quality, Organization, Argumentation, Linguistic Accuracy, and Linguistic Appropriacy.
inter-rater reliability (using Cronbach's alpha formula for calculation) for the global scores was .95. For each of the profile scores it was: Communicative Quality .89, Organization .95, Argumentation .89, Linguistic Accuracy .90, and Linguistic Appropriacy .92. Most of the discrepancies in our ratings were resolved by consultations between me and the second rater. There were 8 cases on which I made a final decision.

**Scoring Summary Recall Protocols**

**Semantic maps.** To score transcripts of participants' oral summary recall protocols, I prepared semantic maps of the two reading texts and a scoring scheme for each of them. As a preliminary step, I asked three M.A. students, all English native speakers, to read the texts and write for me the main and supporting ideas. One of them, who taught an English course to a grade 12 class of English native speakers at high school in Ontario, gave the texts to her students and asked them to write the main and supporting ideas. I read all the responses and came up with a map of main and supporting ideas for each text.

In applying these maps for assessing and scoring participants' reading comprehension of the two reading texts in the pilot study, I noticed that they were not appropriate indicators of people's reading comprehension. Participants' compositions in the thematically-related condition and their responses to the interview questions revealed that they had understood the text far better than their scores on writing the main and supporting ideas of each text showed. I needed a more comprehensive semantic map for each reading text to use as a tool for assessing participants' reading comprehension in the main study.

So I asked three of my Ph.D. colleagues, who were English native speakers, two of whom had extensive ESL and EFL teaching experiences, to read the reading texts and write a semantic
map for each of them. I asked them to consider all the idea-units that they found in the texts. I explained to them that I would use those maps to score students’ reading comprehension. Each person came up independently with two semantic maps. I compared the three maps for each reading text and compiled and integrated them into one in which no idea-units indicated by any of my three colleagues was excluded. This produced comprehensive semantic maps of the reading texts, as shown in Figures 3.1 & 3.2. Figure 3.1 is the map of the reading text which I used in the thematically-unrelated condition (Group Minds). Figure 3.2. is the map of the reading text used in the thematically-related condition (Some Close Encounters of the Mental Kind). My supervisor and I reviewed the final maps and decided on the scores for each unit. We decided, for the sake of equivalency, to have a total score of sixteen for both of them while considering all the levels and units of ideas.
Group Minds (1)
(It is the hardest thing in the world to maintain
an individual dissident opinion as a member of a group)

We are group Animals (2)
(We all live our lives in groups)

Artifact of Western Society (3)
(People in the West...are helpless against all kinds of
pressures on them to conform)

Ignorance is Dangerous (2)
(What is dangerous is not understanding the social tendencies that
govern groups and govern us)

Demonstrable by Experimentation (3)
(A great deal of experimentation has
gone on...on this very theme)

Shameful Experience (3)
(Among our most shameful memories is...
how often we said black was white because
other people were saying it)

Caricature as Self Portrait (4)
(People living in...the free world
...educated in many different
ways...emerge with an idea...
like this: I am a citizen of a free
society...the worst pressures
on me are economic)

This set of ideas...like a
caricature...that may not
Have been acquired
consciously...influence
our ideas of ourselves)

Minorities Fall into Line (4)
(The majority will insist...
the minority will fall into
line...nearly always)

Openness Relieves Guilt (4)
(It is one thing carrying
burden of knowledge...half
conscious...and another
saying openly...this is what
we must expect under this
set of circumstances)

Difficult Self Knowledge and Social Change (5)
(We do not use hard information about ourselves
to improve our institutions and therefore our lives)

Role of Information (6)
(It will help people be on guard against
their own primitive reactions and instincts)

(Imagine saying to children: in the last fifty or so years the human
race has become aware of...its mechanisms...)

(It will set people free from blind loyalty)

(It will set people free from
obedience to slogans, rhetoric,
leaders, and group emotions)

Figure 3.1. Semantic Map of Group Minds
Figure 3.2. Semantic Map of Some Close Encounters of a Mental Kind
The idea-units were organized into a hierarchy of top-, high-, mid-, or low-level units (following studies by Carrell, 1992; Meyer, 1975; Meyer & Freedle, 1984). Top-level units presented the main ideas, high-level units presented major or main topics, mid-level units presented minor or sub-topics, and low-level units presented minor details in the text (Carrell, 1992). Tables 3.4 and 3.5 show the idea-units at each level within each reading passage and their related scores. This organization of idea-units enabled me and a second rater to score the transcribed recordings of participants' oral recall protocols. The 'level five' idea-unit in 'Some Close Encounters of a Mental Kind' consisted of two detailed examples pivotal to the text. I assigned a 3 for each example. The 'low' level of idea-units within 'Group Minds' had one idea-unit while the 'low' level of idea-units in 'Some Close Encounters of the Mental kind' had two idea-units which I took as one to make them parallel for analyses. Tables 3.4 and 3.5 display the assigned scores for each idea unit of the reading texts.

Table 3.4. Assigned Scores for 'Group Minds'

<table>
<thead>
<tr>
<th>Level</th>
<th>Main Idea Unit(s)</th>
<th>Sub-idea Unit(s)</th>
<th>Assigned Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>Hardest thing: Maintaining an individual opinion</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>a) We are group animals</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b) Ignorance is dangerous</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>a) Artifact of Western society</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>b) Demonstrable by experimentation</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Shameful experience</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Caricature as self portrait</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>Difficult self knowledge and social change</td>
<td>a) Lack of knowledge about ourselves</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b) Imagining saying to children.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) openness relieves guilt</td>
<td>a) It will help people...</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) It will set people free...blind loyalty</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Role of knowledge</td>
<td>a) It will help people...</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) It will set people free...group emotions</td>
<td></td>
</tr>
</tbody>
</table>


Table 3.5. Assigned scores for 'Some Close Encounters of a Mental Kind'

<table>
<thead>
<tr>
<th>Level</th>
<th>Main Idea Unit</th>
<th>Sub-idea Unit(s)</th>
<th>Assigned score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>1 Certainty</td>
<td>a) Blessing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Danger</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>2 Eyewitness testimony can be unreliable</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3 a) We grant special status to the visual</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b) The mind can distort visual memories</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 a) legal eyewitness accounts are problematic</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b) personal eyewitness accounts are problematic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>5 a) Empirical evidence against certainty</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>b) Anecdotal evidence against certainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>6 Mental certainties must be respected but scrutinized</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>7 Such scrutiny is paradoxical</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Scoring summary recall protocols. I asked the same person who had rated participants' compositions to help me score the transcriptions of the summary recall protocol, thinking this would avoid unnecessary variation caused by including yet another rater in the study. We reviewed the semantic maps and the scoring schemes together, finding that the scoring was straightforward according to the detailed semantic maps. I scored all the transcribed recall protocols, and my colleague also scored 20% of them, establishing an inter-rater reliability of .96 (Alpha = .96) with me.

Data Analysis

Table 3.6 summarises the research questions, the data collected, and the analyses.
**Table 3.6. Summary of the research questions, data collected, and data analyses.**

### Research Questions

1. *In an English language test, what is the relationship between the given information in a reading passage and ESL students' writing performance when the writing task is related thematically to a reading passage?*

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data collected</th>
<th>Analyses done</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. a) In an English language test, how is ESL students' writing performance affected when their writing task is related thematically to a reading passage, compared to a condition for writing when prior reading is not related thematically to their writing task?</td>
<td>Students' writing scores on two essays, one related thematically to a prior reading passage, and one not related thematically to a reading passage</td>
<td>A repeated measures ANOVA on students' global reading and writing scores</td>
</tr>
<tr>
<td>1. b) In an English language test, how are particular aspects of ESL students' compositions (i.e., communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy) affected by students having read a thematically related passage prior to writing, compared to a condition for writing when they read a passage that is not related thematically to their writing task?</td>
<td>Students' writing profile scores on two essays, one related thematically to a prior reading passage, and one not related thematically to a reading passage</td>
<td>A repeated measures MANOVA on students' writing profile scores on the two essays</td>
</tr>
<tr>
<td>1. c) In an English language test, what strategies do ESL students use when their writing task is related thematically to a reading passage?</td>
<td>Students' responses to the retrospective interview questions and a checklist</td>
<td>Qualitative and quantitative (descriptive and factor analyses) analyses of students' responses to the interview questions and the checklist</td>
</tr>
<tr>
<td>1. d) In an English language test, what are ESL students' attitudes towards reading and writing modules?</td>
<td>Students' responses to a question in retrospective interviews</td>
<td>Qualitative analyses and descriptive statistics on students' responses</td>
</tr>
</tbody>
</table>
Table 3.6. Summary of the research questions, data collected, and data analyses. Cont.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data collected</th>
<th>Analyses done</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. e) In an English language test, is there a correlation between ESL students' self-assessments of their familiarity with the topic of a reading passage and the quality of their written compositions in a condition when their reading and writing tasks are related thematically?</td>
<td>Students’ responses to a question and their writing global scores</td>
<td>Correlational analyses on students’ responses and their writing scores</td>
</tr>
<tr>
<td>2. In an English language test, how is ESL students' reading performance affected when they know their writing task is related thematically to a reading passage, compared to a condition when reading and writing tasks are not related thematically?</td>
<td><strong>……………………………………………………………</strong></td>
<td><strong>……………………………………………………………</strong></td>
</tr>
<tr>
<td>2. a) In an English language test, how do ESL students' overall scores on their summary recall protocols for reading comprehension compare in (a) a condition when they know their writing task is related thematically to a reading passage to (b) a condition when they know the reading and writing tasks are not related thematically?</td>
<td>Students' oral summary recall protocols of reading passages</td>
<td>A repeated measures ANOVA on students' global reading and writing scores</td>
</tr>
<tr>
<td>2. b) In an English language test, how do ESL students' recalls of top, high, mid, and low levels of idea-units within a reading passage compare in (a) a condition when they know their reading and writing tasks are related thematically to (b) a condition when they know their reading and writing tasks are not related thematically?</td>
<td>Students' recalls of top, high, mid, and low levels of idea-units within the two reading passages</td>
<td>A repeated measures MANOVA on students' recalls of idea-units within the two reading passages</td>
</tr>
</tbody>
</table>
I analyzed participants' reading and writing scores in the two thematically-related and thematically-unrelated conditions through General Linear Model (GLM) Repeated Measures (using SPSS Version 8.0). This statistical procedure allowed me to assess whether participants' performances in the two conditions (thematically-related and thematically-unrelated) and tasks (reading and writing) were significantly different. I first transformed the raw scores into percentages because the reading scores were out of 16 whereas the writing scores were out of nine.

I conducted a repeated measures ANOVA first for writing global scores and scores on readings in the two conditions. Then I ran a repeated measures MANOVA on the five writing profile scores in the two conditions as well. Finally I conducted a repeated measures MANOVA on participants' recalls of idea-units in the reading passages in the two conditions. I also conducted correlational analyses to see if there was any relationship between participants' writing performances and their self-assessments of their familiarity with the content knowledge of the reading passage.

Despite using a repeated measures design which allowed me to have all participants do all the tasks, I call for caution in interpreting the findings of this thesis study considering the fact that the sample was small (34 participants) particularly in doing multivariate analyses of variance (in which the cell size for writing profile scores was 6.8 and for participants' recalls of idea units in the reading passages was 5.66) and factor analyses (with 24 items or variables) on the data. Non-significant differences might have been statistically significant or loadings on the factors might have been different with a larger sample. In other words, some differences might have gone undetected because of the sample size (Bray & Maxwell, 1985, pp. 35-36). I made sure that there was no missing data by carefully observing the participants doing all the tasks.
CHAPTER FOUR

RESULTS

Analyses of the data revealed significant differences between participants’ writing and reading performances in the two conditions. They achieved higher reading and writing scores in the thematically-related condition (when their writing task was related thematically to their reading task and when they were aware of this connection in advance), compared to what they did in the thematically-unrelated condition (when their writing tasks was not related thematically to their reading task). The data generally confirmed my expected results for the simulated test situation:

- ESL students achieved significantly higher global writing scores in their writing when their writing task was related thematically to a reading passage, compared to a condition for writing when prior reading was not related thematically to their writing task.

- ESL students achieved significantly higher scores on communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy of their written compositions when their writing task was related thematically to a reading passage, compared to a condition for writing when prior reading was not related thematically to their writing task. However, students’ scores on each aspect of writing were not significantly different from other aspects of writing in the thematically related condition.

- ESL students reported using more than 8 groups of writing strategies (twenty-six strategies in total) in their written compositions when their writing task was related thematically to a reading passage.
- A majority of ESL students (65%) had positive attitudes towards the use of reading and writing modules.
- There was no correlation between ESL students' self-assessments of their familiarity with the topic of a reading passage and their writing scores when their reading and writing tasks were related thematically.
- ESL students achieved significantly higher scores on their summary recall protocols of reading comprehension when they knew their writing task was related thematically to a reading passage, compared to a condition when their reading and writing tasks were not related thematically.
- ESL students recalled more idea-units, particularly at the top and lowest levels of a reading passage, when they knew their reading and writing tasks were related thematically, compared to a condition when they knew their reading and writing tasks were not related thematically.

Results for Research Question 1. A: In an English language test, how is ESL students' writing performance affected when their writing task is related thematically to a reading passage, compared to a condition for writing when prior reading is not related thematically to their writing task?

Participants achieved significantly higher writing scores ($M = 7.4$) in the thematically-related condition than in the thematically-unrelated condition ($M = 6.2$): $F (1, 33) = 134.28, p < .001$. The high $F$ value here indicates that there was not much variability, probably because I was comparing two pieces of the same ESL students' writing. Table 4.1 summarizes the descriptive statistics on global writing scores. Also, there was a significant difference between participants' writing and reading scores (tasks) in the two conditions: $F (1, 33) = 52.75,$
That is, participants achieved significantly higher writing scores than reading scores in the thematically-related condition, compared to what they achieved in the thematically-unrelated condition. There was no significant interaction between the tasks (reading and writing) or the two conditions (thematically-related and thematically-unrelated): $F(1, 33) = .81, p = .37$. Table 4.2 shows the results of a repeated measures ANOVA on the data which, revealed that participants' performance in each condition was significantly different: $F(1, 33) = 134.28, p < .001$.

### Table 4.1. Descriptive Statistics on Global Writing Scores

<table>
<thead>
<tr>
<th>Condition</th>
<th>$M$ (N =34)</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing (Thematically-related)</td>
<td>7.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Writing (Thematically-unrelated)</td>
<td>6.2</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### Table 4.2. Results of a Repeated Measures ANOVA on Global Writing and Reading Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>$df$</th>
<th>$F(1, 33)$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
<td>1</td>
<td>134.28</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Task</td>
<td>1</td>
<td>52.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Task*Condition</td>
<td>1</td>
<td>0.81</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Results for Research Question 1. B: In an English language test, how are particular aspects of ESL students’ compositions (i.e., communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy) affected by students having read a thematically related passage prior to writing, compared to a condition for writing when they read a passage that is not related thematically to their writing task?

There was no significant difference among the profile scores within each condition: $F(4, 132) = .95, p = .44$, but across conditions there was a significant difference: Participants
achieved significantly higher scores on the communicative quality, organization, argumentation, linguistic accuracy, and linguistic appropriacy of their writing task in the thematically-related condition compared to the thematically-unrelated condition: $F (1, 33) = 144.65, p < .001$. There was no significant interaction, however, between the profile scores and the conditions: $F (4, 132) = .88, p = .48$, indicating the effects related to the conditions were integrally distinct from the writing profile scores. Table 4.3 shows the descriptive statistics on writing profile scores in the thematically-related and thematically-unrelated conditions. Table 4.4 shows the results of a repeated measures MANOVA on writing profile scores in the thematically-related and thematically-unrelated conditions.

**Table 4.3. Descriptive Statistics on Writing Profile Scores**

<table>
<thead>
<tr>
<th>Profile</th>
<th>Thematically Related (N = 34)</th>
<th>Thematically Unrelated (N = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Communicative Quality</td>
<td>7.5</td>
<td>0.96</td>
</tr>
<tr>
<td>Organization</td>
<td>7.56</td>
<td>0.93</td>
</tr>
<tr>
<td>Argumentation</td>
<td>7.47</td>
<td>0.93</td>
</tr>
<tr>
<td>Linguistic Accuracy</td>
<td>7.29</td>
<td>0.94</td>
</tr>
<tr>
<td>Linguistic Appropriacy</td>
<td>7.35</td>
<td>1.01</td>
</tr>
</tbody>
</table>

**Table 4.4. Results of a Repeated Measures MANOVA on Writing Profile Scores**

<table>
<thead>
<tr>
<th>Source</th>
<th>$df$</th>
<th>$F (4, 132), (1, 33), &amp; (4, 132)$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profiles</td>
<td>4</td>
<td>0.95</td>
<td>0.44</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>144.65</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Profiles*Condition</td>
<td>4</td>
<td>0.88</td>
<td>0.48</td>
</tr>
</tbody>
</table>
Results for Research Question 1. C: In an English language test, what strategies do ESL students use when their writing task is related thematically to a reading passage?

To begin to describe the writing strategies of participants in the thematically-related condition I first present the descriptive statistics for the 26 strategies itemized in the checklist in Table 4.5. As I said in the previous chapter I ran a factor analysis with eight factors for the items in the checklist. Table 4.6 shows the results of this exploratory factor analysis (Varimax with Kaiser Normalization. Rotated Principal Axis) for the 25 items. Item number 14: Recalling Content from Reading had to be deleted before running the analysis because all participants had checked off ‘yes’ for that item and it did not have any variation. I considered a loading of ≥ .30 or more to demonstrate a substantial link between a factor and an item (writing strategy) in the checklist (see Hatch & Lazaraton, 1991, p. 494). Some items contributed to two or more factors. The eigenvalues were 2.21, 1.97, 1.93, 1.80, 1.77, 1.72, 1.58, and 1.35 for the 8 factors respectively, accounting for 57% of the variance.

After some interpretation I have called the eight factors of writing strategies as A: Considering Task Problems and Weaknesses, B: Content and Form Considerations, C: Monitoring Text Production, D: Goal-oriented Summarizing, E: Adjusting Style and Plans, F: Goal-oriented Revision, G: Generating Supplementary Content, and H: Revising Arguments. I specifically relied on the variables (strategies) with greater loadings than the others in this naming of the factors. For instance, in naming Factor C: Monitoring Text production, I mostly considered: Re-reading Essay (.83), Editing (.64), and Considering Individual Style (.39). In trying to conceptualize labels for the factors I primarily considered the variables with high positive correlations under each factor while mostly using Grabe and Kaplan’s terminology (Grabe & Kaplan, 1996, p. 222). Table 4.7 presents the eight factors of writing strategies and their corresponding item numbers in the checklist.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Strategy</th>
<th>Frequencies (N = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Count</td>
</tr>
<tr>
<td>1</td>
<td>Adjusting/Changing Design</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Generating Additional Content</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>Considering Content. Adding Problems</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Topic-based Problems</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>Considering Alternative Solutions</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>Awareness of Audience</td>
<td>18</td>
</tr>
<tr>
<td>7</td>
<td>Considering Purpose of Writing</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>Format Considerations</td>
<td>26</td>
</tr>
<tr>
<td>9</td>
<td>Changing Style</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>Considering Individual Style</td>
<td>23</td>
</tr>
<tr>
<td>11</td>
<td>Considering Task Weaknesses</td>
<td>20</td>
</tr>
<tr>
<td>12</td>
<td>Compensating for Weaknesses</td>
<td>18</td>
</tr>
<tr>
<td>13</td>
<td>Borrowing Words/Phrases</td>
<td>23</td>
</tr>
<tr>
<td>14</td>
<td>Recalling Content from Reading</td>
<td>34</td>
</tr>
<tr>
<td>15</td>
<td>Adjusting Arguments</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>Re-reading Essay</td>
<td>19</td>
</tr>
<tr>
<td>17</td>
<td>Summarizing</td>
<td>21</td>
</tr>
<tr>
<td>18</td>
<td>Paraphrasing</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>Re-ordering Information</td>
<td>9</td>
</tr>
<tr>
<td>20</td>
<td>Outcomes Considerations</td>
<td>21</td>
</tr>
<tr>
<td>21</td>
<td>Changing Plans</td>
<td>9</td>
</tr>
<tr>
<td>22</td>
<td>Accepting/Rejecting Viewpoint in Reading</td>
<td>30</td>
</tr>
<tr>
<td>23</td>
<td>Editing</td>
<td>17</td>
</tr>
<tr>
<td>24</td>
<td>Reassessing Content</td>
<td>9</td>
</tr>
<tr>
<td>25</td>
<td>Reassessing Argumentation/Reasoning</td>
<td>7</td>
</tr>
<tr>
<td>26</td>
<td>Reassessing Writing Quality</td>
<td>10</td>
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</table>
Table 4.6. Factor Loadings for Writing Strategies in the Checklist

<table>
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<tr>
<th>Item No.</th>
<th>Strategy</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<td>x</td>
<td>.39</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tr>
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<td>2</td>
<td>Generating Additional Content</td>
<td>x</td>
<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>.72</td>
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<td>3</td>
<td>Considering Content, Adding Problems</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
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<td>4</td>
<td>Topic-based Problems</td>
<td></td>
<td>.64</td>
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<td>x</td>
<td>x</td>
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<td>x</td>
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</tr>
<tr>
<td>5</td>
<td>Considering Alternative Solutions</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td></td>
</tr>
<tr>
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<td>Awareness of Audience</td>
<td>x</td>
<td>.45</td>
<td>x</td>
<td></td>
<td>.47</td>
<td>x</td>
<td>.34</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>-.31</td>
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<td></td>
<td>.78</td>
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<td>x</td>
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<td>-.45</td>
<td>.39</td>
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<td>x</td>
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<td>.35</td>
<td>x</td>
<td>x</td>
<td></td>
<td>.46</td>
<td>x</td>
<td>x</td>
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<td>.53</td>
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<td></td>
<td>.70</td>
<td>x</td>
<td>x</td>
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<td></td>
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<td>15</td>
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<td>x</td>
<td>-.31</td>
<td>.45</td>
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<td>x</td>
<td>.31</td>
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<td>x</td>
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<td>x</td>
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<td>x</td>
<td>x</td>
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<td>.60</td>
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<td>x</td>
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<td>x</td>
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<td></td>
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<td>x</td>
</tr>
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<td>x</td>
<td></td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>.54</td>
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<td>-.54</td>
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<td>.36</td>
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<td>21</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>.34</td>
<td>.36</td>
<td>x</td>
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<tr>
<td>22</td>
<td>Accepting/Rejecting Viewpoint in Reading</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
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<td>x</td>
<td></td>
<td>.64</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>24</td>
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<td>x</td>
</tr>
<tr>
<td>25</td>
<td>Reassessing Argumentation/Reasoning</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>.39</td>
<td>.31</td>
</tr>
<tr>
<td>26</td>
<td>Reassessing Writing Quality</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>.96</td>
<td>x</td>
</tr>
</tbody>
</table>

Note: Values less than ±.30 have been printed as 'x'. The eigenvalues were 2.21, 1.97, 1.93, 1.80, 1.77, 1.72, 1.58, and 1.35 for the 8 factors respectively.
Table 4.7. Eight Factors of Writing Strategies

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strategy</th>
<th>Items (Total = 24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Considering Task Problems and Weaknesses</td>
<td>4, 8, 10, 11, 12, 15, 21</td>
</tr>
<tr>
<td>B</td>
<td>Content and Form Considerations</td>
<td>1, 6, 8, 12, 13, 20, 24</td>
</tr>
<tr>
<td>C</td>
<td>Monitoring Text Production</td>
<td>2, 10, 15, 16, 19, 23</td>
</tr>
<tr>
<td>D</td>
<td>Goal-oriented Summarizing</td>
<td>6, 10, 13, 15, 17</td>
</tr>
<tr>
<td>E</td>
<td>Adjusting Style and Plans</td>
<td>9, 12, 18, 21</td>
</tr>
<tr>
<td>F</td>
<td>Goal-oriented Revision</td>
<td>6, 7, 20, 21, 25, 26</td>
</tr>
<tr>
<td>G</td>
<td>Generating Supplementary Content</td>
<td>2, 3, 8, 25</td>
</tr>
<tr>
<td>H</td>
<td>Revising Arguments</td>
<td>5, 15, 19, 21, 25</td>
</tr>
</tbody>
</table>

I present here the eight factors and their corresponding strategies (based on the data from the checklist), their descriptive statistics, and some extracts from interviews in support of some of the strategies in each factor.

Factor A: Considering task problems and weaknesses. Factor A indicated that some participants focused on coping with their writing problems and weaknesses when writing in the thematically-related condition. For example, participants said they queried “Whether my arguments supported my point or not.” (Considering Task Weaknesses); “Can’t think of an [a] concrete example.” or “Couldn’t make a good thesis.” (Topic-based Problems) or had “Not enough time to find out.” (Compensating for Weaknesses).

Factor A showed that participants who attended extensively to Considering Task Weaknesses (.85), Topic-based Problems (.64), and Compensating for Weaknesses (.60) did not attend much to Adjusting Arguments (-.36), Changing Plans (-.32), or Format Considerations (-.31). Coping with writing problems at a particular point of doing the task was the prime concern in this cluster of strategies. Table 4.8 displays descriptive statistics on Factor A writing
strategies.

Table 4.8. Descriptive Statistics: Factor A Strategies: Considering Task Problems and Weaknesses

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item No.</th>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
</tr>
<tr>
<td>Topic-based Problems</td>
<td>4</td>
<td>16</td>
<td>47.1</td>
<td>16</td>
<td>47.1</td>
</tr>
<tr>
<td>Format Considerations</td>
<td>8</td>
<td>26</td>
<td>76.5</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>Considering Individual Style</td>
<td>10</td>
<td>23</td>
<td>67.6</td>
<td>8</td>
<td>23.5</td>
</tr>
<tr>
<td>Considering Task Weaknesses</td>
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<td>20</td>
<td>60.6</td>
<td>11</td>
<td>33.3</td>
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<tr>
<td>Compensating for Weaknesses</td>
<td>12</td>
<td>18</td>
<td>54.5</td>
<td>9</td>
<td>27.3</td>
</tr>
<tr>
<td>Adjusting Arguments</td>
<td>15</td>
<td>15</td>
<td>44.1</td>
<td>15</td>
<td>44.1</td>
</tr>
<tr>
<td>Changing Plans</td>
<td>21</td>
<td>9</td>
<td>26.5</td>
<td>22</td>
<td>64.7</td>
</tr>
</tbody>
</table>

Factor B: Content and form considerations. Factor B strategies dealt with the ways participants adjusted the content, design, and format and reassessed the content of their essays based on the reading passage. For instance, one participant said, "When I wrote the thesis and stuff and I tried to think of a way to catch the the most. the main points, of the main points of our, of (what) I'm going to write and tried to make it the strongest thesis, thesis I can think I...." (Format Considerations).

Factor B showed participants attending to Reassessing Content (.76), Borrowing Words/Phrases (.53), Format Considerations (.40), Adjusting/Changing Design (.39), and Compensating for Weaknesses (.35). These strategies had a negative correlation with people's use of Outcomes Considerations (-.54) and Awareness of Audience (-.45) strategies. Evidently some participants were so involved in considering the format and content of the writing task in the thematically-related condition that they did not think much about who their audience was or
what the outcomes of their writing would be. Table 4.9 displays descriptive statistics on Factor B writing strategies.

**Table 4.9. Descriptive Statistics: Factor B Strategies: Content and Form Considerations**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item No.</th>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusting/Changing Design</td>
<td>1</td>
<td>21</td>
<td>10</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Awareness of Audience</td>
<td>6</td>
<td>18</td>
<td>15</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Format Considerations</td>
<td>8</td>
<td>26</td>
<td>7</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Compensating for Weaknesses</td>
<td>12</td>
<td>18</td>
<td>9</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Borrowing Words/Phrases</td>
<td>13</td>
<td>23</td>
<td>9</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Outcomes Considerations</td>
<td>20</td>
<td>21</td>
<td>11</td>
<td>2</td>
<td>100</td>
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<tr>
<td>Reassessing Content</td>
<td>24</td>
<td>9</td>
<td>22</td>
<td>3</td>
<td>100</td>
</tr>
</tbody>
</table>

**Factor C: Monitoring text production.** Factor C strategies related to how participants controlled their own behavior in their writing tasks. For example, one participant said, "to re-read the wordings and not to copy from word to word." (Re-reading Essay).

Factor C showed that some participants used Re-reading Essay (.83), Editing (.64), and Considering Individual Style (.39) strategies together. At the same time they made little use of Re-ordering Information (-.36), Generating Additional Content (-.33), or Adjusting Arguments (-.31). Table 4.10 shows descriptive statistics on Factor C strategies.
Table 4.10. Descriptive Statistics: Factor C Strategies: Monitoring Text Production

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item No.</th>
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<th></th>
<th>No</th>
<th></th>
<th>Not Sure</th>
<th></th>
<th>Total</th>
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<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Generating Additional Content</td>
<td>2</td>
<td>2</td>
<td>73.5</td>
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<td>20.6</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
</tr>
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<td>Considering Individual Style</td>
<td>10</td>
<td>10</td>
<td>67.6</td>
<td>8</td>
<td>23.5</td>
<td>3</td>
<td>8.8</td>
<td>100</td>
</tr>
<tr>
<td>Adjusting Arguments</td>
<td>15</td>
<td>15</td>
<td>44.1</td>
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<td>3</td>
<td>11.8</td>
<td>100</td>
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<tr>
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<td>19</td>
<td>55.9</td>
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<td>5</td>
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<td>17</td>
<td>50</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

Factor D: Goal-oriented summarizing. Factor D strategies demonstrated participants summarizing the textual and rhetorical information in the reading passage to suit goals of meeting the reader(s)' expectations. For instance, participants said, “So, uh I could re- I could use some of the phrases or words for sure. So, uh I recall the words and phrases they, they’re using.” (Borrowing Words/Phrases); “When I wrote the paragraph I referred referred back to the text. I tried to like organize the words. to summarize what, that example mean....” . “When I was writing the first paragraph. for instance. I was trying to say a gist, a brief summary of what I had read.” (Summarizing); “First I just adjusted judges our to the author’s viewpoints and how much I’m tend accepted.” (Adjusting Arguments).

Factor D showed participants Borrowing Words/Phrases (.70), Summarizing (.60), Awareness of Audience (.47), and Adjusting Arguments (.45) as strategies together. These correlated negatively with the strategy of Considering Individual Style (-.47). Table 4.11 shows descriptive statistics on Factor D writing strategies.
### Table 4.11. Descriptive Statistics: Factor D Strategies: Goal-oriented Summarizing

<table>
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<th>%</th>
<th>Not Sure</th>
<th>%</th>
<th>Total</th>
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<td>2.9</td>
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</tr>
<tr>
<td>Considering Individual Style</td>
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<td>23</td>
<td>67.6</td>
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<td>23.5</td>
<td>3</td>
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<td>100</td>
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<tr>
<td>Borrowing Words/Phrases</td>
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<td>23</td>
<td>67.6</td>
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<td>5.9</td>
<td>100</td>
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<tr>
<td>Adjusting Arguments</td>
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<td>15</td>
<td>44.1</td>
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<td>29.4</td>
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</tbody>
</table>

#### Factor E: Adjusting style and plans.
Factor E strategies revealed that some participants adjusted their style and plans. For example, one participant said, “What tone I should use? What style?” *(Changing Style).* They did this while paraphrasing the reading passage that they had read prior to the writing task.

Four strategies: *Changing Style* (.78), *Paraphrasing* (.62), *Compensating for Weaknesses* (.46), and *Changing Plans* (.34), were positively correlated with each other here. This factor had no variable (strategy) with a negative loading on it. Table 4.12 displays descriptive statistics on Factor E writing strategies.

### Table 4.12. Descriptive Statistics: Factor E Strategies: Adjusting Style and Plans

<table>
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<th>%</th>
<th>Not Sure</th>
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<td>47.1</td>
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<td>5.9</td>
<td>100</td>
</tr>
<tr>
<td>Compensating for Weaknesses</td>
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<td>54.5</td>
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<td>6</td>
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<tr>
<td>Paraphrasing</td>
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<td>50</td>
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<td>41.2</td>
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<td>100</td>
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<tr>
<td>Changing Plans</td>
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<td>22</td>
<td>64.7</td>
<td>3</td>
<td>8.8</td>
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</tbody>
</table>
Factor F: Goal-oriented revision. Factor F writing strategies showed participants changing their writing plans as they reassessed the quality of their writing products or arguments. For instance, one participant said, “So so like people won’t think I’m copying the paragraph [text] I’ve read....” (Awareness of Audience).

Factor F showed strategies of Reassessing Writing Quality (.96), Reassessing Argumentation/Reasoning (.39), Outcomes Considerations (.36), Changing Plans (.36), and Awareness of Audience (.34) cluster together. One variable (strategy): Considering Purpose of Writing correlated negatively with these. Table 4.13 shows descriptive statistics on Factor F writing strategies.

Table 4.13. Descriptive Statistics: Factor F Strategies: Goal-oriented Revision

<table>
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<th>No %</th>
<th>Not Sure Count</th>
<th>Not Sure %</th>
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</thead>
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<td>18</td>
<td>52.9</td>
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<td>1</td>
<td>2.9</td>
<td>100</td>
</tr>
<tr>
<td>Considering Purpose of Writing</td>
<td>7</td>
<td>23</td>
<td>67.6</td>
<td>8</td>
<td>23.5</td>
<td>3</td>
<td>8.8</td>
<td>100</td>
</tr>
<tr>
<td>Outcomes Considerations</td>
<td>20</td>
<td>21</td>
<td>61.8</td>
<td>11</td>
<td>32.4</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
</tr>
<tr>
<td>Changing Plans</td>
<td>21</td>
<td>9</td>
<td>26.5</td>
<td>22</td>
<td>64.7</td>
<td>3</td>
<td>8.8</td>
<td>100</td>
</tr>
<tr>
<td>Reassessing Argumentation/Reasoning</td>
<td>25</td>
<td>7</td>
<td>20.6</td>
<td>25</td>
<td>73.5</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
</tr>
<tr>
<td>Reassessing Writing Quality</td>
<td>26</td>
<td>10</td>
<td>29.4</td>
<td>19</td>
<td>55.9</td>
<td>5</td>
<td>14.7</td>
<td>100</td>
</tr>
</tbody>
</table>

Factor G: Generating supplementary content. Factor G writing strategies showed participants generating supplementary content in their writing and noticing problems in doing so. For example, participants said, “Uh then uh uh then I used my, I was thinking about linking my life like my own life, uh if there is anything like similar to the cases the essay was talking about. Uh
then I come up with one example uh like I think it’s the same reason, I had the same uh like background of everything.” (Generating Additional Content): “Give examples, own examples.” (Considering Content, Adding Problems).

Factor G showed participants who used a lot of Generating Additional Content (.72), Considering Content, Adding Problems (.66) and Reassessing Argumentation/Reasoning (.31) strategies gave little attention to Format Considerations (-.38). Table 4.14 displays descriptive statistics on Factor G writing strategies.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item</th>
<th>Yes No</th>
<th>Count</th>
<th>%</th>
<th>Count</th>
<th>%</th>
<th>Count</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generating Additional Content</td>
<td>2</td>
<td>25</td>
<td>7</td>
<td>20</td>
<td>2</td>
<td>5</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering Content, Adding Problems</td>
<td>3</td>
<td>4</td>
<td>24</td>
<td>70</td>
<td>6</td>
<td>17</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Format Considerations</td>
<td>8</td>
<td>26</td>
<td>7</td>
<td>20</td>
<td>1</td>
<td>2.9</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reassessing Argumentation/Reasoning</td>
<td>25</td>
<td>7</td>
<td>25</td>
<td>73</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Factor H: Revising arguments. Factor H writing strategies dealt with some participants’ reassessing their arguments, the order of presenting information, and re-ordering the rhetorical information of the reading text in their essays. For instance, one participant said, “Trying to see how can I disprove or, you know, prove that the author thesis was wrong or one of his experiences was wrong. But I tried to do that but then I proved the author’s which that X this, his thesis was true.” (Adjusting Arguments).

Factor H involved Reassessing Argumentation/Reasoning (.57), Re-ordering Information
and Adjusting Arguments (.31) together. This cluster of strategies correlated negatively
with Considering Alternative Solutions (-.53) and Changing Plans (-.31). Table 4.15 shows
descriptive statistics on Factor H writing strategies.

Table 4.15. Descriptive Statistics: Factor H Strategies: Revising Arguments

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item No.</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
<th>Not Sure</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considering Alternative Solutions</td>
<td>5</td>
<td>19</td>
<td>55.9</td>
<td>13</td>
<td>38.2</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
</tr>
<tr>
<td>Adjusting Arguments</td>
<td>15</td>
<td>15</td>
<td>44.1</td>
<td>15</td>
<td>44.1</td>
<td>4</td>
<td>11.8</td>
<td>100</td>
</tr>
<tr>
<td>Re-ordering Information</td>
<td>19</td>
<td>9</td>
<td>26.5</td>
<td>20</td>
<td>58.8</td>
<td>5</td>
<td>14.7</td>
<td>100</td>
</tr>
<tr>
<td>Changing Plans</td>
<td>21</td>
<td>9</td>
<td>26.5</td>
<td>22</td>
<td>64.7</td>
<td>3</td>
<td>8.8</td>
<td>100</td>
</tr>
<tr>
<td>Reassessing Argumentation/Reasoning</td>
<td>25</td>
<td>7</td>
<td>20.6</td>
<td>25</td>
<td>73.5</td>
<td>2</td>
<td>5.9</td>
<td>100</td>
</tr>
</tbody>
</table>

**Items 14 and 22 of the checklist.** As I said earlier, I had to omit item 14 (*Recalling from Reading*) from the exploratory factor analyses because all participants said they used this strategy in the thematically-related condition. For example, participants said, "When I wrote the paragraph...I think about the reading, the reading that I had read [...] draw my memory back to the paragraph [text] I had read." ; "I was trying to recall back to see what that in the article (that relate) to the question that I was asked." (*Recalling Content from Reading*).

Item 22 (*Accepting/Rejecting Viewpoint in Reading*) did not load on any factor (because 88.2% of participants marked off 'yes' for this item, producing insufficient variance to obtain a loading on any factor). For instance, participants said, "I was certain all the times that it was written logically." ; "As I was writing this essay according to the author's essay, I pretty much
agreed with the author in the sense that...author’s point of view.” (Accepting/Rejecting Viewpoint in Reading). Table 4.16 shows descriptive statistics on these two items (strategies).

Table 4.16. Descriptive Statistics on Items 14 and 22.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item No.</th>
<th>Yes Frequency</th>
<th>%</th>
<th>No Frequency</th>
<th>%</th>
<th>Not Sure Frequency</th>
<th>%</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recalling from Reading</td>
<td>14</td>
<td>34</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Accepting/Rejecting Viewpoint in Reading</td>
<td>22</td>
<td>30</td>
<td>88.2</td>
<td>1</td>
<td>2.9</td>
<td>3</td>
<td>8.8</td>
<td>100</td>
</tr>
</tbody>
</table>

Results for Research Question 1. D: In an English language test, what are ESL students’ attitudes towards the use of reading and writing modules?

During the interviews I asked how participants felt when they knew their writing task was related thematically to a reading passage. I wanted to investigate what participants thought of these reading and writing modules. Participants’ responses to this question revealed that they were either comfortable, happy, indifferent, or under pressure. I grouped these three kinds of feelings into A (positive attitudes), B (indifferent feelings), and C (negative attitudes). Table 4.17 summarizes the three groups of participants’ attitudes.

Group A mostly felt comfortable or pleased. A majority of participants (65%) (n = 22) belonged to this group (almost half of these 22 participants did their reading and writing tasks in the thematically-unrelated condition first. The order of doing the tasks in the two conditions did not affect their attitudes towards the thematic link between the tasks in the thematically-related condition). For example, one person said, “Uh, a sense of relief, in a sense that I had some information to back up my own topic, my. And also uh since it was a personalized or was a personal response from the author himself. It was about his specific thesis. It gave me a chance to think back about my own experience to and to give my perspective about this essay, so or even essay. or this topic.” Another person said, “I think it would be the easier to write because I had
something to build on. There was a text that I had been given, that I had been given by you and so I had to basically write about that and what I thought about this. Instead of the going and writing something that was, I had no idea about."

Group B stated that they did not think that writing in the thematically-related condition was different from any other writing situation. Only 9% (n = 3) of participants were in this group. For example, one person said, “Uhm indifferent because uh yeah, I I feel indifferent because I I find it that whatever I can I can write, I can read or I can I can X explain because I think I have achieved uh that much command of over the language to be able to to to read and to be able to write at the same level.”

Group C felt they were ‘under pressure’, that the task was ‘tricky’, or that the audience expected more of them. This group consisted of 26% (n = 9) of the total participants. For example, one person said, “I thought it was a little harder than than the last one, because the last was you could just write and write I think. But for this one it sort of had to make sense (laughs). Sort of you know (you had to) coincide with the with the paragraph said, with what the passage said.” Another person said, “I (was) not really very comfortable because I thought if I had, I might have missed out of something (of) the topic.”

Table 4.17. Participants’ Attitudes Towards Reading and Writing Modules in the Thematically-related Condition

<table>
<thead>
<tr>
<th>Group</th>
<th>Attitudes</th>
<th>Count (N =34)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Positive (comfortable, happy, easy)</td>
<td>22</td>
<td>65</td>
</tr>
<tr>
<td>B</td>
<td>Indifferent (indifferent)</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>Negative (under pressure, hard, demanding)</td>
<td>9</td>
<td>26</td>
</tr>
</tbody>
</table>
Results for Research Question 1. E: In an English language test, is there a correlation between ESL students’ self-assessments of their familiarity with the topic of a reading passage and the quality of their written compositions in a condition when their reading and writing tasks are related thematically?

This question aimed to investigate participants’ self-assessments of their familiarity with the reading text in the thematically-related condition. I asked them to mark off a number from ‘1’ (not familiar at all) to ‘5’ (very familiar). Almost one third of the participants (32.4%) marked off ‘4’. Others almost equally marked off ‘1’ (23.5 %), ‘2’ (20.6%), and ‘3’ (23.5%). None of them chose ‘5’ (very familiar). There was no correlation between participants’ writing global scores and their stated familiarity with the reading text in the thematically-related condition ($r = .21$).

Results for Research Question 2. A: In an English language test, how do ESL students’ overall scores on their summary recall protocols for reading comprehension compare in (a) a condition when they know their writing task is related thematically to a reading passage to (b) a condition when they know the reading and writing tasks are not related thematically?

Participants achieved significantly higher scores on their summary recall protocols for reading comprehension in the thematically-related condition ($M = 9.5$) than in the thematically-unrelated condition ($M = 7.2$): $F (1, 33) = 134.28$, $p < .001$. While the conditions and tasks made significant differences $F (1, 33) = 134, 28, p < .001$; $F (1, 33) = 52.75, p < .001$), there was not a significant interaction between them, implying that participants constantly did better in their tasks (here reading comprehension) in one condition (thematically-related) than the other (thematically-unrelated) condition. Table 4.18 displays the descriptive statistics on reading
scores in the two conditions. Table 4.2 (back on p. 82) displays the results of the repeated measures ANOVA already reported on participants’ global reading and writing scores in the two conditions.

Table 4.18. Descriptive Statistics on Overall Summary Recalls

<table>
<thead>
<tr>
<th>Condition</th>
<th>M (N=34)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading (Thematically-related)</td>
<td>9.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Reading (Thematically-unrelated)</td>
<td>7.2</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Results for Research Question 2. B: In an English language test, how do ESL students’ recalls of top, high, mid, and low levels of idea-units within a reading passage compare in (a) a condition when they know their reading and writing tasks are related thematically to (b) a condition when they know their reading and writing tasks are not related thematically?

Participants recalled more idea-units of the reading passage in the thematically-related condition (the average per person: 4.2) than in the thematically-unrelated condition (the average per person: 3.8). They better recalled (a) the idea-units at sub-levels one, three, five, and six of the reading text in the thematically-related condition than in the thematically-unrelated condition and (b) the idea-units at sub-levels two and four of the reading text in the thematically-unrelated than in the thematically-related condition. There were two very common concepts in the reading passage Group Minds, ‘we are group animals’ and ‘the minority usually fall into line with majority’, that participants could hardly miss recalling, which may have skewed these results.

Table 4.19 shows descriptive statistics on participants’ recalls of the levels and sub-levels of the idea-units of the reading passages in the two conditions. Condition made a marginally significant
difference in their performance. Participants recalled more idea-units of the reading passage in the thematically-related condition than in the thematically-unrelated condition: $F (1, 33) = 3.05$, $p < .1$). Their recalls of the levels of idea-units in the two conditions were also significantly different: $F (5, 165) = 6, p < .001$). They recalled some of the levels of the idea-units better than the others in each condition. However, there was an interaction between conditions and levels, implying that in both conditions participants recalled some levels of idea-units better than the others. Table 4.20 shows the results of a repeated measures MANOVA on participants' recalls of idea-units.

**Table 4.19. Descriptive Statistics on Participants’ Recalls of Idea-units of the Reading Texts.**

<table>
<thead>
<tr>
<th>Level of Idea-units</th>
<th>Thematically-related condition</th>
<th>Thematically-unrelated condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>%</td>
</tr>
<tr>
<td>Top &amp; High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>28</td>
<td>82.4</td>
</tr>
<tr>
<td>Two</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Three</td>
<td>28</td>
<td>82.4</td>
</tr>
<tr>
<td>Mid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four</td>
<td>18</td>
<td>52.9</td>
</tr>
<tr>
<td>Five</td>
<td>33</td>
<td>97.1</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six</td>
<td>20</td>
<td>58.8</td>
</tr>
<tr>
<td>Total</td>
<td>144</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.20. Results of a Repeated Measures MANOVA on Participants’ Recalls of Idea-units**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>$F$ $(1, 33), (5, 165),$ &amp; $(5, 165)$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
<td>1</td>
<td>3.05</td>
<td>&lt; .1</td>
</tr>
<tr>
<td>Level</td>
<td>5</td>
<td>6</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Level*Condition</td>
<td>5</td>
<td>12.4</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 4.21 summarizes the research questions, collected data, analyses, and results for the study overall.
### Table 4.21. Summary of the research questions, data collection and analyses, and results.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Answers to Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. In an English language test, what is the relationship between the given information in a reading passage and ESL students’ writing performance when their writing task is related thematically to the reading passage?</strong></td>
<td>Both the processes and products of ESL students’ writing performance were affected when their writing task was related thematically to a reading passage.</td>
</tr>
<tr>
<td><strong>Data collected</strong> Students’ writing scores on two essays, one related thematically to a prior reading passage, and one not related thematically to a reading passage</td>
<td>ESL students achieved significantly higher global writing scores when their writing task was related thematically to a reading passage, compared to a condition for writing when prior reading was not related thematically to their writing task.</td>
</tr>
<tr>
<td><strong>Analyses done</strong> A repeated measures ANOVA on students’ global reading and writing scores</td>
<td>ESL students achieved significantly higher scores on communicative quality, organisation, argumentation, linguistic accuracy, and linguistic appropriacy of their essays when their writing task was related thematically to a reading passage, compared to a condition for writing when prior reading was not related thematically to their writing task. However, students’ scores on these aspects of writing were not significantly different from each other in the thematically related condition.</td>
</tr>
<tr>
<td><strong>1. a) In an English language test, how is ESL students’ writing performance affected when their writing task is related thematically to a reading passage, compared to a condition for writing when prior reading is not related thematically to their writing task?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Data collected</strong> Students’ writing profile scores on two essays, one related thematically to a prior reading passage, and one not related thematically to a reading passage</td>
<td></td>
</tr>
<tr>
<td><strong>Analyses done</strong> A repeated measures MANOVA on students’ writing profile scores on the two essays</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.21. Summary of the research questions, data collection and analyses, and results. Cont.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data collected</th>
<th>Analyses done</th>
<th>Answers to Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. c) In an English language test, what strategies do ESL students use when their writing task is related thematically to a reading passage?</td>
<td>Students' responses to the retrospective interview questions and a checklist</td>
<td>Qualitative and quantitative (descriptive and factor analyses) data analyses of students' responses to the interview questions and the checklist</td>
<td>ESL students used more than 8 groups of writing strategies when their writing task was related thematically to a reading passage.</td>
</tr>
<tr>
<td>1. d) In an English language test, what are ESL students' attitudes towards the use of reading and writing modules?</td>
<td>Students' responses to a question in retrospective interviews</td>
<td>Qualitative data analyses and descriptive statistics on students' responses</td>
<td>A majority of ESL students (65%) had positive attitudes towards the use of reading and writing modules.</td>
</tr>
<tr>
<td>1. e) In an English language test, is there a correlation between ESL students' self-assessments of their familiarity with the topic of a reading passage and the quality of their written compositions in a condition when their reading and writing tasks are related thematically?</td>
<td>Students' responses to a question and their writing global scores</td>
<td>Correlational analyses on students' responses and their writing scores</td>
<td>There was no correlation between ESL students' self-assessments of their familiarity with the topic of a reading passage and their writing scores when their reading and writing tasks were related thematically.</td>
</tr>
<tr>
<td>2. In an English language test, how is ESL students' reading performance affected when they know their writing task is related thematically to a reading passage, compared to a condition when reading and writing tasks are not related thematically?</td>
<td></td>
<td>ESL students achieved higher reading scores and recalled more idea-units in a passage when they knew their writing task would be related thematically to a reading passage, compared to a condition when their reading and writing tasks were not related thematically.</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.21. Summary of the research questions, data collection and analyses, and results. Cont.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data collected</th>
<th>Analyses done</th>
<th>Answers to Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) In an English language test, how do ESL students' overall scores on their summary recall protocols for reading comprehension compare in (a) a condition when they know their writing task is related thematically to a reading passage to (b) a condition when they know the reading and writing tasks are not related thematically?</td>
<td>Students' oral summary recall protocols of reading passages</td>
<td>A repeated measures ANOVA on students' reading and writing scores</td>
<td>ESL students achieved significantly higher reading scores on their summary recall protocols when they knew their writing task was related thematically to a reading passage, compared to a condition when their reading and writing tasks were not related thematically.</td>
</tr>
<tr>
<td>b) In an English language test, how do ESL students' recalls of top, high, mid, and low levels of idea-units within a reading passage compare in (a) a condition when they know their reading and writing tasks are related thematically to (b) a condition when they know their reading and writing tasks are not related thematically?</td>
<td>Students' recalls of top, high, mid, and low levels of idea-units within the two reading passages</td>
<td>A repeated measures MANOVA on students' recalls of idea-units within the two reading passages</td>
<td>ESL students recalled more idea-units, particularly at the top and lowest levels, of a reading passage when they knew their reading and writing tasks were related thematically, compared to a condition when they knew their reading and writing tasks were not related thematically.</td>
</tr>
</tbody>
</table>
CHAPTER FIVE
THREE CASE STUDIES

In this chapter I document further observations by presenting three case studies to supplement the results in Chapter Four. I provide information about three of the participants’ characteristics (with pseudonyms: Jane, Mike, and Ali) and their unique ways of doing the reading and writing tasks. In selecting these cases from among the thirty-four participants I considered their (a) gender, (b) TOEFL scores (reported by them), (c) their unique uses of writing strategies, (d) their distinct writing and reading performances, (e) mother tongues, (f) their self-assessments of their familiarity with the content knowledge of the reading passage in the thematically-related condition, (g) their distinct attitudes towards the reading and writing modules in the thematically-related condition, and (h) the order of their doing the tasks. In selecting the third participant I also considered his L1, Farsi, as a criterion. Table 5.1 profiles these three people. I present a summary of their writing strategies and their recalls of idea-units of the reading passages in Appendix G. The reasons I selected these three are their different mother tongues (I also considered the fact that Ali did his recall of the idea-units and his interview in Farsi, which could allow me to do a comparison with what Mike and Jane did in English), their different TOEFL scores, their different self-assessments of the familiarity with the reading text used in the thematically-related condition, their different attitudes towards reading and writing modules, their different writing and reading scores (see Table 5.1), and the different writing strategies they used when writing in the thematically-related condition (see Appendix G).

I discuss here the three case studies in order of the results for the two main research questions. My interpretations of these three people’s reading and writing performances are affected by the data that I got from all the 34 participants because I had 34 case studies in my
mind. I include one paragraph from each participant's written composition and one extract from their transcribed oral summary recall protocols in each condition to show their unique approaches in doing their tasks. I present Mike's full essays and transcripts of his oral summary recall protocols of the reading passages in the two thematically-related and thematically-unrelated conditions in Appendix H. All material from the participants is presented verbatim, without my correcting errors of grammar, spelling or punctuation.

Table 5.1. Profiles of Three Case Studies

<table>
<thead>
<tr>
<th>Variable</th>
<th>Case</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jane</td>
<td>Mike</td>
<td>Ali</td>
</tr>
<tr>
<td>Mother Tongue</td>
<td>Mandarin</td>
<td>Vietnamese</td>
<td>Farsi</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td>TOEFL score</td>
<td>613</td>
<td>550</td>
<td>540</td>
</tr>
<tr>
<td>Familiarity with the content knowledge</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Attitudes towards reading and writing modules</td>
<td>Positive</td>
<td>Indifferent</td>
<td>Negative</td>
</tr>
<tr>
<td>Writing global score TR / TU</td>
<td>8 / 7</td>
<td>7 / 5</td>
<td>9 / 7</td>
</tr>
<tr>
<td>Reading score TR / TU</td>
<td>14 / 11</td>
<td>5 / 3</td>
<td>7 / 6</td>
</tr>
<tr>
<td>Order of doing the tasks</td>
<td>TR / TU</td>
<td>TU / TR</td>
<td>TR / TU</td>
</tr>
</tbody>
</table>

Case Study One

Jane had a TOEFL score of 613, so her proficiency in English was relatively high. Her mother tongue was Mandarin. Her self-assessment of her familiarity with the content knowledge of the reading passage in the thematically-related condition was '2' which was next to 'not familiar at all'.

1TR: Thematically-related condition. TU: Thematically-unrelated condition.
Jane’s Writing

In her introductory paragraph in the thematically-related condition, Jane made use of the title of the essay and some words from the task for writing. She was successful in introducing the author’s point of view from the reading passage but failed to tell readers what her side of the issue was.

In the essay “Some Close Encounters of a Mental Kind”, the author talks about how our very own thoughts could actually trick us and so let the readers doubt the credibility of their memories.

I checked her essay and found she had utilized some words and phrases from the reading passage: credibility, scrutinize, eyewitness testimony, seeing is believing, perceive, Devils Tower, eyewitness accounts, and poses. What was also unique about Jane was that she did not use (or at least, not check off) Factor E strategies (what I called Adjusting style and plans). She preferred to adhere to her own style and plans for writing. In the interview she said, “Okay, first thing I (was) thinking about structure. So, uh basically like from my own experience. I have to be, it has to be, has a like introduction, and then in the end has a conclusion.” (I labelled this Format considerations). When writing her essay in the thematically-related condition, Jane kept close track of what the task for writing required. She was consciously aware of the reading-writing connection. She said, “I have to uh think about the essay because this topic is based on that, the essay.” (I labelled this Recalling content from reading).

In her writing Jane confronted a problem. She said, “[My problem was to] come up with my own examples.” (I labelled this Topic-based problems). Jane tried to solve the problem by searching her memory for some related material: “[I] spread out my thoughts.” (I labelled this Considering alternative solutions). She was successful in properly using more than 7 types of
the writing strategies discussed in Chapter Four, particularly, Factors D, F, and H strategies (I called these *Goal-oriented summarizing*, *Goal-oriented revision*, and *Revising arguments* respectively), which are quite sophisticated and proved her to be a capable writer. Jane had a positive attitude towards the use of reading and writing modules in the theme-related condition. She said, "Uh uh I was happy about this because it’s like lottery. When I, you [hit] you [hit] the jackpot because uh in this case, I know the topic would be like uh the essay I wrote."

Jane’s essay in the thematically-unrelated condition lacked a sound argument. In fact, in her essay in that condition, Jane was repetitive. For instance, in her third paragraph, Jane was not really adding anything to justify her taking side of the issue. She wrote:

> It’s quite wrong to think we should try to keep away from modern technology. After developed from thousands of experiments and researches, modern technologies are brought in our lives to help the development of the society and therefore has more good effects rather than bad ones. So it’s (unwitted) if we just threw all technologies away despite of the great improvement it could bring to us

### Jane’s Reading

In the thematically-related condition, Jane recalled all idea-units at all levels in the reading passage but just failed to recall or indicate the thesis sentence at the top level. She almost fully recalled all the details in the original text. Her recall of the given examples in the reading passage was astonishingly comprehensive. In her recall protocols of ‘level seven’ of the idea-units she said:

> But still this is a way of uh clearing things up. But with in the end he like asked like with what we could ac- uh we could actually achieve this this this uh this scrutinize of our memory. (*Level seven*)

In the thematically-unrelated condition, Jane, as in the previous reading task, failed to recall or indicate the thesis sentence at level one but she also missed some idea-units at levels
five and six. She put much emphasis on the given examples in the reading passage. Those
examples helped her to better understand and recall the text. She was not as successful in her
recall of the reading passage in this condition as she was in the thematically-related condition.
For instance, in her recall of 'level five' of the idea-units she said, neglecting to indicate the idea
of man's failure in transforming hard information about himself/herself to the next generation,
which was an important idea at 'level five' of the idea-units in the reading passage (after the 3
hours of performance she was obviously fatigued, as were other participants at the end of this
time period):

And so so this is like the tendency of minor uh to join the majority to say black is white. Uh, and then uh so the author was in the end, in the end was saying that even though
there's already like all these kinds of experiment uh for a long time and people already
know all these uh social tendencies like how people react, but still like uh there's not like
a great uh recognition of like like uh not too many people have realized this point. (Level
five)

Case Study Two

Mike's mother tongue was Vietnamese. He had a TOEFL score of 550, so his English
proficiency was just barely at the level that permitted him to enter the university. His self-
assessment of his familiarity with the content knowledge of the reading passage in the
thematically-related condition was '1' or 'not familiar at all'.

Mike's Writing

In the thematically-related condition, Mike was not successful in writing an effective
introductory paragraph in which he would tell readers his side of the issue. He was not exactly to
the point in this paragraph.

Human is one of the most complicated creatures that we know, and human mind is even
more. Human as an individual has many certainties on their own and often doubt of other
people certainties. People tend to behave in what they observe and always have positive thoughts about it. But when being questioned about their observation, they often fail to tell what they observed. Here, it raises a question about human’s certainties, about what we see and what we actually remember.

What was distinct about Mike was that he did not use Factor G strategies (what I called *Generating supplementary content*) while writing in the thematically-related condition. This could be an indication of his writing weakness. In the interview, he said, “I had no knowledge about the topic.” (I labelled this *Topic-based problems*). Mike tried, however, to compensate for this problem by recalling as much as he could from the reading passage that he had read prior to writing. He said, “I was thinking the I’m trying to how do I try to think about the two example in the text.” (I called this *Recalling content from reading*). In his essay he used the title and some words and phrases from the reading text such as: scrutinize, certainties, misperception, demonstrator, recalling, perceive, and some close encounters of a mental kind. Mike uniquely made full uses of Factors A and B strategies (I called these *Considering task problems and weaknesses* and *Content and form considerations*) which indicated that he tried to cope with his problems in writing. He did not make good use of Factors E, F. and H strategies (I labelled these *Adjusting style and plans, Goal-oriented revision, and Revising arguments* respectively) which could have led him to produce a much better writing product.

Mike had an indifferent attitude towards the reading-writing connection in the thematically-related condition. In his interview, he said, “Uh, for the [first] topic I had [some] knowledge about like technology and computer. But for thing that, like for the second the second essay, I have no knowledge about it”.

Mike’s arguments in his essay in the thematically-unrelated condition looked very naive.
He wrote illogically in that condition and his first paragraph indicated his weak reasoning. Even though he first talked about the advantages of modern technology, he then suggested that people should stick to the traditional ways of living. Mike wrote:

In the last few decades, the technology has significantly developed the way we live. It has been giving us many advantages in our daily life. But it also has created many damages to our natural environment. The air that we breathe everyday, the water that we drink, the land where we live are more polluted than in last century or so. In my opinion, people should return to the traditional life in order to protect our environment.

Mike's Reading

Mike did poorly in his reading tasks in the two conditions. He failed to recall or indicate idea-units at the top, high, and low levels within the reading passages. In his recall of 'level four' of the idea-units in the reading passage in the thematically-unrelated condition, Mike just cited the example from the reading text and failed to indicate the author's intention of giving that example and how people's ideas in the West are affected. Mike said:

the length of the wood are different. But some of the people who, uh the majority of the people agree that the length of the wood is the same. but the minority of the people opinion is uh the length are different. (Level four)

Mike's recall of the idea-units in the thematically-related condition appeared to be very odd. Unlike the majority of participants, he missed those ideas in the middle of the reading text in that condition. He unnecessarily took a side of the issue in his recall of the reading passage. In his recall of 'level seven' of the idea-units within the reading passage, Mike used the author's doubt in finding any solution as his own. However, he was successful in picking up the author's intention in the idea-units of that level. Mike said:

So, that's why he uh he was wrong after thirty years. And of course, this problem the the author didn't uh come up (with) a research solution because I think, personal, I think that there is no answer for this problem about certainty. (Level seven)
Case Study Three

Ali was a native speaker of Farsi. I asked him to do his interview and oral summary recall protocols of the reading passages in Farsi, my mother tongue. He had a TOEFL score of 540, so like Mike he barely had the proficiency in English to enter the university. His self-assessment of his familiarity with the content knowledge of the reading passage in the thematically-related condition was ‘4’ which was next to ‘very familiar’.

Ali’s Writing

Ali did much better in his writing task in the thematically-related condition than in the thematically-unrelated condition. For instance, in his last paragraph in the thematically-related condition. Ali was especially concise and to the point. He demonstrated a unique way of summarizing the reading passage:

People’s perception varies. they interpret each event differently from others and it may lead to remembering it in other ways. Images from long gone days are also distorted or mixed-up with other events that also occurred long ago.

In the interview, Ali said, “I, this, it can be said. when I was writing the first paragraph, for instance. I was trying to say a gist, a brief summary of what I had read.” (I labelled this Summarizing). Ali did not use either Factor A strategies (what I called Considering task problems and weaknesses) or Factor H strategies (what I called Revising arguments). This could be because of his writing strength or his high familiarity with the reading passage. Ali’s full uses of Factors C, D, F, and G strategies (I called these Monitoring text production, Goal-oriented summarizing, Goal-oriented revision, and Generating supplementary content respectively) was quite successful. For example, in his essay, Ali wrote:

It does not have to be a chaotic situation to make remembering something difficult. I
have had difficulty finding an object which has been in the same place for a while or some places seemed different from the last time I visited them - similar to the experience of the Devil’s Tower in the reading was noticeable.

Ali had a negative attitude towards the reading and writing modules in the thematically-related condition, saying that he felt nervous. In his interview, he said, “I, in my thought, experience, see that I am a little nervous.”

In his essay in the thematically-unrelated condition, Ali was rather repetitive and did not give strong arguments as he did in his essay in the thematically-related condition. Ali suggested finding a balance regarding the use of technology and avoiding damage to our natural environment in the first two paragraphs in his essay in that condition. However, in his third paragraph, he again wrote:

We as human seek means to improve our lives, it is in our nature. Therefore, we must allow technology to advance while keeping a watchful eye for unnecessary and wasteful change in the name of advancement.

Ali’s Reading

I transcribed and translated Ali’s oral summary recall protocols from Farsi into English and a Farsi native speaker (a Ph.D. student studying Second Language Education) checked my translation. Ali missed some of the idea-units at the top, high, mid, and low levels of the thematically-related reading passage. His recall of idea-units did not follow the same order as they had been presented in the passages. This might be because of Ali’s being ‘a little nervous’. In his recall of ‘level three’ of the idea-units in the reading passage in the thematically-related condition, for instance, Ali just cited one idea-unit and failed to recall the author’s point that we grant special status to the visual. Ali said:

It says how human mind works. And they want you to understand that, for instance,
when human mind sees something through eyes, something, sees one incident, how it retrieves it and how it recalls it, how many, for instance, after a while. *(Level three)*

In the thematically-unrelated condition, except for the idea-units at ‘level one’, Ali recalled the other idea-units at other levels but partially. In his recall of ‘level four’ of the idea-units within the reading passage, for example. Ali recalled the first idea-unit but failed to cite the author’s example and his idea that openness relieves guilt. Ali said:

This, the second thing, the second reading is about, aims to show that although we live in a society that everything, there’s freedom, there’s freedom of speech and things like that, the only thing that might prevent freedom, that might restrict freedom is economic things. *(Level four)*

**Observations**

These three participants, like the other ones in this study, performed better, to different degrees of course, in their reading and writing tasks in the thematically-related condition than they did in the thematically-unrelated condition. Looking at their reading and writing scores, writing strategies, and their recalls of idea-units, however, one notices certain individual differences. What was distinct about Jane was her relatively high proficiency in English, using her own writing style and plans, and her comprehensive recall of the reading passage in the thematically-related condition. Mike appeared as both a weak writer and reader. But despite his low self-assessment of his familiarity with the reading passage and his indifferent attitudes towards reading and writing modules, he compensated for his weaknesses in writing in the thematically-related condition by using certain writing strategies *(Topic-based problems, Format considerations, Considering individual style, Considering task weaknesses, Compensating for weaknesses, Adjusting arguments, Changing plans, Adjusting/changing design, Awareness of audience, Compensating for weaknesses, Borrowing words/phrases, Outcomes considerations,*
and Reassessing content). What was distinct about Ali was his high self-assessment of his familiarity with the reading passage in the thematically-related condition. This could be one reason for his good writing performance in that condition in that he summarized the author's point of view and at the same time took a side of the issue with convincing reasoning though overall he did poorly in his reading performance in the two conditions despite the fact that he did his summary recall protocols of the reading passages in his L1 (Farsi). In this sense and compared to what Mike and Jane did in English, there seemed to be no difference among these three participants. Doing his recall in L1 was not of much help to Ali. Ali did not use Factor A strategies (what I called Considering task problems and weaknesses), which could be because of his writing ability or Factor H (Revising arguments) writing strategies when writing in the thematically-related condition. This added to his distinct task performances because other participants who wrote good essays in the thematically-related condition, like Jane, made use of Factor H writing strategies.

What might have caused these differences in participants' different reading and writing performances? I assume that neither gender nor L1 played a substantial role (though these issues require more research). The differences, I believe, were in their capabilities for applying specific reading and writing strategies. Their writing strategies varied in kind (see Appendix G) and there was also an indication that the three people were not equally successful in using even some shared strategies. For instance, they all said that they used Summarizing, but it was only Ali who demonstrated his good ability in using that writing strategy. These capabilities in using certain types of writing strategies appropriately might be directly related to their English language proficiency (but again this issue needs further research). It would not be enough for ESL students to be aware of a number of writing and reading strategies but they have to be able to use
them efficiently in such language testing circumstances.

All three case study participants critically interacted with the reading passage in the thematically-related condition. One reason for their doing so, I think, was the reading-writing connection in that condition and the fact that a reading to write task attracted them (see their essay extracts in that condition in this Chapter and how they tried to be reasonable in their arguments). Regardless of their initial differences, namely, gender, TOEFL score, L1, and their familiarity with the content knowledge of the reading passage in the thematically-related condition, they somehow benefited from a reading-writing connection in doing their reading and writing tasks (see their reading and writing scores in Table 5.1). Moreover, one can notice a balance between their reading and writing performances as their reading and writing scores showed (see Table 5.1). I believe if they had been taught how to use reading and writing strategies more effectively, they would have achieved even higher reading and writing scores. But in sum, these observations clearly demonstrate the exploratory nature of the findings.
CHAPTER SIX

IMPLICATIONS

In this chapter I first present a summary of the findings. Then, I point out their theoretical and practical implications. Finally, I conclude the chapter with the limitations of this thesis study and suggest some questions for further research.

Summary of the Findings

The quantitative and qualitative analyses documented in Chapters Four and Five revealed that in an English language test, and compared to a condition when reading and writing tasks were not related thematically: First, the present adult ESL students could extensively but in individually different ways use a reading text as a source of knowledge ('back up information') in producing better written compositions than if they had written compositions independently of a reading task (as is commonly done in many English language tests). The use of a reading text helped them to better communicate, organize, and argue their ideas in their essays and to a lesser extent write linguistically more appropriate and accurate compositions. Second, participants used certain sophisticated writing strategies (more than 8 types of strategies) which matched their goals in writing and were based on their uses of a reading passage. Figure 6.1 shows the 8 types of writing strategies I was able to document.
Eight Types of Writing Strategies

Negatively Correlated with →

A: Considering Task Problems and weaknesses
- Considering task weaknesses
- Topic-based problems
- Compensating for weaknesses

B: Content and form considerations
- Reassessing content
- Borrowing words/phrases
- Format considerations
- Adjusting/changing design
- Compensating for weaknesses

C: Monitoring text production
- Re-reading essay
- Editing
- Considering individual style

D: Goal-oriented summarizing
- Borrowing words/phrases
- Summarizing
- Awareness of audience
- Adjusting arguments

E: Adjusting style and plans
- Changing style
- Paraphrasing
- Compensating for weaknesses
- Changing plans

F: Goal-oriented revision
- Reassessing writing quality
- Reassessing argumentation/reasoning
- Outcomes considerations
- Changing plans
- Awareness of audience

G: Generating supplementary content
- Generating additional content
- Considering content, adding problems
- Reassessing writing quality

H: Revising arguments
- Reassessing argumentation/reasoning
- Re-ordering information
- Adjusting arguments

Figure 6.1. Eight Types of Writing Strategies
The configuration of participants’ writing strategies might be a demonstration of their different levels of writing expertise and/or language proficiency which led to their individually different approaches of using a reading passage as a source of information (see ‘Suggestions for Further Research’ below). These strategies revealed different levels of sophistication. Some seemed to be more sophisticated than others and, as a result, participants may have needed a certain English language ability to use them. The differences between strategies in terms of complexity lay between and within factors. For instance, Factor H strategies (Revising arguments) were more complicated and their use may have required more writing ability than Factor A strategies (Considering task problems and weaknesses) did (see ‘Case Study One’ in Chapter Five). Likewise, in Factor D, using strategies such as Summarizing and adjusting arguments were more demanding than Borrowing words/phrases in that they required certain abilities not necessarily needed when some participants just borrowed some words and phrases from the reading passage.

As shown in Figure 6.1, the use of some strategies negatively correlated with certain others. It appeared that participants’ uses of these strategies had their own logic depending on individual differences (as I discussed in Chapter Four and Five). For example, some participants’ use of Factor G writing strategies (Generating additional content, Considering content, adding problems, and Reassessing writing quality) negatively correlated with their use of ‘Format considerations’, showing that they may have paid more attention to the content rather than the format of their essays. These positive and negative correlations between the use of writing strategies by ESL examinees require further research.

Some strategies within each factor (e.g., ‘Topic-based problems’ in Factor A, ‘Format
considerations' in Factor B, 'Editing' in Factor C, 'Awareness of audience' in Factor D, 'Changing plans' in Factors E, F, and H, and 'Reassessing writing quality' in Factor G) may be used by examinees in their writing in all English language testing situations. In contrast, strategies such as 'Borrowing words/phrases' in Factor D or 'Paraphrasing' in Factor E are probably unique to reading-writing tasks. More importantly, the combination of strategies in each of these factors probably occurred in a way that is unique to an English language test using reading and writing modules.

These findings about writing strategies are highly exploratory. Different writing tasks and their combination with particular reading passages or other sources of information might require different writing strategies. Developing a framework for learning strategies in general and writing strategies in particular necessitates a systematic program of research, including various studies like the present one while controlling for and keeping some variables constant each time in the progress of considerable research. Documenting such a framework needs a wide range of research.

Third, participants mostly had positive attitudes towards the use of reading and writing modules in this English language test. Fourth, participants' self-assessments of their familiarity with the content knowledge of the reading passage did not have a significant correlation with their writing scores. Again I call for great caution in generalizing this finding because it was only based on their response to a Likert-type scale, and I did not pursue any other source of information (e.g., interviews or test instruments - see Dochy, Segers, & Buehl, 1999) about their familiarity with the reading passage or its topic or related information. Fifth, they achieved significantly higher reading scores on their oral summary recall protocols and recalled more idea-
units, particularly at the top and lowest levels, of a reading passage when they knew their writing task was related thematically to a reading passage.

**Theoretical Implications**

The findings showed that a bidirectional hypothesis (Eisterhold, 1990; Shanahan & Lomax, 1984) can justifiably account for reading-writing connections in an English language test using reading and writing modules. Participants’ reading and writing performances demonstrated that they were both ‘interactive’ and ‘interdependent’ in that the thematic connection affected participants’ reading and writing processes and products (as discussed in Chapter Two). Using reading resources in this context was not a ‘linear act’, but both reading and writing influenced each other in a condition when they were related thematically and juxtaposed with each other as tasks on a test. Carson (1993) concurred with Spivey (1990) that when writers compose from sources reading and writing processes ‘blend and co-occur’. The reading-writing connection in the thematically-related condition of the present thesis study may also have enhanced participants’ ‘ongoing thinking and learning’ for in that condition participants applied more than 8 combined groups of writing strategies (26 identifiable strategies in total) in doing their writing task. Their reading processes, too, were altered in positive ways as their recalls of the idea-units of the reading text revealed. In sum, the findings of this thesis study showed that within a testing context when ‘academic literacy’ was viewed as a phenomenon consisting of two interwoven constructs (reading and writing) each construct while interacting with each other also had their own entities, promoting participants to demonstrate their potential reading and writing abilities in ways that exceeded their performance when they did two other comparable reading and writing tasks that were thematically-unrelated.
Practical Implications

I believe the findings of this research have numerous implications for language proficiency testing.

Using Thematic Links

Weir (1990, p. 85) argued that simulating reality (in terms of relevance to academic tasks) and employing more extensive language context are the major advantages of an integration of skills such as reading and writing in a language test. The findings of this thesis study indicated that the use of reading and writing modules in an English language test did highly motivate participants, made them have more memory efforts (see item 14 in the checklist), stimulated their abilities to perform academic task types, and enhanced their ESL reading and writing performances. The findings support the effectiveness of a thematic link between two or more components of English language proficiency tests, for example, in current tests such as TEEP and IELTS. They are also useful in evaluating or designing other language tests (e.g., UCLA Subject A Examination in which the prompt of the writing task is in the form of a reading text). Particularly, the findings may also have important implications for the thematic organization of language proficiency tests where all components of the tests are based on one theme. But that type of context needs to be studied in future research.

The Newly Developed Checklist of Writing Strategies

The checklist of writing strategies that I developed, piloted, and used in this thesis study could be used as an appropriate tool for eliciting information about students’ writing strategies in conditions when reading and writing tasks are related thematically. I suggest that the checklist be revised based on further consideration of the positive and negative correlations between the items shown in Figure 6.1. as well as supplementary information to verify the strategies, such as
concurrent think-aloud verbal reports or stimulated, retrospective interviews after task performance (cf. Smagorinsky, 1994). This is an obvious area for further research.

In this thesis study I did not check participants' writing strategies in the thematically-unrelated condition because I was afraid that asking them to do more tasks would be too much. It took them more than three hours to do the tasks and they were exhausted at the end (I had noticed this in the pilot study as well). In another future study I would suggest using a much larger sample so that participants can do the tasks in two groups. One group would do the reading and writing tasks, interview, and checklist in the thematically-related condition and the other group would do these in the thematically-unrelated condition.

**ESL Examinees’ Understanding of Prompts in an English Language Test Using Reading and Writing Modules**

In most previous studies investigating the effects of different prompts on ESL students' writing, there has been no indication that researchers assessed ESL students' reading comprehension. We do not have evidence of how seriously they read prompts in the form of reading texts. This, in my opinion, is a crucial factor. It is necessary to check ESL students' understanding of reading texts in the first place prior to evaluating the performance in writing that may follow from them. If examinees did not effectively pay attention to their reading tasks, how could they do their writing tasks efficiently when reading and writing are related thematically? In this thesis study I checked participants' reading comprehension of the reading passages through their oral summary recall protocols and by using two semantic maps of the reading texts. However, I did not investigate participants' reading strategies through on line think-aloud protocols which could have rendered more information about their reading performance. This issue needs further research.
Adjusting Writing Rating Scales to Suit Rating ESL Examinees' Written Compositions in an English Language Test Using Reading and Writing Modules

While rating participants' written compositions in the thematically-related condition it occurred to me that as a rater I needed a rating scheme which could appropriately be used for rating those kinds of written compositions. Most widely available, currently used rating scales address the issue of using input for a writing task in a different way. For instance, the bottom scale descriptor of Hamp-Lyons' (1991) rating scale (see Appendix B) reads:

1. A true non-writer who has not produced any assessable strings of English writing. An answer which is wholly or almost wholly copied from the input text or task is in this category [the emphasis is mine]. (Hamp-Lyons. 1991, p.151)

Neither I nor the second rater penalized participants in the present study for using the reading text's information in their written compositions in the thematically-related condition. That is, we ignored this directive. An appropriate rating scale for rating compositions based on a reading-writing task would guide raters in evaluating and giving weight to originality and copying information from a provided resource (reading and/or listening component of a test) differently. This would help raters to know whether or not they should penalize ESL examinees for using information from a reading text and/or from other components in their writings in an English language test using reading and writing modules or themes. It would also help ESL examinees to know to what extent such uses of given information in written compositions are plausible and legitimate.

Positive Washback Effects

The results of this thesis study revealed that ESL students benefited from the integration of reading and writing components in an English language test. However, their relatively poor
reading performance could be in part because of the fact that they lacked adequate training or practice in ESL reading (Leki, 1993; Goldstein, 1993). Leki (1993, p.12) held that the lack of a link between reading and writing in many language tests and curricula poses major damage to both domains in language instruction. An integration of reading and writing in English courses could enhance not only ESL examinees’ writing performance but also their reading skills (Kroll, 1993, p. 75). The use of thematic links between two or more components of English language tests could result in reinforcing this idea of the integration of reading and writing in educational courses.

**Limitations of the Study**

I ensured the internal validity of the present thesis study by carefully designing, administering, coding, scoring, and analyzing the data as I described in Chapter Three and Chapter Four. However, despite consistent, significant results obtained through inferential statistics (which imply the generalizability of the findings for the same population), I have to call for great caution in terms of their external validity or extending the findings to other populations because participants were geographically in one region, were fairly proficient in their second language, English, were taking the same ESL writing courses and university degree program in engineering, and had already been admitted to an undergraduate program at a post-secondary level.

The present thesis study had several other limitations which need to be highlighted so as to avoid any overgeneralizations and misinterpretations of the results. First, I and a second rater tried to be unbiased in rating participants’ compositions and the transcripts of their oral summary recall protocols of the reading passages as much as possible by (a) putting their essays and
transcripts of their summary recall protocols of the reading passages in random order for rating and (b) following the same writing and reading rating schemes. However, I consider (a) myself acting as one of the raters and (b) the fact that the second rater could also distinguish the conditions from participants’ essays and transcripts of their summary recall protocols, which might have consequently led to potential bias in rating, as limitations of this thesis study.

Second, Donin and Silva (1993) showed that L2 students’ reading comprehension is most effectively assessed through verbal reports in their L1s:

The findings of these studies are, thus, consistent with Lee’s (1986) and Wolff’s (1987) suggestions that the use of second-language production tends to underestimate and distort second-language comprehension, at least at intermediate levels of second-language proficiency. If one’s interest is in assessing and improving second-language comprehension, then the use of first-language production would appear to be more appropriate at these proficiency levels. (Donin & Silva, 1993, p. 391)

In this study, ESL students were from eight different L1s, making it difficult for me to evaluate their reading comprehension in their L1s. Moreover, having native speakers of the different languages translate the answers would have also added to the sources of errors in the study. Therefore, I assessed participants’ reading comprehension through their oral summary recall protocols in English, except for the Farsi speakers. Since my first language is Farsi, I asked those whose L1 was Farsi (six of the participants) to produce their summary recall protocols in Farsi. One of them, however, refused to do so arguing that he would prefer to recall in English. He said, “I have the text in English in my mind and it would be more difficult for me and also time consuming to recall it in Farsi”. The merit of assessing ESL students’ reading comprehension in their L1s needs further investigation, and to see if indeed ESL examinees prefer that their reading be assessed in their L1s.
Third. Cumming (1988) observed that individuals’ second language writings vary with their levels of writing expertise and their language proficiency. Participants in this thesis study were from an intermediate level of English language proficiency. However, I did not look for the effects of their English language proficiency on their writing performance. I had the TOEFL scores of the majority of them, but the scores were spread over a large range and did not allow me to put participants in groups according to those scores (see Chapter Three). Moreover, this study did not investigate participants’ writing expertise and how it may have interacted with the effects of the writing prompt in the form of a reading text and participants’ levels of English language proficiency.

Fourth, an introspective approach (e.g., concurrent think aloud protocols produced while people read and wrote) might have been preferable to the retrospective approach (which I used in the present thesis study) for examining ESL students’ writing strategies when their writing task was related thematically to their reading task. However, since participants were required to do their tasks in a simulated English language testing situation within a limited time, I did not ask them to provide me with their think aloud protocols, which I thought, would have disrupted this process (as I discussed in Chapter Two - see also Smagorinsky, 1994).

Fifth, as I mentioned in Chapter Three the sample was small (34 ESL students). I did not intend to have more participants as the design of the study required each participant to do the tasks in almost three hours and I expected it would be difficult to recruit many ESL students who would be willing to take part in such a study, especially when they are asked to write two compositions. It was not even easy to recruit this number of participants. Sixth, I did not treat participants’ L1 as a variable. It could have had an impact on participants’ reading
comprehension and writing performance. Carson et al. (1990), for instance, found that the relationship between L2 reading and writing skills varied for two language groups (Japanese and Chinese ESL students).

Seventh, different subject matter (i.e., content knowledge) might have yielded different results when investigating the effects of content knowledge from reading on ESL written compositions. The content knowledge in this study was from the Social Sciences; but other topics might have produced different results for these engineering students. Different writing tasks could also have led to different results (Cumming, 1988, p.169): the writing tasks in this study were discussing issues and giving reasons and examples. As I mentioned in Chapter Three, I checked the similarity of the writing tasks with ESL students in the pilot study. The effects of different tasks on ESL students' performance need to be investigated through further research; my sampling of reading and writing on which the effects of reading on writing performance were assessed was limited to a relatively short reading text and a short piece of writing. However, the brevity of the tasks resembled all that might be feasible in a real-testing situation. Finally, since my method of process tracing was exploratory, any assessment implications based on the findings of this thesis study regarding writing processes and ESL students’ writing strategies in English language testing situations when a writing task was related thematically to a reading passage should be treated with great caution.

Suggestions for Further Research

This thesis study, because of its exploratory nature, brings about a number of research questions which are worth investigating. Further studies of this kind could help to make English language tests profound, publicly popular, valid, and reliable performance-based assessments.
My major suggestions for further research are in English writing assessment, English reading assessment, and English language performance for both adult ESL students and English native speakers.

**English Writing Assessment**

The present thesis study shed light on some of the issues surrounding English writing assessment in English language tests using reading and writing modules. However, there still remain many unanswered questions:

Participants’ responses to the interview questions and the types of the writing strategies that they used in their writing in the thematically-related condition, to some extent, showed their engagement in both ‘knowledge-telling’ and ‘knowledge-transforming’ processes in their writings in the thematically-related condition. They also actively participated in argumentation and analysing the content of the reading text, as Davis (1994, p. 142) stated is desirable. People’s uses of knowledge-telling and knowledge-transforming strategies might have arisen from the nature of the writing task or their own abilities or goals, but more extensive analyses of ESL students’ use of knowledge-transforming and their critical views about the content knowledge of the reading passage seem very intriguing and require further research.

The data from participants’ written compositions in the thematically-related condition, interviews, and the checklist showed that the integration of skills and using reading and writing modules motivated them and engaged them in a highly cognitive activity. This was evident from their argumentation and the range of their writing strategies. Applying more than 8 groups of writing strategies (26 strategies in total) in a thirty-five minute writing task seemed to be a good indication of participants’ cognitive involvement. This may justify the use of such tasks in
language tests in that they are in line with educational goals which aim to help learners develop their cognitive abilities.

The findings showed that the thematic connection between the reading and writing tasks in the thematically-related condition led participants to make tremendous efforts to produce meaningful and reasonable pieces of writing. However, further research needs to be done to find out the precise nature of ESL examinees' writing processes and their individual models of writing in an English language test with a thematic link between its reading and writing. It is also worth knowing in such a test (a) what writing strategies ESL students studying in other fields than engineering use, (b) how English language proficiency affects ESL students' writing strategies, and (c) what writing strategies (by comparison) English native speakers use in their compositions.

**English Reading Assessment**

Although in this thesis study I assessed participants' reading comprehension through the transcripts of their oral summary recall protocols, further research is needed to check the appropriacy of these tools for assessing ESL students' reading comprehension and if they are better tools for assessing ESL students' or English native speakers' reading comprehension than other common assessment tools such as open-ended questions, multiple-choice questions, or cloze tests. Moreover, I did not investigate participants' online reading strategies or reading processes in an English language test using reading and writing modules: these are other topics worthy of study in further research (see Feng & Mokhtari, 1998). I suggest research might usefully try: (a) to develop a checklist of reading strategies which would cover all probable strategies, (b) to administer such a checklist with reading and writing tasks, and (c) to interview
participants to find out what reading strategies they use in an English language test which makes
use of reading and writing modules (like the procedures that I followed in this thesis study to find
out ESL students’ writing strategies in such a test).

It is also worth investigating (a) what reading strategies ESL students or English native
speakers use in their readings, (b) how English language proficiency affects ESL students’ or
English native speakers’ reading strategies, and (c) how ESL students’ or English native
speakers’ self-assessments of their familiarity with the content knowledge of a reading text might
affect their reading comprehension and reading strategies.

**English Language Performance**

In this thesis study I did not check participants’ listening or oral proficiency in English
language tests using themes because of some practical reasons that I explained in Chapter One.
Because English language performance testing often also includes examinees’ listening and
speaking performances, there are various further questions that need to be investigated. We need
to know in an English language test using reading and writing modules or themes (a) how L1
affects ESL students’ English language performance; (b) how different themes or subject matter
affect ESL students’ or English native speakers’ English language performance; (c) how
‘component dependency’ affects English native speakers’ language performance; and (d) how
different tasks affect ESL students’ or English native speakers’ language performance.

**Reading-writing connections and validity issues.** Considering participants’ reading and
writing performances in the thematically-related condition in the present study, I cannot support
the belief (expresses in Charge & Taylor, 1997) that reading and writing modules ‘increased the
potential for confusing the assessment of reading ability with the assessment of writing ability’
(see my discussion of this issue in Chapter Two). However, it may be that because participants in my research were relatively proficient in English that their comprehension of the reading material was not overly problematic. But different results might have appeared for ESL students with much less proficiency in English, who might not have generally understood the reading passage. Could they have still compensated for this problem by using effective writing strategies? Questions like this suggest the issue of the construct validity of English language tests using reading and writing modules needs to be thoroughly studied with a wide variety of learner populations.

Reading and writing are among those tasks that ESL students need to do when admitted to a college or university. Students are usually asked to write a paper after doing some readings (Waters, 1996). Assessment which integrates reading and writing skills more realistically suits their future tasks in English language in academia than language tests with independent components (although during the authentic writing process in academia students have access to the reading texts while in a testing context they usually do not, as it was the case for participants in this thesis study). Considering the findings I can not support (a) the idea that the predictive validity of an English language test using reading and writing modules is constrained because of ‘the variety of interactions of certain underlying competencies and skills with particular topics or particular tasks’(see Chapter Two); (b) the idea that the subject matter affects ESL students’ writing performance and consequently constrains the predictive validity of an English language test using reading and writing modules or themes (see Chapter Two); or (c) the idea that ‘the specificity of the task and performance criteria’ affects the generalizability of the construct and constrains the predictive validity of an English language test using reading and writing modules
(see Chapter Two). The integration of skills is obviously relevant to academic tasks (Spack, 1993, pp. 186-187). However, the issue of the predictive validity of English language tests using a link between two or more of test components needs further research.

Consequential validity or washback effects of English language tests are considered of high importance in language assessment (Darling-Hammond, 1995, p. 95). These include whatever effects a test has on society outside the context of the test itself. Would more widespread uses of integrated English tests make course designers, material developers, and language teachers put more emphasis on reading skills in reference to writing? Would they use more integrated reading, writing, and even listening tasks in their syllabuses, materials, and classroom assignments? Would the integration of skills in English language assessment in general and in TOEFL and IELTS, for instance, in particular (because of their popularity), encourage ESL teachers and course designers to put more emphasis on reading-writing and listening tasks? And would this, in turn, enhance ESL students' English language proficiency and their learning processes? These are major concerns to be investigated on the large-scale effects of integrating reading, writing, and even listening components on students' language performance in English language tests.
REFERENCES


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McGinley, W., & Tierney, R.J. (1989). Traversing the topical landscape: Reading and writing as ways of knowing. Written Communication, 6, 243-269.


directions. *Language Arts, 60*, 627-642.


APPENDIX A

Six Tests’ Specifications

Table 1. The Table of Specifications - First TOEFL-1963

<table>
<thead>
<tr>
<th>Section</th>
<th>Subunit(s)</th>
<th>Question Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Listening</td>
<td>A: Statement/Question</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Conversation(s) - dialogue type</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: Lecture(s) - with note taking</td>
<td></td>
</tr>
<tr>
<td>2. English Structure</td>
<td>Items in supposedly simulated conversation</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td>3. Vocabulary</td>
<td>A: Sentence Completion Task</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Synonym Matching Task</td>
<td></td>
</tr>
<tr>
<td>4. Reading</td>
<td>Reading passages</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td>5. Writing Ability Test</td>
<td>A: Error Recognition Task</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Sentence Completion Task</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Specifications of TOEFL-1979

<table>
<thead>
<tr>
<th>Section</th>
<th>Subunit(s)</th>
<th>Question Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Listening Comprehension</td>
<td>A: Statement</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Conversation-dialogue type</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: Mini Talks (Monologues)</td>
<td></td>
</tr>
<tr>
<td>2. Structure and Written Expression</td>
<td>A: Fill in the blanks</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Error recognition</td>
<td></td>
</tr>
<tr>
<td>3. Reading and Vocabulary</td>
<td>A: Fill in the blanks</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td></td>
<td>B: Reading comprehension</td>
<td></td>
</tr>
</tbody>
</table>
Table 3. Specifications of IELTS - 1996

| Listening (All Candidates)-General Language Proficiency-Four Sections | 1. a. First two sections: Social Needs.  
| | b. Last two sections: Educational or Training Contexts.  
| | 2. 40 items in 30 minutes.  
| | 3. Question Types: M/C, short-answer questions, notes/summary/flow chart completion, sentence completion, labelling a diagram and matching.  
| | 4. Both monologues and dialogues.  

Reading - Candidates take  
Either:  
I. Academic Reading Module: For graduate and undergraduate purposes.  
- a. 3 sections-3 passages.  
- b. 40 items in 60 minutes.  

Or:  
II. General Training Reading Module: Social Survival and General Reading.  

Writing - Candidates take  
Either:  
I. Academic Writing Module: For graduate and undergraduate purposes.  
- Short essays or general reports addressed to tutors or to an educated non-specialist audience.  
- a. Task One (150 words): Candidates are asked to look at a diagram, table or data and to present the information in their own words.  
- b. Task Two (250 words): All candidates present a solution to a problem, justify an opinion or evaluate a point of view.  

Or:  
II. General Training Writing Module: Personal semi-formal or formal correspondence or a given topic as part of a class assignment.  
- a. Task One: Candidates respond to a given problem with a letter.  

Speaking (All Candidates)- A structured interview with an emphasis on general speaking skills.  

Five Sections in 10-15 minutes: An introduction, extended discourse on some familiar topic, eliciting information, discussion about future plan, and a conclusion.
Table 4. Specifications of TEEP

<table>
<thead>
<tr>
<th>Section(s)</th>
<th>Paper</th>
<th>Subject</th>
<th>Component(s)</th>
<th>Focuses on</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>General</td>
<td>Reading-Writing-Listening</td>
<td>lectures</td>
<td>2:15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compulsory</td>
<td>II</td>
<td>Broadly specific:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Arts/Sociology/Administration/Business</td>
<td>Reading-Writing-Listening</td>
<td>Seminars</td>
<td>2:25</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Science/Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>III</td>
<td>General</td>
<td>Speaking skills</td>
<td>Questions</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Specifications of OTESL(Post Admission Test)

<table>
<thead>
<tr>
<th>Subtests</th>
<th>Theme</th>
<th>Components</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Academic Module</td>
<td>General</td>
<td>Reading 1&lt;br&gt;Reading 2</td>
<td>½ hour</td>
</tr>
<tr>
<td>A: Science and Technology</td>
<td></td>
<td>Reading 1&lt;br&gt;Listening&lt;br&gt;Reading 2</td>
<td></td>
</tr>
<tr>
<td>Discipline-Related Module</td>
<td></td>
<td>Writing</td>
<td>2 hours</td>
</tr>
<tr>
<td>B: Social Science</td>
<td></td>
<td>Reading 1&lt;br&gt;Listening&lt;br&gt;Reading 2&lt;br&gt;Writing</td>
<td></td>
</tr>
<tr>
<td>Oral Interaction</td>
<td>A: Science and Technology</td>
<td>.......................</td>
<td>15 minutes</td>
</tr>
<tr>
<td></td>
<td>B: Social Science</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table 6. Specifications of The COPE Test

<table>
<thead>
<tr>
<th>Components</th>
<th>Part(s)</th>
<th>Question Type</th>
<th>Time</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Text 1 (800-900 words)</td>
<td>Short Answers</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>A:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B:</td>
<td>Multiple Choice Questions</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>C:</td>
<td>Summary (main points-supporting ideas)</td>
<td>80 minutes</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>D:</td>
<td>Cloze (with and without given words)</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>An Essay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Section I: Listen for Specific Information (with printed outline)</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Section II: Guided Note Taking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Section III: Note Taking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B:</td>
<td>Section IV: Comprehension</td>
<td>Short Answers</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Section V:</td>
<td>Multiple Choice Questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Section VI: Interactions</td>
<td>Multiple Choice Questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>3-4 paragraphs (1 - ½ pages)</td>
<td>Essay</td>
<td>35</td>
</tr>
</tbody>
</table>
**APPENDIX B**

Hamp-Lyons' (1991, pp. 148-51) rating scale

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<table>
<thead>
<tr>
<th>Global scale</th>
<th>Band descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>The writing displays an ability to communicate in a way which gives the reader full satisfaction. It displays a completely logical organisational structure which enables the message to be followed effortlessly. Relevant arguments are effectively related to the writer's experience or views. There are no errors of vocabulary, spelling, punctuation or grammar and the writing shows an ability to manipulate the linguistic systems with complete appropriacy.</td>
</tr>
<tr>
<td>8</td>
<td>The writing displays an ability to communicate without causing any difficulties. It displays a logical organisational structure which enables the message to be followed easily. Relevant arguments are presented in an interesting way, with main ideas highlighted, effective supporting material and they are well related to the writer's own experience or views. There are no significant errors of vocabulary, spelling, punctuation or grammar and the writing reveals an ability to manipulate the linguistic systems appropriately.</td>
</tr>
<tr>
<td>7</td>
<td>The writing displays an ability to communicate with difficulties for the reader. It displays good organisational structure which enables the message to be followed without much efforts. Arguments are well presented with relevant supporting material and with an attempt to relate them to the writer's experience or views. The reader is aware of but not troubled by occasional minor errors of vocabulary, spelling, punctuation or grammar, and/or some limitations to the writer's ability to manipulate the linguistic systems appropriately.</td>
</tr>
<tr>
<td>6</td>
<td>The writing displays an ability to communicate although there is occasional strain for the reader. It is organised well enough for the message to be followed throughout. Arguments are presented but it may be difficult for the reader to distinguish main ideas from supporting material; main ideas may not be supported; their relevance may be dubious; arguments may not be related to the writer's experience or views. The reader is aware of errors of vocabulary, spelling, punctuation or grammar, and/or limited ability to manipulate the linguistic systems appropriately, but these intrude only occasionally.</td>
</tr>
<tr>
<td>5</td>
<td>The writing displays an ability to communicate although there is often strain for the reader. It is organised well enough for the message to be followed most of the time. Arguments are presented but may lack relevance, clarity, consistency or support; they may not be related to the writer's experience or views. The reader is aware of errors of vocabulary, spelling, punctuation or grammar which intrude frequently, and of limited ability to manipulate the linguistic systems appropriately.</td>
</tr>
<tr>
<td>4</td>
<td>The writing displays a limited ability to communicate which puts strain on the reader throughout. It lacks a clear organisational structure and the message is difficult to follow. Arguments are inadequately presented and supported; they may be irrelevant; if the writer's experience or views are presented their relevance may be difficult to see. The control of vocabulary, spelling, punctuation and grammar is inadequate, and the writer displays inability to manipulate the linguistic systems appropriately, causing severe strain for the reader.</td>
</tr>
<tr>
<td>3</td>
<td>The writing does not display an ability to communicate although meaning comes through spasmodically. The reader cannot find any organisational structure and cannot follow a message. Some elements of information are present but the reader is not provided with an argument, or the argument is mainly irrelevant. The reader is primarily aware of gross inadequacies of vocabulary, spelling, punctuation and grammar; the writer seems to have no sense of linguistic appropriacy, although there is evidence of sentence structure.</td>
</tr>
<tr>
<td>2</td>
<td>The writing displays no ability to communicate. No organisational structure or message is recognisable. A meaning comes through occasionally but it is not relevant. There is no evidence of control of Vocabulary, spelling, punctuation or grammar, and no sense of linguistic appropriacy.</td>
</tr>
<tr>
<td>1</td>
<td>A true non-writer who has not produced any assessable strings of English writing. An answer which is wholly or almost wholly copied form the input or task is in this category.</td>
</tr>
<tr>
<td>Communicative Quality</td>
<td>Organisation</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>9. The writing displays an ability to communicate in a way which gives the reader full satisfaction.</td>
<td>The writing displays a completely logical organisational structure which enables the message to be followed effortlessly.</td>
</tr>
<tr>
<td>8. The writing displays an ability to communicate without causing the reader any difficulties.</td>
<td>The writing displays a logical organisational structure which enables the message to be followed easily.</td>
</tr>
<tr>
<td>7. The writing displays an ability to communicate with few difficulties for the reader.</td>
<td>The writing displays good organisational structure which enables the message to be followed throughout.</td>
</tr>
<tr>
<td>6. The writing displays an ability to communicate although there is occasional strain for the reader.</td>
<td>The writing is organised well enough for the message to be followed throughout.</td>
</tr>
<tr>
<td>5. The writing displays an ability to communicate although there is often strain for the reader.</td>
<td>The writing is organised well enough for the messages to be followed most of the time.</td>
</tr>
<tr>
<td>4. The writing displays a limited ability to communicate which puts strain on the reader throughout.</td>
<td>The writing lacks a clear organisational structure and the message is difficult to follow.</td>
</tr>
</tbody>
</table>
**Profile scale**  
**Band descriptor: Cont.**

<table>
<thead>
<tr>
<th>Communicative Quality</th>
<th>Organisation</th>
<th>Argumentation</th>
<th>Linguistic Accuracy</th>
<th>Linguistic Appropriacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The writing does not display an ability to communicate although meaning comes through spasmodically.</td>
<td>The writing has no discernible organisational structure and a message cannot be followed</td>
<td>Some element of information are present but the reader is not provided with an argument, or the argument is mainly irrelevant.</td>
<td>The reader is primarily aware of gross inadequacies of vocabulary, spelling, punctuation and grammar.</td>
<td>There is little or no sense of linguistic appropriacy, although there is evidence of sentence structure.</td>
</tr>
<tr>
<td>2. The writing displays no ability to communicate.</td>
<td>No organisational structure or message recognisable.</td>
<td>A meaning comes through occasionally but it is not relevant.</td>
<td>The reader sees no evidence of control vocabulary, spelling, punctuation or grammar.</td>
<td>There is no sense of linguistic appropriacy.</td>
</tr>
<tr>
<td>1. A true non-writer who has not produced any assessable strings of English writing. An answer which is wholly or almost wholly copied from the input text or task is in this category.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

UCLA Examinations and Task Instructions

University of California: Subject A Examination May 1989

Group Minds

People living in societies that we describe as Western, or as the free world, may be educated in many different ways, but they will all emerge with an idea about themselves that goes something like this: I am a citizen of a free society, and that means I am an individual, making individual choices. My mind is my own, my opinions are chosen by me. I am free to do as I will, and at the worst the pressures on me are economic—that is to say, I may be too poor to do as I want.

This set of ideas may sound something like a caricature, but it is not so far off from how we see ourselves. It is a portrait that may not have been acquired consciously, but is part of a general atmosphere or set of assumptions that influence our ideas about ourselves. People in the West therefore may go through their entire lives never thinking to analyze this very flattering picture, and as a result are helpless against all kinds of pressures on them to conform in many kinds of ways. The fact is that we all live our lives in groups—the family, work groups, social, religious and political groups. We are group animals still, and there is nothing wrong with that. But what is dangerous is not understanding the social tendencies that govern groups and govern us.

When we’re in a group, we tend to think as that group does. It is the hardest thing in the world to maintain an individual dissident opinion as a member of a group.

It seems to me that this is something we have all experienced—something we take for granted, may never have thought about. But a great deal of experiment has gone on among psychologists and sociologists on this very theme. If I describe an experiment or two, then anyone listening who may be a sociologist or psychologist will groan. Oh no. not again—for they will have heard of these classic experiments far too often. My guess is that the rest of you will never have heard of these experiments. If my guess is true, then it aptly illustrates my general thesis, that we—the human race—are now in possession of a great deal of hard information about ourselves, but we do not use it to improve our institutions and therefore our lives.

A typical experiment on this theme goes like this. A group of people is taken into the researcher’s confidence. A minority of one or two is left in the dark. Some situation demanding measurement or assessment is chosen: for instance, comparing lengths of wood that differ only a little from each other, but enough to be perceptible, or comparing shapes that are almost the same size. The majority in the group—according to instruction—will assert stubbornly that these two shapes or lengths are the same length, or size, while the solitary individual who has not been so instructed will assert that the pieces of wood are different. But the majority will continue to insist—speaking metaphorically—that black is white, and after a period of exasperation, irritation, even anger, certainly incomprehension, the minority will fall into line. Not always, but nearly always. There are indeed glorious individualists who stubbornly insist on telling the truth as they
see it, but most give in to the majority opinion, obey the atmosphere.

When put as baldly, as unflatteringly, as this, reactions tend to be incredulous: "I certainly wouldn't give in, I speak my mind." But would you?

People who have experienced a lot of groups, who perhaps have observed their own behavior, may agree that the hardest thing in the world is to stand out against one's group, a group of one's peers. Many agree that among our most shameful memories is this—how often we said black was white because other people were saying it. People who have been in a political movement at times of extreme tension, people who remember how they acted in school, will know this guilt anyway.... but it is one thing carrying a burden of knowledge around, half conscious of it, perhaps ashamed of it, hoping it will go away if you don't look too hard, and another saying openly and calmly and sensibly: "Right. This is what we must expect under this and that set of conditions."

Imagine us saying to children: "In the last fifty or so years, the human race has become aware of a great deal of information about its mechanisms: how it usually behaves, how it tends to behave under certain circumstances. If this is to be useful you must learn to contemplate these tendencies calmly, dispassionately, disinterestedly, without emotion. It is information that will set people free from blind loyalties, obedience to slogans, rhetoric, leaders, group emotions. You must be on your guard against your own most primitive reactions and instincts." Well, there it is.

University of California: Subject A Examination May 1992

Some Close Encounters of a Mental Kind

Certainty is both a blessing and a danger. Certainty provides warmth, solace, security— an anchor in the unambiguously factual events of personal observation and experience. But certainty is also a great danger, given the notorious fallibility—and unrivaled power—of the human mind. How often have we killed on vast scales for the 'certainties' of nationhood and religion: how often have we condemned the innocent because the most prestigious form of supposed certainty—eyewitness testimony—bears all the flaws of our ordinary fallibility.

Primates are visual animals par excellence, and we therefore grant special status to personal observation—to being there and seeing directly. But all sights must be registered in the brain and stored somehow in its intricate memory. And the human mind is both the greatest marvel of nature and the most perverse of all tricksters.

Eyewitness accounts do not deserve their conventional status as ultimate arbiters, even when testimony of direct observation can be marshaled in abundance. In her sobering book Eyewitness Testimony (Harvard University Press, 1979), Elizabeth Loftus debunks, largely in a legal context, the notion that visual observation confers some special claim for veracity. She identifies three levels of potential error in supposedly direct and objective vision: misperception of the event itself, and the two great tricksters of passage through memory before later disgorgement—retention and retrieval.

In one experiment, for example, Loftus showed 40 students a 3-minute videotape of a
classroom lecture disrupted by 8 demonstrators (a relevant subject for a study from the early 1970s!). She gave the students a questionnaire and asked half of them: "Was the leader of the 12 demonstrators . . . a male?"; and the other half, "Was the leader of the 4 demonstrators . . . a male?" One week later, in a follow-up questionnaire, she asked all the students: "How many demonstrators did you see entering the classroom?" Those who had previously received the question about 12 demonstrators reported seeing an average of 8.9 people; those told of 4 demonstrators claimed an average of 6.4. All had actually seen 8, but compromised later judgement between their actual observation and the largely subliminal power of suggestion in the first questionnaire.

Thus, we are easily fooled on all fronts of both eye and mind: seeing, storing, and recalling. The eye tricks us badly enough; the mind is infinitely more perverse. What remedy can we possibly have but constant humility, and eternal vigilance and scrutiny?

At the age of fifteen. I made a western trip by automobile with my family: I have specially vivid memories of an observation at Devils Tower, Wyoming (the volcanic plug made most famous as a landing site for aliens in Close Encounters of the Third Kind). We approach from the east. My father tells us to look out for the tower from tens of miles away, for he has read in a guidebook that it rises, with an awesome near-verticality, from the dead-flat Great Plains-and that pioneer families used the tower as a landmark and beacon on their westward trek. We see the tower, first as a tiny projection, almost square in outline, at the horizon. It gets larger as we approach, assuming its distinctive form and finally revealing its structure as a conjoined mat of hexagonal basalt columns. I have never forgotten the two features that inspired my rapt attention: the maximal rise of verticality from flatness, forming a perpendicular junction; and the steady increase in size from a bump on the horizon to a looming, almost fearful giant of a rock pile.

Now I know, I absolutely know that I saw this visual drama, as described. The picture in my mind of that distinctive profile, growing in size, is as strong as any memory I possess. I see the tower as a little dot in the distance, as a mid-sized monument, as a full field of view.

In 1987, I revisited Devils Tower with my family-the only return since my first close encounter thirty years before. I planned the trip to approach from the east, so that they would see the awesome effect-and I told them my story, of course.

In the context of this essay, what follows will be anticlimactic in its predictability, however acute my personal embarrassment. The terrain around Devils Tower is mountainous; the monument cannot be seen from more than a few miles away in any direction. I bought a booklet on pioneer trails westward, and none passed anywhere near Devils Tower. We enjoyed our visit, but I felt like a perfect fool. Later, I checked my old logbook for that high-school trip. The monument that rises from the plain, the beacon of the pioneers, is Scotts Bluff, Nebraska-not nearly so impressive a pile of stone as Devils Tower.

And yet I still see Devils Tower in my mind when I think of that growing dot on the horizon. I see it as clearly and as surely as ever, although I now know that the memory is false.

Of course we must treat the human mind with respect-for nature has fashioned no more admirable instrument. But we must also struggle to stand back and to scrutinize our own mental certainties. This last line poses an obvious paradox, if not an outright contradiction-and I have no resolution to offer. Yes, step back and scrutinize your own mind. But with what?
Task Instructions

Thematicallv-related Reading
Directions: Please read the passage carefully. Then. I will ask you to tell me what you can remember from the text. Your oral summary recall protocol will be used as a tool for measuring your reading comprehension; and it will be scored for citing the main and supporting ideas/examples in the reading text. You will be tape-recorded.

Your writing task is related to this reading text.

Reading Time: 20 minutes

Thematicallv-related Writing
Please write 3-4 paragraphs (1-1/2 pages) on the following topic. Your essay will be evaluated on the basis of your ability to develop your central idea, to express yourself clearly, and use the conventions of written English. The topic has no 'correct' response.

Time: 35 minutes

Most students find it useful to take 5-10 minutes to think about their essay and to make notes or an outline: try to decide on your main ideas and the details and examples you will use to support or develop your ideas. Plan to leave a few minutes to check your work.

Essay Task
How does the author attempt to shake our belief in the credibility of what we see or remember seeing? To what extent does his essay convince you to doubt what people perceive and remember? To develop your essay you should discuss specific examples from your own experience, your observation of others, or your reading—including “Some Close Encounters of a Mental Kind” itself.

Thematicallv-unrelated Reading
Directions: Please read the passage carefully. Then. I will ask you to tell me what you can remember from the text. Your oral summary recall protocol will be used as a tool for measuring your reading comprehension; and it will be scored for citing the main and supporting ideas/examples in the reading text. You will be tape-recorded.

Reading Time: 20 minutes
Thematically-unrelated Writing

Please write 3-4 paragraphs (1-1/2 pages) on the following topic. Your essay will be evaluated on the basis of your ability to develop your central idea, to express yourself clearly, and use the conventions of written English. The topic has no 'correct' response.

Time: 35 minutes

Most students find it useful to take 5-10 minutes to think about their essay and to make notes or an outline: try to decide on your main ideas and the details and examples you will use to support or develop your ideas. Plan to leave a few minutes to check your work.

Essay Prompt and Task

Some people believe that modern technology has caused some terrible damage to the natural environment. They think this process can result in a global crisis. What do you think? Do you think in order to support the natural environment we should try to keep away from modern technology and stick to traditional ways of life? Discuss this issue and give your reasons.
Appendix D

A Sample of One Interview

('R' stands for ‘researcher’ and ‘P’ stands for ‘participant’. Words in parentheses indicate that I am not sure if they are what the participant said. X, XX, and XXX stand for missing one, two, and more words respectively. Pauses of more than five seconds are shown by ‘...’):

Interview No. 2

R: Please look at your composition and answer these questions. What did you think about when you wrote each of the paragraphs of your compositions?
P: I was looking, I was looking at the questions to see what you want us, you want me to uh tell. So, I organized uh a few points I got from the article. So, I put the three points uh, uh. Do I have to say first?
R: Uhm.
P: Okay, so (the) first paragraph is just in- like introduction, just restate- restate the questions and give the solution to show how how the author try uh how the author uh want to prove the credibility of what we see and remember seeing can be shaken uh by three points. I put uh misperception, persuasion and so called the certainty. And then I elaborated this three points that I (brought) in the introduction. And (in) next three paragraphs I X (extension) and uh supporting detail for uh for each statement.
R: Can you say more? I mean about all paragraphs.
P: Uh the paragraphs?
R: Yeah.
P: Uh the details?
R: Yeah sometimes...
P: Okay, so the first one is sometimes we judge a person through his or her looking and not by X and we usually look at a (great) of a person by degree education. And I put some examples such as uh (is talking about his experience)...
R: Sorry to interrupt you. The question is what did you think about?
P: What (I) think about?
R: Yeah. When you wrote, when you were writing paragraphs.
P: I was thinking to support my statement. And my statement referred back to the question from the paper. Yeah and I want to prove it XX.
R: And for the other paragraphs? The same thing or?
P: The same thing. The same, just different points and different examples. XX uh and after the examples, I restate the relationship between this paragraph and back to (my) statement. So, I just concluding, I put the concluding sentence after the details, after the supporting details.
R: When writing, did you think about the reading you had done previously? In what ways? Please give details.
P: Yeah, oh yes. (When) I was writing this paragraph I think the para- the article I read there are like some examples that I can use. So, yeah, I put them down XX. Because some of the statement from the article, they also give the example. So, I I picked some of them up. Yeah, to prove my point. ‘Please give details’. What do you mean by details? R: I mean, can you give more details of how you were affected by the reading text in your writing? I mean the ways that the reading text affected you in your writing.
P: Oh, yeah, yes. Uh, so, (after I have finished) the article, I have some basic ideas and then I think more deeply than the the article. Then I referred those, like examples to my real life and and also I find something similar to (what) the author is telling me. And then I put those examples (in my essay).
R: Okay, thank you. How did feel when you knew your writing task would be related to the text that you read?
P: Uh. how did I feel (laughs)?
R: I mean, comfortable...
P: Yeah, comfortable, yeah because you don’t have to read other things okay, and this is your XX. So, yeah, I (felt) comfortable (laughs).
R: Thank you. Did you use any particular words from the reading text in your writing? Such as?
P: Uh. okay, I have ‘misperception’ XX I found in the article, ‘recalling’ like ‘recalling memory’ or ‘the truth’...XX the ideas are the same. I just I put the examples in a real life. So, I have like ‘persuasion’, ‘assume’, oh yeah, ‘assume the certainty’ something mentioned in the text. Uh, like we assume a person. ‘we usually judge a person’ I X told you. And also ‘testimony’ most people think, XXX (is reading his essay)...R: Can you say any other word that you copied from the text?
R: Thank you.
APPENDIX E
Checklist of Writing Strategies

<table>
<thead>
<tr>
<th>No.</th>
<th>Name:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Please put a check mark in the appropriate column.</td>
</tr>
<tr>
<td>1.</td>
<td>Did you adjust (change or design) your essay in relation to the reading text you had previously read?</td>
</tr>
<tr>
<td>2.</td>
<td>Did you generate additional content to what you had previously read?</td>
</tr>
<tr>
<td>3.</td>
<td>Did you notice any problems when you created additional content? Please describe.</td>
</tr>
<tr>
<td>4.</td>
<td>Did you have any problems while writing about this particular topic? Please describe.</td>
</tr>
<tr>
<td>5.</td>
<td>Did you consider different options? What did you decide to do? Did you come up with one or more ways of solving the problems? Please describe.</td>
</tr>
<tr>
<td>6.</td>
<td>Did you think about the person who would read your writing?</td>
</tr>
<tr>
<td>7.</td>
<td>Did you consider the purpose(s) of the writing task when you were writing?</td>
</tr>
<tr>
<td>8.</td>
<td>Did you consider how to format your essay when you were writing?</td>
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<tr>
<td>9.</td>
<td>Did the reading text affect your preferred writing style?</td>
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<tr>
<td>10.</td>
<td>Did you consider your individual style?</td>
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<tr>
<td>11.</td>
<td>Did you have any weaknesses in writing the essay?</td>
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<tr>
<td>12.</td>
<td>Did you look for any way to overcome those weaknesses?</td>
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<tr>
<td>13.</td>
<td>Did you use any new words or phrases from the reading text in your writing?</td>
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<tr>
<td>14.</td>
<td>Did you try to remember the content of the reading text you had previously read?</td>
</tr>
<tr>
<td>15.</td>
<td>Did you try to use the same way of presenting the arguments as you had previously read?</td>
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<tr>
<td>16.</td>
<td>Did you read your writing again after drafting and before submitting it?</td>
</tr>
</tbody>
</table>
Please put a check mark in the appropriate column.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Did you summarize any part of the text you had previously read?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>18. Did you paraphrase any part of the text you had previously read?</td>
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<tr>
<td>19. Did you re-order the information of the text you had previously read?</td>
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<tr>
<td>20. Did you think about the result of your writing performance?</td>
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<tr>
<td>21. Did you change your plan for writing the essay when you were doing your writing task?</td>
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<tr>
<td>22. Did you accept or reject the author's point of view?</td>
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<tr>
<td>23. Did you edit your essay?</td>
<td></td>
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<tr>
<td>24. Did you reassess the content of your writing?</td>
<td></td>
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<tr>
<td>25. Did you reassess the order of presenting arguments, reasons, or examples?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>26. Did you reassess the quality of your writing?</td>
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</tbody>
</table>
APPENDIX F
Letter to Solicit Participants

To Whom It May Concern,

This letter is being distributed to ask if you are willing to participate in a research study on the effects of topic knowledge from reading on writing. The research is part of my Ph.D. thesis at the Ontario Institute for Studies in Education/University of Toronto. The findings will document the reading - writing relationships and the strategies that examinees apply in a real English language testing situation.

If you are interested to take part in this study as a paid volunteer, you will be asked:

1. to read a text and orally summarize it (talk about its main and supporting ideas). You will be tape-recorded.
2. to write on a topic which is related thematically to the reading text (3 to 4 paragraphs: one and a half pages).
3. to be briefly interviewed after writing the composition (you will be asked about your strategies in writing the composition)
4. to read another text and orally summarize it (talk about its main and supporting ideas). You will be tape-recorded.
5. to write another composition (3 to 4 paragraphs: one and a half pages) on another topic which is not related thematically to the reading text.

These activities will take place in one meeting (three hours- a 30-minute break included) to be arranged at your convenience outside of your class hours, during this university semester. The recorded interviews and the compositions you write will be collected for later analysis.

You will be paid $25 (Canadian) for your participation in the study. I will also offer you one hour of writing instruction to help you improve your writing in English.

Your participation in this study is, of course, voluntary. If you decide to participate, you may later decide to quit at any time. Your involvement in the research will be strictly confidential. In analyzing and reporting the results of the study your identity will be concealed by a number. What you write or say during the study will not be revealed to your course instructors.

I have obtained the permission of Professor X, the coordinator of ESL courses at X College, to ask for your participation. Professor X has reviewed the details of the study and approves of its design.

If you are interested in participating in the study, could you kindly complete the attached form. and return it to me (or your course instructor)? I will contact all people who indicate they are interested and arrange to meet them briefly to explain the research in more detail.

Thank you for taking the time to read this letter. If you wish to have more information you may call me at (416) 964-7754 or send me an e-mail message. My e-mail address is: hesmaeile@oise.utoronto.ca

Sincerely,

Hameed Esmaeili
Dear Mr. Esmaeili,

I have read your letter describing the study you are conducting on the effects of topic knowledge from reading on writing. I am interested in participating in this research. Could you contact me to discuss this further?

Name:........................................... Date:........................................

Telephone number:.........................
E-mail address:.................................
## Appendix G

### Three Cases' Writing Strategies and Recall of Idea-units of Reading Passages

<table>
<thead>
<tr>
<th>Variable</th>
<th>Jane</th>
<th>Mike</th>
<th>Ali</th>
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</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
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<td></td>
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<tr>
<td>Topic-based problems</td>
<td>x</td>
<td>x</td>
<td>-</td>
</tr>
<tr>
<td>Considering tasks weaknesses</td>
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<td>x</td>
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<tr>
<td>Compensating for weaknesses</td>
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<td>-</td>
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<tr>
<td>Adjusting/Changing design</td>
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<td>x</td>
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<tr>
<td>Format considerations</td>
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<td>x</td>
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<tr>
<td>Reassessing content</td>
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<td>x</td>
<td>-</td>
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<tr>
<td>Considering individual style</td>
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<tr>
<td>Re-reading essay</td>
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<tr>
<td>Editing</td>
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<tr>
<td>Borrowing words/phrases</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>Adjusting argument</td>
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<td>-</td>
<td>x</td>
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<tr>
<td>Summarizing</td>
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<tr>
<td>Changing style</td>
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<tr>
<td>Paraphrasing</td>
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<td>x</td>
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<tr>
<td>Outcomes considerations</td>
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<tr>
<td>Reassessing writing quality</td>
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<tr>
<td>Generating additional content</td>
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<td>-</td>
<td>x</td>
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<tr>
<td>Considering content, adding problems</td>
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<td>-</td>
<td>x</td>
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<tr>
<td>Variable</td>
<td>Case</td>
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<tr>
<td><strong>Strategy</strong></td>
<td><strong>Jane</strong></td>
<td><strong>Mike</strong></td>
<td><strong>Ali</strong></td>
</tr>
<tr>
<td>Re-ordering information</td>
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<td>-</td>
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<tr>
<td>Reassessing argumentation/reasoning</td>
<td>x</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Considering novelty of idea(s)</td>
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<tr>
<td>Task/topic considerations</td>
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<td>-</td>
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<tr>
<td>Plagiarizing considerations</td>
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<tr>
<td>Time and quantity considerations</td>
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<td>-</td>
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<tr>
<td>Considering alternative solutions</td>
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<tr>
<td>Awareness of audience</td>
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<td>x</td>
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<td>Purpose considerations</td>
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<td>Changing plans</td>
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<td>Text-based thinking</td>
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<tr>
<td>Considering reasoning/logic</td>
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<table>
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<th>Writing Strategies</th>
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<td><strong>Recalled levels of idea-units</strong></td>
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<td><strong>TR / TU</strong></td>
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</tbody>
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¹TR: Thematically-related condition  TU: Thematically-unrelated condition
APPENDIX H

Participant Number 29’s (Mike’s) Task Performances

I present here Mike’s full essays, transcripts of summary recall protocols, and interview.

1. Participant’s essay in the thematically-related condition:

Essay task. How does the author attempt to shake our belief in the credibility of what we see or remember seeing? To what extent does his essay convince you to doubt what people perceive and remember? To develop your essay you should discuss specific examples from your own experience, your observation of others, or your reading—including “Some Close Encounters of a Mental Kind” itself.

Human is one of the most complicated creatures that we know, and human mind is even more. Human as an individual had many certainties on their own and often doubt of other people certainties. People tend to believe in what they observe and always have positive thoughts about it. But when being questioned about their observation, they often fail to tell what they observed. Here, it raises a question about human’s certainties, about what we see and what we actually remember.

The best way to illustrate this issue is by taking some example. Take the example about 8 demonstrators in the essay ‘Some Close Encounters of a Mental Kind’ for example, the students knew that there were 8 demonstrators entering the classroom. But they were asked by different questions: “Was the leader of the 14 (or 4) demonstrators... a male’ and “How many demonstrators did you see entering the classroom”.

The second question was asked a week after, and the answer, as we know, was not 8. Here we can see that people being (as) doubted by all information they perceive. They actually saw 8 but since in the first question, it was not 8 but instead 12 or 4 and it made people doubted their own certainties. And time is also a problem, what they saw and remembered very clearly at a time, might not be clear after a week or so. I personally believe that if the second question was asked right after the experiment, the answer would be 8. The problem of storing and recalling always make people doubt about perceive and remember.

The second example in the same essay is another problem about seeing. This falls in the category of misperception because the person remembered very well but he (mispercept) it for
the first time.

In conclusion, what people see and remember are 2 different categories. We should have certainty but we also should reexamine our own mind.

2. Participant’s essay in the thematically-unrelated condition:

Essay Prompt and Task. Some people believe that modern technology has caused some terrible damage to the natural environment. They think this process can result in a global crisis. What do you think? Do you think in order to support the natural environment we should try to keep away from modern technology and stick to traditional ways of life? Discuss this issue and give your reasons.

In the last few decades, the technology has significantly developed the way we live. It has been giving us many advantages in our daily life. But it also has created many damage to our natural environment. The air that we breath everyday, the water that we drink, the land where we live are more polluted than in last century or so. In my opinion, people should return to the traditional life in order to protect our environment.

The air is the first thing that modern technology has created a significant damage. The inventions of car, airplane, train, benefit people a lot in terms of time and speed. But car and plane consume a very large amount of fuel everday and give out an even larger amount of carbon-monoxide and carbon-dioxide. As a result, the global tempereture is increasing, the ice at two poles is melting, the green-house effect etc. And needless to say we both know the effect to our environment from this result.

The second thing that I also want to talk about here is the invention of electricity. Because of the increasing amount of electricity consumed, people are building more power plant, nuclear plant that use water or chemical element to produce electricity. In many countries in the world, people are bulding (demp), cutting the river in order to make use of water. This cause a lot of change in the nature of land and that is the cause of many floods nowadays.

In conclusion, the modern technology has damaged our natural environment significantly in terms of air, water and land. In my own idea, people should come back to our traditional life in order to protect our environment.
3. Interview

**Interview conventions.** ‘R’ stands for ‘researcher; ‘P’ stand for ‘participant’; () indicates that I am not sure about the word(s); [ ] the word is mine; X, XX, and XXX one, two, and more than three words not detectable when transcribing.

I highlight the strategies in parentheses and in italics.

R: Please look at your composition and answer these questions. What did you think about when you wrote each of the paragraphs of your compositions? Did you think about the reading you had done previously to writing?

P: Uh because when I was uh when I was writing the second paragraph I was I was thinking the I’m trying to how do I try to think about the two example in the text (*Recalling Content from Reading*). The first example is the one that XXX demonstrator. And the second example is uh the person who have remember about the Devils Tower. I tried to I tried to think like to figure it out so why he or why they they misunderstand or they mis-recalling or mis-storing the information that they get in the two example. So, tried to figure it out why people uh really doubt about what they see and what they remember of what they really remember. Something like they are they are certainly what they see but after a week or after a time they’re not very sure about what they see (*Accepting/Rejecting Viewpoint in Reading*).

R: Is there anything else that you were thinking or just? As I realize you were mostly influenced by the author’s arguments, reasoning, and logic. What about the structures and words or ...

P: Yeah, because actually to be honest with you this is the first time I read this topic. I mean I never thought of that. I’ve never thought, I mean uh this is totally a new idea for me (*Considering novelty of ideas*). I never thought of something like this (happen) in my life because I usually very uh confident about myself. I have (certain) confident in what I see what I believe. And of course I doubt about other people. Now, I think I doubt other people because it it (teaches) us something might happen that people might forget something. Or so so yeah I couldn’t pick up some a new example (*Considering content adding problems*).

R: Is there anything that you like to talk about? I mean your thought?

P: I mean yeah I can tell uh like I have I don’t have any example about anything but what I want to say is uh like for example for example in the first example people might give I think my own idea I think people might give the wrong answer in ....(is talking about the example in the text).
He also wrote on his checklist:

No Knowledge about the topic (Topic-based problems).

R: Thank you very much. How did you feel when you knew that your writing task would be related to the text that you read?

P: Uhm I don’t really know about feeling but...

R: You know sometimes you are given a topic and you don’t have any background knowledge or information about it, but this time you had some information.

P: uh. XX for the (first) topic I had (some) knowledge about like technology and computer. So, I feel yeah like you said I feel more seem to comfortable because in the topic in the essay you see a lot of example, a lot of uh example and illustration the idea. So, give X idea about it (give) knowledge about it XX back on it. But for thing that like the second the second essay I thought like there no about the topic, about the knowledge, no, I got knowledge about it. So, I more relied on the reading than than (yeah) I mean I just XX for the continuity for I do the essay. So I must rely on something I read because I have no knowledge about it. So, it might or might not be related I don’t know yet. Because...

He said he felt comfortable since he had the reading text as a source of knowledge for his writing. Particularly he was happy of having access to ‘a lot of examples’ given in the reading text. I assume those examples also helped him to better understand the text.

R: Did you use any particular words from the reading text in your writing?

P: Yeah, I did. The the three words that I remember that I used because this is the first time I saw the words and I”m really interested in the words I need I need: perception, the second one is the retrieval and re- retention. Yeah because these three words is new and is is somehow related to the problem that we are talking (is talking about the topic)...

R: Is there any other word? Please look at your composition.

P: No. I remember uh the ‘certainty’ yeah because the topic is about certainty.

R: Thank you very much.

I checked his essay and found the following words and phrases from the
reading text.

reading text: human, scrutinize, certainties, misperception, believe, remember, demonstrator, recalling, classroom, perceive, entering, leader, and 'some close encounters of a mental kind'.

Summary recall protocols. I highlight the levels of the recalled idea-units in parentheses and in italics.

Group Minds (text used in the thematically-unrelated condition)

Uhm, yeah from the text what I remember is uhm people as an individual in the society. they have uh they have their own opinion. They have their own thinking. But uh when they are in the group the people, the minority of the people try to argue uh about something. They tend to, their opinion, the- even though they are so sure about what they are thinking about their opinion X but their thinking follow the the group min (Level four). They, one of the example X we, in the in the message that I have read that uh when people are (taking) some measurement for uh example for the wood, for the length of the wood. for some sort of the uh wood then the length is, the length of the wood are different. But some of the people who, uh the majority of the people agree that the length of the wood is the same, but the minority of the people opinion is uh the length are different (Level four). But uh after arguing about between this on group, on the other group. the minority of people uh intend to agree with the majority opinion of the people because uh people uh uhm they are X by of group, the opinion of the group people. They they can not XXX they can not, they they they can not to, they can not give their won idea just because of other people say ‘black is white’ and and they say so (Level three).

Some Close Encounters of a Mental Kind (text used in thematically-related condition)

...the topic about the uh uh (talking) about the human kind. What I remember is about, what, their certainty of the human being and or their certainty (Level one), they doubt X they doubt themselves even of what they see and what they remember seeing. Another thing I remember is two, two example in uh, the message. One example is about they con- they (conducted) an (experiment) X a professor in Harvard University that tried to test the students about their memory about uh about what they remember when they saw uh the 8 interrupter come into the room. But the question, the first question was, were the 12 interrupter X a male. And were 4 interrupter a male. It it really didn’t ask the student (were there) a lot interrupter enter the room. But after a week, the question is how many interrupters enter the room. And the answer was (were there) 8 interrupters. So, the problem here is probably the students’ recalling was wasn’t very well and X. So information storing is not very (well) (Level five). The second example is about the person who remember uh uh a trip when they uhm come and visit the Devil Tower and
when he came back thirty years after, he he couldn’t find the the old place that he came before. (Because) that problem is uh falling to or has already (off) mis- misperception. And because he’s for the first time he already misunderstand or he’s uh misperceived the information. So. yeah. So, that’s why he he (went wrong), he he memory went wrong but he misunderstand for the first time (Level five). So, that’s why he uh he was wrong after thirty years. And of course, this problem the the author didn’t uh come up (with) a research solution because I think. personal, I think that there is no answer for this problem about certainty (Level seven).