

การศึกษาการใช้คำปรากฏร่วมของคำกริยาที่เป็นศัพท์ทางวิชาการ  
และความสามารถทางการเขียนภาษาอังกฤษของนักศึกษาปริญญาบัณฑิตวิชาเอกภาษาอังกฤษ



นายศิริระ ภูมะธน

## ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย


วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาครุศาสตรมหาบัณฑิต  
สาขาวิชาการสอนภาษาอังกฤษเป็นภาษาต่างประเทศ ภาควิชาหลักสูตร การสอน และเทคโนโลยีการศึกษา

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2553

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

A STUDY OF THE USE OF ACADEMIC VERB COLLOCATIONS AND  
ENGLISH WRITING ABILITY OF UNDERGRADUATE ENGLISH-MAJOR STUDENTS



Mr. Sira Bhumadhana

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Education Program in Teaching English as a Foreign Language

Department of Curriculum, Instruction and Educational Technology

Faculty of Education

Chulalongkorn University

Academic Year 2010

Copyright of Chulalongkorn University

Thesis Title                                    A STUDY OF THE USE OF ACADEMIC VERB COLLOCATIONS  
AND ENGLISH WRITING ABILITY OF UNDERGRADUATE  
ENGLISH-MAJOR STUDENTS  
By    Mr. Sira Bhumadhana  
Field of Study                                    Teaching English as a Foreign Language  
Thesis Advisor                                   Assistant Professor Chansongklod Gajaseni, Ph. D.

---

Accepted by the Faculty of Education, Chulalongkorn University in Partial  
Fulfillment of the Requirements for the Master's Degree

*S. Kanjanasee*  
..... Dean of the Faculty of Education  
(Professor Sirichai Kanjanawasee, Ph. D.)

THESIS COMMITTEE

*Prannapha Modehiran*  
..... Chairman  
(Prannapha Modehiran, Ph. D.)

*C. Gajaseni*  
..... Thesis Advisor  
(Assistant Professor Chansongklod Gajaseni, Ph. D.)

*P. Sripicharn*  
..... External Examiner  
(Passapong Sripicharn, Ph. D.)

ศิระ ภูมะธน : การศึกษาการใช้คำปรากฏร่วมของคำกริยาที่เป็นศัพท์ทางวิชาการและ  
 ความสามารถทางการเขียนภาษาอังกฤษของนักศึกษาปริญญาบัณฑิตวิชาเอกภาษาอังกฤษ.  
 (A STUDY OF THE USE OF ACADEMIC VERB COLLOCATIONS AND ENGLISH  
 WRITING ABILITY OF UNDERGRADUATE ENGLISH-MAJOR STUDENTS) อ.ที่ปรึกษา  
 วิทยานิพนธ์หลัก : ผศ.ดร.จันทร์ทรงกลด คชเสนี, 214 หน้า.

การวิจัยนี้มีวัตถุประสงค์เพื่อ (1) ศึกษาประเภทและที่มาของปัญหาที่พบบ่อยในการใช้คำ  
 ปรากฏร่วมของคำกริยาที่เป็นศัพท์ทางวิชาการของนักศึกษาปริญญาบัณฑิตวิชาเอกภาษาอังกฤษ  
 มหาวิทยาลัยวลัยลักษณ์ (2) เปรียบเทียบความแตกต่างของการใช้คำปรากฏร่วมของนักศึกษาทั้ง 3  
 กลุ่ม ซึ่งประกอบด้วยกลุ่มที่มีความสามารถทางด้านภาษาอังกฤษในระดับสูง ระดับปานกลาง และ  
 ระดับต่ำ และ (3) วิเคราะห์ความสัมพันธ์ระหว่างการใช้คำปรากฏร่วมและความสามารถทางการเขียน  
 ของนักศึกษาทั้ง 3 กลุ่ม กลุ่มตัวอย่างเป็นนักศึกษาชั้นปีที่ 2 และ 3 จำนวน 155 คน ที่ศึกษาอยู่ที่  
 มหาวิทยาลัยวลัยลักษณ์ ในภาคการศึกษาที่ 2 ปีการศึกษา 2552 เครื่องมือที่ใช้ในการเก็บข้อมูลวิจัย  
 คือ แบบทดสอบความสามารถทางการใช้คำปรากฏร่วมของคำกริยาที่เป็นศัพท์ทางวิชาการและการ  
 เขียนภาษาอังกฤษ ซึ่งเป็นข้อสอบแบบอัตนัยจำนวน 21 ข้อ สถิติที่ใช้ในงานวิจัย คือ สถิติบรรยาย การ  
 วิเคราะห์ความแปรปรวนแบบทางเดียว และการวิเคราะห์สหสัมพันธ์ของเพียร์สัน

ผลการวิจัยสรุปได้ว่า (1) ปัญหาการใช้คำปรากฏร่วมแบบคำกริยาและคำนาม (verb-noun  
 collocations) มีความถี่สูงสุด และปัญหาจากการคาดคะเนและความคล้ายคลึง (approximation) เป็น  
 ที่มาของปัญหาการใช้คำปรากฏร่วมที่พบบ่อยที่สุด (2) กลุ่มนักศึกษาที่มีความสามารถทางด้าน  
 ภาษาอังกฤษในระดับสูงได้คะแนนเฉลี่ยของคำปรากฏร่วมสูงกว่านักศึกษาอีก 2 กลุ่ม อย่างมีนัยสำคัญ  
 ทางสถิติในระดับ .05 และ (3) ความสัมพันธ์ระหว่างการใช้คำปรากฏร่วมและความสามารถทางการ  
 เขียนของนักศึกษาอยู่ในระดับปานกลาง อย่างมีนัยสำคัญทางสถิติในระดับ .05 ผลการวิจัยชี้ให้เห็นถึง  
 ความสำคัญของคำปรากฏร่วมในการเรียนและการสอนภาษาอังกฤษในห้องเรียน

ภาควิชา หลักสูตร การสอน และเทคโนโลยีการศึกษา ลายมือชื่อนิติศ..... ศิระ ภูมะธน  
 สาขาวิชา การสอนภาษาอังกฤษเป็นภาษาต่างประเทศ ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก.....  
 ปีการศึกษา 2553

## 5083409127 : MAJOR TEACHING ENGLISH AS A FOREIGN LANGUAGE

KEYWORDS : ACADEMIC VERB COLLOCATIONS / COLLOCATION KNOWLEDGE /

WRITING ABILITY / ENGLISH-MAJOR STUDENTS

SIRA BHUMADHANA : A STUDY OF THE USE OF ACADEMIC VERB COLLOCATIONS AND ENGLISH WRITING ABILITY OF UNDERGRADUATE ENGLISH-MAJOR STUDENTS. THESIS ADVISOR : ASST. PROF. CHANSONGKLOD GAJASENI, Ph. D., 214 pp.

The objectives of this study were (1) to explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University, (2) to compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability, and (3) to examine the relationship between the use of academic verb collocations and writing ability among three groups of students. The participants were 155 second- and third-year English majors who were studying at Walailak University in the second trimester of academic year 2009. The research instrument was the academic verb collocation writing ability test, which was a writing test consisting of 21 items. The data were analyzed by using descriptive statistics, one-way analysis of variance (one-way ANOVA), and Pearson's Product-Moment Correlation Coefficient.

The findings revealed that (1) the *verb-noun collocation* was the most frequent type of errors, and *approximation* was the most frequent source of errors, (2) students in the high English language ability group gained significantly higher average scores on academic verb collocations than the other two groups at the level of .05, and (3) there was a relationship between the use of academic verb collocations and writing ability of students at the moderate level at the significant level of .05. The findings indicated the importance of collocations in language learning and teaching in classroom.

Department: Curriculum, Instruction and Educational Technology

Student's Signature *Sira Bhumadhana*

Field of Study: Teaching English as a Foreign Language

Advisor's Signature *C. Gajaseeni*

Academic Year: 2010

## ACKNOWLEDGEMENTS

I would like to express my grate gratitude to my excellent advisor, Assistant Professor Dr. Chansongklod Gajaseni, who helped and encouraged me to complete the study. This study is accurate and concise due to her contribution.

I would also like to express my appreciation to the committee members, Dr. Prannapha Modehiran and Dr. Passapong Sripicharn, for their kind suggestions and valuable advice.

In addition, I would like to give recognition to all of the experts, Dr. Jutarat Vibulphol, Assistance Professor Dr. Anchalee Chayanuvat, and Mr. Wiroon Chayarak, who validated my research instrument. Also, I would like to thank the inter-rater, Mr. David J. Weatherby, for his valuable assistance.

I am extremely grateful to all staff members at School of Liberal Arts, Walailak University, for their help while I was collecting data.

I am also indebted to all my beloved teachers who taught me at primary, secondary, and university levels for helping me along the path of developing my English skills.

In addition to my English teachers, I would also like to acknowledge the debt I owe to all the publications and Internet sources I have referred to, for their useful information which relates to my study.

I would like to thank my special friends in the TEFL program, Mr. Denchai Prabjandee and Ms. Pattarane Vega, who always cheered me up during my study.

At last, I would like to express my sincere gratitude to my parents. Without their painstaking efforts during my childhood, this study would never have come into existence.

## CONTENTS

	Page
ABSTRACT IN THAI .....	iv
ABSTRACT IN ENGLISH .....	v
ACKNOWLEDGEMENTS .....	vi
CONTENTS .....	vii
LIST OF TABLES .....	xi
LIST OF FIGURES .....	xiii
CHAPTER I INTRODUCTION .....	1
Background of the Study .....	1
Research Questions .....	4
Research Objectives .....	4
Statement of Research Hypotheses .....	5
Scope of the Study .....	6
Assumption of the Study .....	7
Definitions of Key Terms .....	7
An Overview of the Study .....	9
CHAPTER II REVIEW OF THE LITERATURE .....	10
Collocations .....	10
Definition of Collocations .....	10
Types of Collocations .....	11
Importance of Collocations .....	20
Evaluating Learners' Collocation and Vocabulary Knowledge .....	24

	Page
Strategies for Producing Collocations .....	33
Sources of Collocation Errors .....	35
Writing .....	40
Definition of Writing .....	40
Importance of Writing .....	41
Evaluating Writing Ability .....	42
Criteria for Good Writing .....	42
Types of Scoring Rubrics .....	44
Resources of Academic Words .....	56
The University Word List .....	56
The Academic Word List .....	57
Previous Studies on Collocations and Writing .....	59
Framework of the Present Study .....	64
<b>CHAPTER III RESEARCH METHODOLOGY .....</b>	<b>67</b>
Research Procedures .....	67
Context of the Study .....	70
Population and Participants .....	70
Classification of Students .....	71
Research Instrument .....	72
Selection of Words .....	72
Academic Verb Collocation Writing Ability Test and	
Test Development .....	75
Scoring Rubrics .....	80



	Page
Validation of the Test .....	81
The Pilot Study .....	85
Inter-rater Reliability Check .....	86
Data Collection .....	87
Data Analysis .....	88
<b>CHAPTER IV RESEARCH FINDINGS .....</b>	<b>93</b>
Findings of Research Question 1 .....	93
General Findings .....	94
Types of Collocation Errors .....	97
Sources of Collocation Errors .....	101
Findings of Research Question 2 .....	109
Findings of Research Question 3 .....	112
Conclusion .....	116
<b>CHAPTER V CONCLUSION AND DISCUSSION .....</b>	<b>118</b>
Summary of the Study .....	118
Discussion .....	122
Students' Collocation Knowledge .....	122
Students' Collocation Knowledge and Levels of English Proficiency .....	125
Students' Collocation Knowledge and Writing Ability .....	126
Pedagogical Implications .....	128
Suggestions for Future Research .....	130

	Page
REFERENCES .....	131
APPENDICES .....	137
Appendix A: The Academic Word List (AWL) .....	138
Appendix B: List of Top 18 Most Frequent Academic Verbs .....	166
Appendix C: Academic Verb Collocation Writing Ability Test .....	167
Appendix D: Scoring Rubrics .....	179
Appendix E: List of Experts .....	183
Appendix F: The Index of Congruency (IOC) .....	184
Appendix G: Collocation Patterns of 18 Academic Verbs .....	189
Appendix H: List of Sources of Collocation Errors .....	203
Appendix H: Evaluation Form .....	206
BIOGRAPHY .....	214


  
 ศูนย์วิทยทรัพยากร  
 จุฬาลงกรณ์มหาวิทยาลัย

## LIST OF TABLES

	Page
Table 2.1 <i>Lexical collocations</i> .....	12
Table 2.2 <i>Grammatical collocations</i> .....	14
Table 2.3 <i>Sources of collocation errors based on Liu's (1999b) study</i> .....	37
Table 2.4 <i>Analytic scoring rubric (Jacobs et al., 1981)</i> .....	49
Table 2.5 <i>Composition of the Academic Corpus</i> .....	58
Table 3.1 <i>Number of students in each group</i> .....	72
Table 3.2 <i>Course descriptions of three required courses</i> .....	77
Table 3.3 <i>Details of academic verb collocation writing ability test</i> .....	79
Table 3.4 <i>Results of experts' evaluation</i> .....	82
Table 3.5 <i>Connections between research questions, objectives, instruments, and data analysis</i> .....	91
Table 4.1 <i>Correct collocations and collocation problems</i> .....	94
Table 4.2 <i>Collocation problems of each academic verb</i> .....	95
Table 4.3 <i>Different types of collocation errors</i> .....	99
Table 4.4 <i>Lexical and grammatical errors</i> .....	100
Table 4.5 <i>Sources of collocation errors in the present study</i> .....	101
Table 4.6 <i>Samples of collocation errors resulting from false concept hypothesized</i> .....	102
Table 4.7 <i>Samples of collocation errors resulting from ignorance of rules restrictions</i> .....	103
Table 4.8 <i>Samples of collocation errors resulting from overgeneralization</i> .....	104
Table 4.9 <i>Samples of collocation errors resulting from the use of synonyms</i> .....	105
Table 4.10 <i>Samples of collocation errors resulting from negative transfer</i> .....	106

	Page
Table 4.11 <i>Samples of collocation errors resulting from approximation</i> .....	107
Table 4.12 <i>Samples of collocation errors resulting from no or incomplete collocations presented</i> .....	108
Table 4.13 <i>Sources of collocation errors</i> .....	108
Table 4.14 <i>Total scores of the sentence building section</i> .....	110
Table 4.15 <i>The result of the test of homogeneity of variances</i> .....	111
Table 4.16 <i>The result of one-way ANOVA</i> .....	111
Table 4.17 <i>Scores of the email task</i> .....	112
Table 4.18 <i>Scores of the storytelling task</i> .....	113
Table 4.19 <i>Scores of the essay task</i> .....	114
Table 4.20 <i>Total scores of the writing tasks section</i> .....	115
Table 4.21 <i>The result of Pearson's Product-Moment Correlation Coefficient</i> .....	116

## LIST OF FIGURES

	Page
Figure 2.1 <i>Sample of test items used in Sun and Wang's (2003) study</i> .....	25
Figure 2.2 <i>Samples of test items used in Kaur and Hegelheimer's (2005) study</i> ....	27
Figure 2.3 <i>Samples of collocation and vocabulary tasks shown by Lewis (2000, 2002)</i> .....	30
Figure 2.4 <i>Holistic scoring rubric for writing assessment with ESL students</i> .....	45
Figure 2.5 <i>Primary trait scoring rubric (Cohen, 1994)</i> .....	48
Figure 2.6 <i>Analytic scoring rubric (Weir, 1990)</i> .....	53
Figure 2.7 <i>Framework of the present study</i> .....	66
Figure 3.1 <i>Presentation of research procedures</i> .....	69
Figure 3.2 <i>Sample of word frequency in LDOCE</i> .....	74
Figure 3.3 <i>Process of word selection</i> .....	75
Figure 3.4 <i>Process of test construction and validation</i> .....	87

## CHAPTER I

### INTRODUCTION

#### Background of the Study

Collocations are the way in which particular combinations of two or more words are used frequently and naturally in spoken and written language such as *make an appointment*, *rancid butter*, and *absolutely fascinated*. Collocation has become one of the primary concerns in English language teaching and learning for decades. Many linguists (e.g., Chang, Chen, Chen, and Liou, 2008; Hill, 2000; Woolard, 2000) have agreed that students should acquire an adequate number of collocations and should know how to use them correctly, and that collocation knowledge increase their language competence and help them communicate more naturally and effectively. Hill (2000) emphasized the importance of collocations by stating that the first and most important reason why collocations are significant is that the way words combine in collocations is fundamental to all language use. Likewise, Woolard (2000: 31) stressed the importance of collocation learning by stating that “learning more vocabulary is not just learning new words, it is often learning familiar words in new combinations”. This further elaborated by Chang et al. (2008) who confirm that a high level of collocation knowledge enhances native-like proficiency. It implies that if students do not have adequate knowledge of the entire combinations of words, they may speak or write English unnaturally; for example, they may say or write a sentence like *\*I make exercise every morning in the gym*, instead of *I do exercise every morning in the gym* (Hill, 2000).

Previous researchers have found that a number of students often have difficulty in learning collocations (e.g., Li 2005; Liu, 1999b; Liu, 2002; Nesselhalf, 2003). Among

different types of collocations, however, the verb-noun collocation has been found to be the major weakness of many students who learn English as a Foreign Language (EFL) (Liu, 1999b; Liu, 2002) because their first language (L1) heavily influences their production of collocations (Liu, 1999b; Liu, 2002; Nesselhauf, 2003). For example, learners with a Chinese background often translate such a word combination as *\*eat medicine*, which is correct in Chinese but unacceptable in English. Nesselhauf added that even advanced learners have problems in collocations; they made a considerable number of collocation errors in their essays. In short, becoming skilled at collocations is difficult for many students who learn English at all levels.

For the reason that collocations are difficult for many learners of English, in recent years, there has been growing interest in conducting research into the difficulties of learners of English with collocations, with particular regard to writing, in order to apply research results and implications for teaching to foreign language pedagogy (e.g., Li, 2005; Liu, 1999b; Liu, 2002; Nesselhauf, 2003). These studies yielded similar findings that one of the collocation error types occurring most frequently is the wrong choice of verb collocates. In addition to the above-mentioned studies which focus on studying the students' general collocation knowledge in a certain stage, some studies are dedicated to investigating the relationship between the students' use of collocations and writing ability (e.g., Hsu, 2007; Zhang, 1993). The findings of these studies revealed that there was a significant relationship between students' production of collocations and their writing ability.

In Thailand, not many people are aware of collocations since there have been few studies in the area of collocations conducted in Thailand so far (e.g., Mallikamas and Pongpairoj, 2005; Mongkolchai, 2008). These studies revealed that there are a variety of

problems in Thai students' collocation knowledge. Moreover, as far as the previous studies in collocations are concerned, there have been a limited number of studies on the use of collocations of academic words and the relationship between the use of collocations of academic words and writing ability of undergraduate English-major students in Thailand and any other countries. In fact, not only do general words deserve a place in language teaching and learning, but academic words also need more emphasis in pedagogy. According to Coxhead and Nation (2001), academic words are important because they are common to various academic texts, so they are relevant to learners when reading academic texts. In addition, academic words are important to learners "no matter what their specialist area of academic study is" (Nation, 2001: 191).

Besides the importance of academic words, the focus of the study was on verbs because previous studies on the use of collocations by EFL learners (e.g. Liu, 1999b; Liu, 2002; Nesselhalf, 2003) had found that the collocation error occurring most frequently was the misuse of verbs. Moreover, there are a larger variety of verb collocations than other types of collocations. Among 33 types of collocation patterns categorized by Benson, Benson, and Ilson (1986), 22 are verb collocations. Furthermore, the researcher focuses on writing ability because the participants of this study were undergraduate English-major students; teachers may give more emphasis on writing ability by asking their students to write a number of academic projects such as essays, reports, independent studies, research studies, and so forth.

According to what the researcher mentioned above, it creates the need for the researcher to investigate the use of academic verb collocations in writing and to examine the relationship between the use of collocations of academic words and writing ability of undergraduate English-major students.



## Research Questions

The present study addresses the three following research questions.

1. What are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University?
2. Are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability?
3. Is there any relationship between the use of academic verb collocations and writing ability among three groups of students?

## Research Objectives

Based on the research questions stated above, this study aims:

1. To explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University;
2. To compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability; and
3. To examine the relationship between the use of academic verb collocations and writing ability among three groups of students.

## Statement of Research Hypotheses

Previous studies such as Liu (1999b), Liu (2002), and Li (2005) found that the verb-noun collocation was the most noticeable error of EFL learners. Liu (1999b) and Liu (2002) further stated that negative transfer, so-called L1 interference, occurred most frequently in learners' writing production while Li (2005) found that ignorance of rule restrictions occurred most frequently. In addition, Chang (1997) investigated collocation errors in English compositions by college students in the three groups: *low*, *mid*, and *high*. He found that less proficient students made more errors than more proficient ones, and the number of errors occurring in the writing of the students in the *high* group was significantly fewer than the students in the other two groups. Hsu (2007) studied the relationship between students' use of collocations and writing ability. The findings revealed that there was a significant relationship between students' production of collocations and their writing ability. Their findings implied that students who were proficient in collocations gained high scores on writing.

Based on the findings of some previous research indicated above, this study addresses the following research hypotheses.

1. Verb-noun collocation (L1) will be the most frequent types of errors, and negative transfer will be the most frequent source of errors of the students.
2. Students in the high English language ability group will gain significantly higher average scores on the sentence building section of the academic verb collocation writing ability test than students in the other two groups at the significant level of .05.

3. There will be a strong relationship between the use of academic verb collocations and writing ability of the students at the significant level of .05.

### **Scope of the Study**

The scope of the present study consists of the three following aspects.

First, the population for this study was undergraduate students majoring in English at Walailak University, Nakhon Si Thammarat Province, Thailand.

Second, the independent variable was three levels of English language ability of the students: low, moderate, and high English ability. The dependent variables were the production of academic verb collocations and writing ability of undergraduate English-major students at Walailak University, as well as their average scores on the academic verb collocation writing ability test.

Last, this study mainly aimed at investigating and comparing the use of academic verb collocations among three groups of undergraduate English-major students; it focused only on verb collocations of the 18 academic verbs on Coxhead's (1998) the *Academic Word List* (AWL) according to the 1000 most frequent words indicated in *Longman Dictionary of Contemporary English* (LDOCE) (2009), with no concerns for any other types of collocations, or verb collocations of the rest of academic verbs, and any other verbs which are not on the AWL.

### **Assumption of the Study**

The students participating in this study had registered and passed three required foundation English courses: *ENG-101 English Foundations*, *ENG-102 English for Applications*, and *ENG-104 English Communication in Social Sciences*. Thus, they were expected to have adequate, fundamental knowledge of the English language and were ready to take the academic verb collocation writing ability test used in the study.

### **Definitions of Key Terms**

The key terms used in this study are defined as follows:

**Collocations** refer to the way in which particular combinations of two or more words are used frequently and naturally in spoken and written language. For example, *do* is used with a noun, such as *business*, *homework*, and *research*, but not *arrangements*, *mistakes*, and *money*, with which *make* co-occurs.

**Academic verb collocations** refer to word combinations of 18 academic verbs, which are (1) achieve, (2) affect, (3) assume, (4) create, (5) design, (6) enable, (7) ensure, (8) establish, (9) identify, (10) indicate, (11) involve, (12) maintain, (13) occur, (14) publish, (15) remove, (16) require, (17) reveal, and (18) seek. In this study, the classification of academic verb collocations was adapted from the categories of collocations proposed by Benson et al. (1986). Also, all of the 18 verbs were chosen from 389 academic verbs on the Academic Word List (AWL) (Coxhead, 1998) according to the 1000 most frequent words indicated in Longman Dictionary of Contemporary English (LDOCE) (2009). These target words were the basis of the academic verb collocation writing ability test used to collect the data.

**The Academic Word List (AWL)** refers to the list of academic words developed by Coxhead (1998). It is composed 570 headwords, and is divided into 10 sublists, with around 3,000 family members in total. There are 60 headwords in each sublist, except for Sublist 10, which contains 30 headwords. All sublists were ordered such that the words in the first sublist were the most common words, and those in the last sublist were the least common words in the Academic Corpus. In this study, the AWL was used as a referent tool for selecting academic verbs to be studied.

**Collocation knowledge** refers to the students' background knowledge of academic verb collocations of the 18 academic verbs and their ability to use such collocations correctly. In this study, the students' collocation knowledge was represented by their achievement scores on the *sentence building* section of the academic verb collocation writing ability test, which was graded by using the primary trait scoring rubric developed from Jacobs et al. (1981) and O'Malley and Pierce (1996).

**Writing ability** refers to the students' ability to write two short paragraphs and one essay effectively. The students' writing ability was assessed with their achievement scores on the *writing tasks* section of the academic verb collocation writing ability test, which was graded by using the analytic scoring rubric adapted from Weir (1990), which examined six aspects of writing ability: relevance and adequacy of content, compositional organization, cohesion, adequacy of vocabulary for purpose, grammar, and mechanical accuracy (punctuation and spelling).

**Students** refer to second- and third-year undergraduate English-major students who were studying at Walailak University in Nakhon Si Thammarat Province in the second trimester of academic year 2009.

## **An Overview of the Study**

The first chapter describes the background of the study, research questions and objectives, statement of research hypotheses, scope of the study, assumption of the study, operational definitions of key terms, and significance of the study.

The second chapter reviews the relevant literature and previous studies on collocations and writing. This includes the topics about resources of academic words and framework of the present study.

The third chapter describes the methodology of this study, including context of the study, population and samples, research instruments, data collection, and data analysis procedures.

The fourth chapter presents the research findings. Both quantitative and qualitative data obtained from the research instrument are revealed.

The last chapter summarizes and discusses the findings from this study, points out pedagogical implications for English teachers, and provides suggestions for future researchers.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## CHAPTER II

### REVIEW OF THE LITERATURE

In order to provide sufficient background information and obtain a conceptual framework for studying the use of academic verb collocations and English writing ability of undergraduate English majors at Walailak University, the researcher reviews previous literature and research studies related to this study. The topics about collocations, writing, resources of academic words, previous studies on collocations and writing, and framework of the present study are reviewed in this chapter.

#### **Collocations**

In this section, the researcher reviews key issues on collocations in terms of definition of collocations, types of collocations, importance of collocations, evaluating learners' collocation knowledge, strategies for producing collocations, and sources of collocation errors, respectively.

#### **Definition of Collocations**

The term of collocations has been defined in different ways. Firth (1968: 181) was probably the first linguist who defined this term by stating that "collocations of a given word are statements of the habitual or customary places of that word". Sinclair (1991: 170) considered collocations from a computational and a statistical view, and stated that "collocation is the occurrence of two or more words within a short space of each other in a text". Lewis (2002: 8) considered a collocation as "the readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency". Deuter, Greenan, Noble, and Phillips (2002: vii) provided a clearer definition of

collocations as “the way words combine in a language to produce natural-sounding speech and writing”. Further, Aroonmanakun (2005: 28) viewed the collocation as “a linguistic phenomenon in which two or more words tend to be used together”. Similarly, Chang et al. (2008: 285) regarded collocations by stating that “a lexical phenomenon of word combination occurring together relatively more often than other combinations”. For example, *do* is used with a noun, such as *business*, *homework*, and *research*, but not *arrangements*, *mistakes*, and *money*, with which *make* co-occurs, and vice versa (*do business/homework/research*, and *make arrangements/mistakes/money*, but not *\*do arrangements/mistakes/money*, and *\*make business/homework/research*). Another example is that *exhausted* co-occurs with such adverbs as *absolutely*, *completely*, and *quite*, but does not co-occur with *very* or *extremely* (*absolutely/completely/quite exhausted*, but not *\*very/extremely exhausted*) because it already has a strong meaning; *exhausted* means very tired (Turton and Heaton, 1996).

According to the definition of „collocations“ mentioned above, it can be concluded that a collocation is a particular combination of two or more words which is used frequently and naturally in spoken and written language.

### **Types of Collocations**

Linguists in the field of collocations classify collocations differently. The prominent experts are Benson et al. (1986), Lewis (2000), and Hill (2000).

Benson et al. (1986) distinguished types of collocations in light of the structure of words by focusing on types of nodes which are lexical and grammatical words. Their classification of collocations is widely used in collocation research (e.g., Li, 2005; Liu,



1999b). Benson et al. (1986) divided collocations into two main categories: lexical and grammatical collocations.

### 1. *Lexical collocations*

Lexical collocations are combinations of two dominant words: nouns, verbs, adjectives, and adverbs (e.g., adjective + noun, verb + noun, noun + noun, adverb + adjective). There are seven types of lexical collocations categorized by Benson et al. (see Table 2.1).

Table 2.1

#### *Lexical Collocations*

Type	Pattern	Examples
L1 <sup>a</sup>	Verb (usually transitive) + noun/pronoun (or prepositional phrase)	(Denoting creation) <ul style="list-style-type: none"> <li>• <i>Come to an agreement</i></li> <li>• <i>Compose music</i></li> </ul> (Denoting activation) <ul style="list-style-type: none"> <li>• <i>Launch a missile</i></li> <li>• <i>Set an alarm</i></li> </ul>
L2 <sup>a</sup>	Verb (meaning eradication and/or nullification) + noun	<ul style="list-style-type: none"> <li>• <i>Reject an appeal</i></li> <li>• <i>Withdraw an offer</i></li> </ul>
L3	Adjective + noun	<ul style="list-style-type: none"> <li>• <i>Kind/kindest/best regards</i></li> <li>• <i>Strong/weak tea</i></li> </ul>
L4 <sup>b</sup>	Noun + Verb	<ul style="list-style-type: none"> <li>• <i>Bees buzz</i></li> <li>• <i>Bomb explode</i></li> </ul>

Table 2.1 (continued)

Type	Pattern	Examples
L5	Noun 1 + (of) + noun 2	<ul style="list-style-type: none"> <li>• <i>A bit of advice</i></li> <li>• <i>A bouquet of flowers</i></li> </ul>
L6	Adverb + adjective	<ul style="list-style-type: none"> <li>• <i>Deeply absorbs</i></li> <li>• <i>Hopelessly addicted</i></li> </ul>
L7	Verb + adverb	<ul style="list-style-type: none"> <li>• <i>Appreciate sincerely</i></li> <li>• <i>Argue heatedly</i></li> </ul>

*Note.*

<sup>a</sup>Since the patterns of L1 (verb + noun/pronoun/prepositional phrase) and L2 (verb + noun) were similar, the researcher followed Li's (2005) study by combining these two patterns into one pattern which is L1 (verb + noun/pronoun).

<sup>b</sup>The pattern of L4 (noun + verb) was eliminated from this study since a noun is used as the head word while other patterns use a verb as the head word. Therefore, the researcher considered this pattern as a noun collocation rather than a verb collocation.

## 2. *Grammatical collocations*

Grammatical collocations are combinations of a dominant word and a grammatical word or structure such as a preposition, to-infinitive, and that-clause (e.g., noun + to + infinitive, adjective + preposition or that-clause). There are eight types of grammatical collocations, with 26 patterns altogether (see Table 2.2).

Table 2.2

*Grammatical Collocations*

Type	Pattern	Examples
G1	Noun + preposition	<ul style="list-style-type: none"> <li>• <i>Apathy towards</i></li> <li>• <i>Blockade against</i></li> </ul>
G2	Noun + to + infinitive	<ul style="list-style-type: none"> <li>• <i>An attempt/effort to do it</i></li> </ul>
G3	Noun + that-clause	<ul style="list-style-type: none"> <li>• <i>An agreement that she would represent us in court.</i></li> </ul>
G4	Preposition + noun	<ul style="list-style-type: none"> <li>• <i>By accident</i></li> <li>• <i>In advance</i></li> </ul>
G5	Adjective + preposition	<ul style="list-style-type: none"> <li>• They are <i>angry at</i> the children.</li> <li>• They are <i>hungry for</i> news.</li> </ul>
G6	Adjective + (prepositional phrase) + to + infinitive	<ul style="list-style-type: none"> <li>• It was <i>necessary for him to work.</i></li> <li>• She is <i>ready to go.</i></li> </ul>
G7	Adjective + that-clause	<ul style="list-style-type: none"> <li>• She was <i>afraid that she would fail the exam.</i></li> <li>• It was <i>imperative that we be here.</i></li> </ul>
G8 (A)	Verb + indirect object + to + direct object (= Verb + indirect object + direct object)	<ul style="list-style-type: none"> <li>• He <i>sent the book to his brother.</i> (= He <i>sent his brother the book.</i>)</li> </ul>
G8 (B)	Verb + indirect object + to + direct object (do not allow the dative movement transformation)	<ul style="list-style-type: none"> <li>• They <i>described the book to her.</i> (*They <i>describe her the book.</i>)</li> </ul>

Table 2.2 (continued)

Type	Pattern	Examples
G8 (C)	Verb + indirect object + for + direct object (= Verb + indirect object + direct object)	<ul style="list-style-type: none"> <li>• She <i>bought a shirt for her husband.</i> (= She <i>bought her husband a shirt.</i>)</li> </ul>
G8 (D)	Verb + preposition + object (or) Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• We <i>adhered to the plan.</i></li> <li>• They <i>based their conclusions on the available facts.</i></li> </ul>
G8 (E)	Verb + to + infinitive	<ul style="list-style-type: none"> <li>• She <i>continued to write.</i></li> <li>• They <i>began to speak.</i></li> </ul>
G8 (F)	Verb + bare infinitive	<ul style="list-style-type: none"> <li>• We <i>had better go now.</i></li> <li>• They <i>must work.</i></li> </ul>
G8 (G)	Verb + verb in -ing	<ul style="list-style-type: none"> <li>• They <i>kept talking.</i></li> <li>• We <i>enjoyed watching television.</i></li> </ul>
G8 (H)	Verb + object + to + infinitive	<ul style="list-style-type: none"> <li>• They <i>asked the students to participate in discussion.</i></li> </ul>
G8 (I)	Verb + object + bare infinitive	<ul style="list-style-type: none"> <li>• We <i>let them use the car.</i></li> </ul>
G8 (J)	Verb + object + verb in -ing	<ul style="list-style-type: none"> <li>• I <i>caught him smoking in his bedroom.</i></li> </ul>
G8 (K)	Verb + a possessive + verb in -ing	<ul style="list-style-type: none"> <li>• They <i>love his clowning.</i></li> <li>• Please <i>excuse my waking you so early.</i></li> </ul>

Table 2.2 (continued)

Type	Pattern	Examples
G8 (L)	Verb + (object) + that-clause	<ul style="list-style-type: none"> <li>• They <i>admitted that they were young.</i></li> <li>• She <i>assured me that she would arrive on time.</i></li> </ul>
G8 (M)	Verb + object + to be + complement (adjective/past participle/noun/pronoun)	<ul style="list-style-type: none"> <li>• We <i>considered her to be very capable/well-trained/a competent engineer.</i></li> </ul>
G8 (N)	Verb + object + complement (adjective/past participle/noun/pronoun)	<ul style="list-style-type: none"> <li>• She <i>dyed her hair red.</i></li> <li>• He <i>found them interesting.</i></li> </ul>
G8 (O)	Verb + object 1 + object 2	<ul style="list-style-type: none"> <li>• The teacher <i>asked the students questions.</i></li> </ul>
G8 (P)	Verb + (object) + adverbial (adverb/adverbial phrase/prepositional phrase/noun phrase or clause)	<ul style="list-style-type: none"> <li>• He <i>carried himself with dignity.</i> (*He <i>carried himself.</i>)</li> <li>• The meeting <i>will last two hours.</i> (*The meeting <i>will last.</i>)</li> </ul>
G8 (Q)	Verb + (object) + wh-clause/wh-phrase	<ul style="list-style-type: none"> <li>• He <i>asks how to do it.</i></li> <li>• She <i>knows when to keep quiet.</i></li> </ul>
G8 (R)	It + verb + object + to + infinitive/that-clause	<ul style="list-style-type: none"> <li>• <i>It surprised me to learn of her decision.</i></li> <li>• <i>It surprised me that our offer was rejected.</i></li> </ul>

Table 2.2 (continued)

Type	Pattern	Examples
G8 (S)	Verb + complement (adjective/noun)	<ul style="list-style-type: none"> <li>• He <i>was a teacher</i>.</li> <li>• The food <i>tastes good</i>.</li> </ul>

Besides Benson et al. (1986), Lewis (2000: 133-134) listed 20 types of collocation patterns in the sense that these groups of words were regularly found together. Different collocation types in terms of phrases and expressions beyond Benson et al.'s classification were seen in his list as follows:

1. Adjective + noun (e.g., *a difficult decision*)
2. Verb + noun (e.g., *submit a report*)
3. Noun + noun (e.g., *radio station*)
4. Verb + adverb (e.g., *examine thoroughly*)
5. Adverb + adjective (e.g., *extremely inconvenience*)
6. Verb + adjective + noun (e.g., *revise the original plan*)
7. Noun + verb (e.g., *the fog closed in*)
8. Discourse marker (e.g., *to put it another way*)
9. Multi-word prepositional phrase (e.g., *a few year ago*)
10. Phrasal verb (e.g., *turn in*)
11. Adjective + preposition (e.g., *aware of*)
12. Compound noun (e.g., *fire escape*)
13. Binomial (e.g., *backwards and forwards*)
14. Trinomial (e.g., *hook, line, and sinker*)

15. Fixed phrase (e.g., *on the other hand*)
16. Incomplete fixed phrase (e.g., *a sort of ...*)
17. Fixed expression (e.g., *not half!*)
18. Semi-fixed expression (e.g., *see you later/tomorrow/on Monday*)
19. Part of a proverbs (e.g., *too many cooks ...*)
20. Part of quotation (e.g., *to be or not to be ...*)

Different from Benson et al.'s (1986) and Lewis' (2000) classifications of collocations, Hill (2000) separated collocations into four categories based on the strength of collocations, which were unique, strong, medium-strength and weak collocations.

#### 1. *Unique collocations*

Unique collocations are considered the most restricted combinations compared to the other three categories. They can hardly occur in everyday spoken and written language, and have a specific meaning that is different from the ordinary meaning of each separate word (e.g., ***foot the bill*** and ***shrug your shoulders***). The examples of unique collocations given above are fixed because the verbs *foot* cannot be used with any other nouns (e.g., ***\*foot the invoice/coffee***) and the verb *shrug* cannot be used with any other words concerning parts of human body. Most idioms are in this category. *Foot the bill* means to “pay for something, especially you do not want to” (Adrian-Vallance et al., 2009: 151), and *shrug your shoulders* means to “raise [your shoulders] to show that you do not know or care about something” (Adrian-Vallance et al., 2009: 1619).

## 2. *Strong collocations*

Strong collocations are specific collocations which do not occur commonly in everyday spoken and written language. They are not predictable, and often relate to specific purposes such as business and law. There are a limited number of words that can be combined a certain word (e.g., *extenuating circumstances*, *trenchant criticism*, *rancid butter*, *ulterior motives*, and *harbor grudges*).

## 3. *Medium-strength collocations*

In comparison to unique and strong collocations, medium-strength collocations occur more frequently in terms of usage and are more predictable. However, they do not occur as frequently in everyday spoken and written language as weak collocations described in the next part. Collocations like *conduct a survey*, *hold a conversation*, *make a mistake* are in this category. Hill (2000) stressed that medium-strength collocations are most important for teachers to teach in the classroom.

## 4. *Weak collocations*

Weak collocations are word combinations which occur frequently in everyday spoken and written language. Two or more words are combined freely; each of which can be combined with a number of words (Lewis, 2002). Therefore, weak collocations are predictable in meaning (e.g., *a white shirt*, *white wine*, *red wine*, *red hair*, *long hair*, and *short hair*). Learners can make such combinations easily because they are similar to their own language.



In this study, the researcher investigated student's knowledge of academic verb collocations based on the types of collocations proposed by Benson et al. (1986) because they cover a wider range of verb collocation patterns than the other two experts. Moreover, this study did not look at the strength of collocations categorized by Hill (2000) because his criteria were rather too broad. According to the reasons stated above, it is appropriate to select types of collocations proposed by Benson et al. (1986) to be studied.

### **Importance of Collocations**

Collocation plays an important role for language learning and teaching. In order to communicate well in a foreign language, learners should acquire an adequate number of word combinations and should know how to use them correctly. Placing emphasis on the importance of collocations in detail, Hill (2000) stated that there were at least nine reasons why collocations are significant as follows.

1. *The lexicon is not arbitrary.*

Hill stated that "the first and most obvious reason why collocation is important is because the way words combine in collocations is fundamental to all language use" (p. 53). Hence, the lexicon is not arbitrary. It is not randomly produced. For example, the choice of objects that co-occurs with the verb *entrance* is limited to a small number of nouns or noun phrases such as *his reputation* and *the standing of the company*. In short, language is not spoken or written as if it were one huge substitution table with vocabulary items which merely fill slots in grammatical structure.

2. *Collocations are predictable.*

Collocation patterns are predictable. For example, according to Hill (2000), when a speaker thinks of drinking, he or she may use a common verb such as *have*. There would be such expectations from a listener as *tea, coffee, milk, mineral water, orange juice*, even *tequila sunrise*, but there would be no expectations of *engine oil, shampoo, or sulfuric acid*. The last three liquids are drunk by accident, but linguistically they are not „probable“ in the way that the former are.

3. *The size of the phrasal mental lexicon is large.*

The field of predictability of collocations is enormous. There are a considerable number of two-word or more-than-two-word collocations used in all natural spoken and written text. Hill (2000: 57) emphasized that “up to 70% of everything we say, hear, read, or write is to be found in some form of fixed expression”.

4. *Collocations help improve the role of memory.*

The role of memory is important. Collocations are known because they have been met before and imprinted in the memory. They can be retrieved from the mental lexicon just as a telephone number or address which is pulled from the memory.

5. *Collocations enhance language fluency.*

Collocations enable language learners to think more quickly and communicate more effectively. Hill (2000) claimed that native speakers can

speak, listen, and read with speed because they always recognize word combinations rather than process word-by-word. In other words, native speakers have a wide repertoire of ready-made language which is immediately available from their mental lexicons. Chang et al. (2008) supported this idea by stating that a high level of collocation knowledge enhances native-like proficiency. Thus, it can be concluded that collocations help learners produce and process language at a much faster rate.

6. *Complex ideas are often expressed lexically.*

Complex ideas are related more to lexicon than to grammar. Hill (2000) emphasized that collocations help language learners convey their ideas in complex language, not grammar. The more lexical nature of language they recognize, the longer word combinations they can produce.

7. *Collocation makes thinking easier.*

Since complex ideas can be expressed more quickly by means of using collocations, they can be manipulated without taking efforts to focus on the form of words. Therefore, learners who are good at collocations can convey their ideas more easily.

8. *Pronunciation is integral.*

Collocations make pronunciation integral. When speakers pronounce individual words, their pronunciation, stress, and intonation, can be difficult for listeners. Hill (2000) suggested that learners should learn the stress pattern of a phrase as a whole so that they can improve stress and intonation. This

idea has been supported by Kozlowski and Seymour (2003) who confirmed that learners' stress and intonation will be better if they can memorize longer collocation patterns. In short, collocations make language sound more natural.

9. *Recognizing word combinations is essential for acquisition.*

The last advantage of collocations presented by Hill (2000) is that recognizing word combinations is essential for acquisition. Hill stated that unseen reading is found to be difficult because learners do not recognize the chunks. Instead, learners read every word as if it were separated from one another. Thus, if learners can identify lexical items accurately, they can store them accurately in their mental lexicon.

In addition to Hill (2000), Kozlowski and Seymour (2003) emphasized that collocations help learners improve writing ability. In order to improve the quality of written language, they suggested that teachers should teach students to identify useful word combinations in reading and listening by recording the language in context in collocation notebooks or creating vocabulary charts.

In conclusion, collocation knowledge can improve learners' language production and development. Liu (2000a) stated that the more English collocation students were taught, the more correct collocations students could produce. Woolard (2000: 31) further stated that "learning more vocabulary is not just learning new words; it is often familiar words in new combinations". Therefore, collocation learning should be encouraged in foreign language pedagogy.

## **Evaluating Learners' Collocation and Vocabulary Knowledge**

In order to probe into learners' collocation and vocabulary competence in writing, each study had different techniques and procedures. As long as the research in collocations was concerned, there have been two ways to measure learners' collocation and vocabulary knowledge: using authentic production and using/constructing elicitation tasks.

### *1. Using authentic production*

To investigate EFL learners' collocation knowledge, some researchers collected learners' authentic production such as essays and then analyzed data based on the collected pieces of writing. Findings of these studies demonstrated learners' insufficient knowledge of English collocations. For example, Nesselhalf (2003) examined verb-noun collocation errors in advanced German learners' 32 essays, and found that the most frequent collocation error type was the misuse of verb collocates. Li (2005) investigated lexical and grammatical collocation errors in Chinese learners' 76 writing samples. She found that the collocation error type occurring most frequently was the verb-noun collocation.

### *2. Using/constructing elicitation tasks*

In addition to collecting learners' pieces of writing, some researchers used/constructed elicitation collocation and vocabulary tasks as research instruments in their studies. For example, Sun and Wang (2003) investigated whether deductive or inductive approach helped students learn both easy and difficult collocations with the help of concordances more effectively. The participants were 81 second-year students from a senior high school in Taiwan.

After randomization, 41 students were enrolled in the inductive group, and the rest were enrolled in the deductive group. The two groups took the pre-test, a one-hour instruction section, and the post-test. The findings indicated that students who were taught inductively achieved significantly higher mean scores than those who were taught deductively, especially for easy collocations. Figure 2.1 presents sample of the test items used in Sun and Wang's study.

**Error correction**

Instruction: Please make correction on the following sentences.

1. Jack's teacher was quite indignant at him for breaking the rules.
2. It is not easy to distinguish your voice and those sounds.
3. There is a big gulf in Tom and his parents.
4. Yesterday the boss declared that profits of our company were to excess of \$2 billion.
5. Your black hair distinguished you to your brother.
6. The cow used as a sacrifice is in excess to 150 kilograms.
7. Mary felt indignant at her boyfriend for drinking too much.
8. It is hard to avoid the gulf in teachers and students.

(Sun & Wang, 2003: 93)

*Figure 2.1.* Sample of test items used in Sun and Wang's (2003) study.

Kaur and Hegelheimer (2005) compared whether students who used both an online concordance and an online dictionary or students who used only the online dictionary were able to use and transfer their knowledge of 30 academic words in their vocabulary tasks and writing task more correctly. 18 undergraduate students at a university in the United States participated in this study. Students were randomly and equally divided into two groups: the control group who used only the online dictionary, *Dictionary.com*, and the treatment group who used the online concordance, Tom Cobb's *Compleat Lexical Tutor*, as well as the online dictionary. They found that students in the treatment group achieved higher scores than those in the control group at all activities. In other words, students who used both an online concordance and an online dictionary helped students transfer academic words more effectively. Figure 2.2 presents samples of the test items used in Kaur and Hegelheimer's study.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

- **A vocabulary quiz**

Instruction: Choose the sentence that uses the given words most appropriately. Then circle the best answer.

1. affect

- A. Studies show that a good education can **affect** students to look for jobs.
- B. Parents should **affect** their children to strive for excellent.
- C. The war in Iraq will **affect** the youngsters emotionally.
- D. Mosquitoes can **affect** us with the West Nile disease.

2. accommodating

- A. Last week, they began working on the **accommodating** project for the hotel.
- B. She is liked for her tolerant and **accommodating** nature.
- C. **Accommodating** scientists can conduct the research more precisely.
- D. He lost his investments because of his **accommodating** finances.

3. analysis

- A. I did an **analysis** in the apartment to search for my watch.
- B. Following the accident, John lost his mind **analysis**.
- C. During a tournament, an **analysis** of the participants will determine the winner.
- D. Your **analysis** of the manager's role in curbing white-collar crimes was enlightening.

*Figure 2.2.* Samples of test items used in Kaur and Hegelheimer's (2005) study.



• **Cloze**

Instruction: Use the given words to complete the sentences. Each word can only be used once.

reject	exploit	conduct	bias	furthermore
focus	resolve	whereas	statistics	valid
issue	significant	justify	illustration	documentation
category	assumption			

1. Since the former aeronautic theory has no \_\_\_\_\_ claim, it will not be accepted.
2. The authorities will \_\_\_\_\_ your application if they find that you have given incorrect information.

Instruction: For the following items, circle the best answers.

13. In our camp, the food was not \_\_\_\_\_ to sustain us for another day. We were sure to die of starvation unless help arrived quickly.
  - A. accommodating
  - B. sufficient
  - C. consenting
  - D. converse
14. Leaders of that country should \_\_\_\_\_ the involvement of their troops in the neighboring country before the public loses confidence in the leadership.
  - A. justify
  - B. scheme
  - C. credit
  - D. predict

Figure 2.2. (continued).

- **Sentence-building task**

Instruction: Make sentences with the given words. The word used in the sentence can be in any form (noun/verb/adjective/adverbs). Please specify the word form.

1. affect

---



---

word form: \_\_\_\_\_

2. analysis

---



---

word form: \_\_\_\_\_

(Kaur and Hegelheimer, 2005: 301-308)

*Figure 2.2. (continued).*

Furthermore, Lewis (2000, 2002) has provided some useful insights into designing various types of elicitation tasks to measure learners' collocation and vocabulary knowledge. Figure 2.3 presented samples of collocation and vocabulary tasks presented by Lewis (2000, 2002).

- **Gap-filling tasks**

Which of the verbs *speaks*, *says*, *tells* fit best into the gaps in these authentic examples?

1. I can't \_\_\_\_\_ for the rest of the staff, though.
2. As I \_\_\_\_\_ they've already appointed somebody.
3. You'd better do exactly what the doctor \_\_\_\_\_.
4. Don't worry. Everything you \_\_\_\_\_ me is confidential.

(Lewis, 2000: 61)

- **Verb + adverb**

Some verbs collocate strongly with particular adverbs. Use each adverb once to complete these sentences. If in doubt, check the **verb** in a collocation dictionary.

---

categorically	confidently	completely	flatly
fully	legitimately	hardly	readily
strongly	tentatively		

---

1. I'm sorry, I \_\_\_\_\_ forgot to pass your message on.
2. He \_\_\_\_\_ refused to help.
3. Oh it's you! I \_\_\_\_\_ recognized you with your new haircut.
4. I \_\_\_\_\_ recommend we wait until we have more information.

(Lewis, 2000: 107)

Figure 2.3. Samples of collocation and vocabulary tasks shown by Lewis (2000, 2002).

• **Adverb + adjective (Alternatives to *very*)**

With many adjectives you want to use *very*, but there are lots of other words with a similar meaning which are stronger or more precise. For example:

*highly* qualified

*bitterly* disappointed

Use a collocation dictionary to add a word which means *very* to each of these:

- |                       |                        |
|-----------------------|------------------------|
| 1. _____ exhausted    | 3. _____ handicapped   |
| 2. _____ disorganized | 4. _____ disillusioned |

(Lewis, 2000: 108)

• **Adverb + adjective 2**

Some *adverb + adjective* collocations are often fairly strong. Match each adverb in List 1 with an adjective in List 2. You should find all the answers in a collocation dictionary by looking up the adjectives.

**List 1**

1. delicately
2. closely
3. enthusiastically
4. highly
5. carefully
6. ideally
7. badly
8. dangerously

**List 2**

- a. associated with
- b. balanced
- c. chosen
- d. mistaken
- e. overcrowded
- f. qualified
- g. received
- h. situated

Figure 2.3. (continued).

Now complete each of these sentences with one of the expressions:

1. The election is very \_\_\_\_\_ at the moment. Either party could win.
2. The new production of „Hamlet“ was \_\_\_\_\_ by the first night audience.
3. She’s too \_\_\_\_\_ for the job – we don’t want someone with a degree.
4. The house is \_\_\_\_\_ ten minutes from the sea, and ten minutes to the mountain.

(Lewis, 2000: 109)

• **The missing verbs**

What are the missing verbs in the following collocations? The same verb completes all these examples. If in doubt, check the nouns in a collocation dictionary. Notice how important it is to learn words in phrases rather than single words.

- |                                   |                     |
|-----------------------------------|---------------------|
| 1. _____ a mistake                | 3. _____ concern    |
| _____ a statement                 | _____ embarrassment |
| _____ an observation              | _____ fear          |
| 2. _____ to a complete standstill | 4. _____ panic      |
| _____ to an understanding         | _____ a problem     |
| _____ to a decision               | _____ embarrassment |

(Lewis, 2000: 112)

Figure 2.3. (continued).

- **Collocate deletion**

One word in each group does not make a strong word partnership with the word in capitals. Which is the odd one?

1. BRIGHT idea green smell child day room
2. CLEAR attitude need instructions alternative day conscience road
3. LIGHT traffic work day entertainment suitcase rain green lunch
4. NEW experience job food potatoes baby situation year

(Lewis, 2002: 94)

*Figure 2.3. (continued).*

### **Strategies for Producing Collocations**

When learning collocations, EFL learners seem to adopt several strategies to deal with the target language and hence produce a number of collocation errors. Liu (2000b) has provided seven types of strategies that learners might use in their writing as follows:

#### *1. Retrieval*

Retrieval refers to learner's ability to recall collocations from their memory. Many learners have no intention to store collocations in their memory, so they often fail in searching for correct collocations when communicating either in speaking or in writing.

## 2. *Literal translation*

Literal translation means that learners tend to transfer their thought word-by-word from L1 to L2 when they cannot find proper stored collocations from their memory. For example, as presented in Chan and Liou's (2008) and Li's (2005) studies, English learners who have a Chinese background often have a problem with the combination of *take* and *medicine* because they substitute another word by using the verb *eat*, which co-occurs with the word *medicine* in Chinese (*\*eat medicine*, instead of *take medicine*).

## 3. *Approximate translation*

Approximate translation refers to a process of paraphrasing their thought from L1 to L2. Students sometimes rely on their intuition to produce their own collocations and choose approximate translation as another strategy other than literal translation. For example, as shown in Li (2005), *board and long-ranged* was used to mean *high* (e.g., *\*board and long-ranged ambitions*, instead of *high ambitions*).

## 4. *Use of de-lexicalized verbs*

De-lexicalized verbs refers to such verbs as *do*, *get*, *have*, *make*, and *take*, which have little meaning on their own, but have the widest range of patterns. It is quite difficult for learners to use de-lexicalized verbs correctly because their meanings depend on the words following them (Meng, 2008). Consequently, learners are inclined to use de-lexicalized verbs carelessly and substitute one for another freely. For instance, learners might say or write a

sentence like *\*I **make** exercise every morning in the gym*, instead of *I **do** exercise every morning in the gym* (Hill, 2000).

#### 5. *Use of synonyms*

Synonyms refer to words that have the same or nearly the same meaning as another word. Learners use synonyms to solve L2 lexical problems when they encounter the collocations that they are not able to bring out the right words. For example, as presented by Li (2005), a student made a collocation error like *\*I had **little** grammatical knowledge* instead of *I had **slight** grammatical knowledge*.

#### 6. *Appeal for authority*

Learners may ask a native speaker of the target language or consult a dictionary when they cannot find the right collocations to use.

#### 7. *Appeal for assistance*

Learners have a tendency to depend on others for guidance and instruction.

The poor writers are the ones who often use this strategy.

### **Sources of Collocation Errors**

There has been a great concern among researchers about the reasons why EFL learners often make collocation errors in their writing. Liu (1999a) studied Chinese college freshmen's collocation competence, and found that there were four factors causing students' difficulties in producing acceptable collocations as follows:



1. *Lack of collocation concept*

Some students understood only the basic meaning of the word but had no idea which word it would go with. As a result, they could not produce any collocation.

2. *Direct translation*

Some students translated their thought from L1 to L2 directly to produce collocations. Thus, they made such collocation errors as *\*learn knowledge*, instead of *gain/absorb knowledge*.

3. *Ignorance of rule restrictions*

Some students did not realize that some collocation restrictions were based on the meaning of the word and range; others did not take grammar to consideration. For example, they produced such collocation errors as *\*few knowledge*, instead of *little knowledge*.

4. *Lack of knowledge of collocation properties*

Many students did not understand the potential collocation properties of the words they knew. For example, most students knew the collocation *a good boy*, but few students generated the collocation *\*a good knowledge*.

In addition to Liu's (1999a) study, Liu (1999b) analyzed collocation errors in Chinese students' writing, and concluded that there were seven sources of collocation errors based on intralingual transfer, interlingual transfer, and paraphrase (see Table 2.3).

Table 2.3

*Sources of Collocation Errors Based on Liu's (1999b) Study*

Strategies	Category	Sources of errors
Cognitive strategies	Intralingual transfer	<ul style="list-style-type: none"> <li>• False concept hypothesized</li> <li>• Ignorance of rule restrictions</li> <li>• Overgeneralization</li> <li>• Use of synonyms</li> </ul>
	Interlingual transfer	<ul style="list-style-type: none"> <li>• Negative transfer</li> </ul>
Communication strategies	Paraphrase	<ul style="list-style-type: none"> <li>• Word coinage</li> <li>• Approximation</li> </ul>

1. *False concept hypothesized*

False concept hypothesized refers to students' faulty comprehension of distinctions in the target language (Li, 2005). Some students might think that words such as *do*, *make*, and *take* were de-lexicalized verbs, so they can replace another one freely. For example, students would use *\*do plans* instead of *make plans*.

2. *Ignorance of rule restrictions*

Ignorance of rule restrictions refers to "analogy and failure to observe the restrictions of existing structures" (Richards, 1973, as cited in Li, 2005: 25). For example, *\*to make Joyce surprise* (instead of *to make Joyce surprised*) was a false analogy of the construction of verb + object + infinitive.

### 3. *Overgeneralization*

Students used overgeneralization when the item did not carry any obvious contrast to them. It was “the creation of one deviant structure in place of two regular structures on the basis of students’ experience of the target language” (Li, 2005: 24). For instance, the students would use the collocation *\*am used to take* instead of *am used to taking*. They probably knew the combinations of *am used to something* and *used to do something*, but was unable to distinguish the two clearly.

### 4. *Use of synonyms*

The use of synonyms is taken as “a straightforward application of the open choice principle” (Farghal and Obiedat, 1995, as cited in Li, 2005: 25). In other words, when students could not find a semantically correspondent collocation in Chinese, they would use a synonym to replace the target English collocation (Li, 2005). For instance, students might use *\*call at his parents* instead of *call on his parents*, and *\*receive other people’s opinion* instead of *accept other people’s opinions*.

### 5. *Negative transfer*

Negative transfer, so-called L1 interference, means that students’ first language influences their production of collocations. The errors were normally caused by direct translation from L1 to L2. For example, the collocations like *\*listen his advice*, *\*arrive school*, and *\*wait your phone*, are understandable in Chinese, but they are not acceptable in English. Such words as *listen*, *arrive*,

and *wait* are intransitive verbs, so they cannot be directly followed by a noun. However, this rule does not exist in Chinese.

#### 6. *Word coinage*

Word coinage means that students make up a new word in order to communicate the desired concept (Tarone, 1978). For example, students would use *\*to see sun-up* instead of *to see the sunrise*.

#### 7. *Approximation*

Approximation means that students use a vocabulary item or structure, which students know that it is incorrect, but which shares enough semantic features in common with the desired item to satisfy the speaker (Tarone, 1978). For example, the word *middle* in *\*middle exam* was used to mean mid-term in *midterm exam*.

In addition, Li (2005) stated that some errors possibly occurred from the similarity of spelling and pronunciation between words. For example, students would make collocation errors like *\*entrance the university* instead of *enter the university*, and *\*punished us seriously* instead of *punished us severely*.

To conclude, EFL students make collocation errors in their writing because of the lack of collocation concept, intralingual transfer, interlingual transfer, paraphrase, and so on. These can be the possible reasons to explain why students often produce unacceptable collocations in their writing.

## **Writing**

In this section, the researcher reviews key issues on writing in terms of definition of writing, importance of collocations, and evaluating writing ability, respectively.

### **Definition of Writing**

Writing is one of the ways to communicate one's thoughts into written language. It is important and complex, and it is found to be more difficult if it is performed in another language. Many educators have defined writing as follows.

Torwong (2003: 12) stated that "writing is a complex activity which involves a text, cognitive process, and social context."

Lerdejdech (2007: 9) defined writing as "the process of thinking that is expressed through the written language". She also mentioned that writing should share the writer's thoughts with the readers accurately and appropriately according to the writer's purpose.

Phochanapan (2007: 9) defined writing as "the complex process, in which the writers try to combine and organize sentences into a paragraph in order to make readers understand".

According to the definition of „writing“ stated above, it can be concluded that writing as a thinking process to communicate writers' ideas and thoughts with readers by using accurate and appropriate written language of the target language.

## **Importance of Writing**

From the definition of writing, writing has long been considered important because it is used to communicate writers' ideas and thought with readers in every language. According to Grabe and Kaplan (1996, as cited in Torwong, 2003), in the Ancient Greek era, writing was used to record events, traditions, and transactions. Later, during the rise of the Roman Empire, it was used in government and commerce. To date, as mentioned by Grabe and Kaplan (1996), writing has been involved in many aspects in human life such as culture, education, finance, occupations, politics, and so forth.

Howell-Richardson and Bish (1997) stated that the number of computer-based communication users has been increasing, and people have created numerous electronic information sites each month. This kind of communication definitely requires writing which is understandable for its readers. Therefore, writing is becoming more important nowadays.

Lerdejdech (2007) stated that writing plays one of the important roles in daily life. It is used to express ideas, thoughts, and experiences between the writer and the reader. She mentioned that we can communicate with many people in the same time by writing although the sender does not stay in the same place with the receiver. Writing can also be used to communicate with people as long as it is kept.

In conclusion, writing is highly significant for everybody to communicate in daily life, involving in the form of computer-based communication. It is used to express the senders' ideas, thoughts, and experience to the receiver, reader.

## **Evaluating Writing Ability**

In this part, the researcher provides criteria for evaluating learners' writing products. The researcher then presents three types of scoring rubrics, including an example of each type of scoring used for the assessment of writing. Some advantages and disadvantages of the rating scales are also discussed.

### **Criteria for Good Writing**

In order to evaluate learners' English writing ability, Beers (2000: 3) stated that teachers should consider the five main criteria for measuring how good their writing is. These criteria consist of content, organization, diction, sentence structure, and mechanics and usage.

#### *1. Content*

- a. Does the paper focus on a specific subject?
- b. Does the writer demonstrate knowledge of the subject?
- c. Is the purpose of the paper made evident to the reader?
- d. Are generalizations supported by specific details?
- e. Are ideas original and clear or are borrowed ideas credited to their sources?
- f. Does the paper demonstrate imagination and originality in both content and style?

## 2. *Organization*

- a. Does the introduction prepare the reader for the content?
- b. Is the organization easy to follow?
- c. Is there a clear connection from one point to another?
- d. Is there a logical transition between paragraphs?
- e. Are all details related to the purpose of the paper?
- f. Does the conclusion reemphasize the purpose or summarize the content or raise further questions?
- g. Does a paper maintain a consistent point of view?

## 3. *Diction*

- a. Are words used correctly?
- b. Where appropriate, do words appeal to the reader's senses?
- c. Is the language appropriate to the purpose of the paper and to the intended reader?
- d. Is the writing free of clichés (i.e., He learned his lesson; Boys will be boys.) and colloquialisms?

## 4. *Sentence structure*

- a. Are sentences complete?
- b. Are the parts of the sentence logically related?
- c. Are sentences separated by end punctuation?
- d. Are sentences free of choppy, unnecessarily repetitive constructions?
- e. Is sentence structure varied?
- f. Does sentence structure reflect grade level expectations of the student?



## 5. *Mechanics and usage*

- a. Is penmanship legible?
- b. Is the writing free of errors and word usage?
- c. Are words spelled correctly?
- d. Are punctuation marks and capital letters correctly used?
- e. Are there unnecessary shifts in person, tense, or number?

From the criteria for good writing presented by Beers (2000), we can assign scores to these five aspects by using scoring rubrics which are discussed in the next part.

### **Types of Scoring Rubrics**

The scoring for writing assessment is always planned before writing tasks and assessment procedures are developed (Phochanapan, 2007). When the writing is complete, the rubrics can guide the teachers in evaluation. There are three types of scoring rubrics generally used in scoring writing: holistic, primary trait, and analytic scoring (Beers, 2000; Weigle, 2002).

#### *1. Holistic scoring*

The first type of scoring rubric is holistic scoring, which is sometimes called *impressionistic scoring* (Hughes, 2003). Holistic scoring combines a variety of criteria into a single score. The rationale for using the holistic-assessment scale is that the total quality of written text is more than the sum of its components. Writing is viewed as a whole. Thus, teachers can evaluate students' writing quickly. Hughes mentioned that, using the holistic scoring, experienced raters can evaluate a one-page piece of writing only in a few

minutes or even less. However, the major weakness of this rating scale is that an individual score does not provide diagnostic information since it does not allow scorers to distinguish between various criteria such as organization, vocabulary, grammar, and so forth (Cohen, 1994; Weigle, 2002). Some students may have excellent writing skills in terms of content and organization, but may have a low level of proficiency in English grammar, and vice versa.

A well-known example of a holistic scoring rubric is the scale developed by ESL teachers, Prince William County Public Schools in Virginia, as presented in Figure 2.4 (O'Malley and Pierce, 1996: 143). This holistic scoring system has descriptors of the syntactic and rhetorical qualities of six levels of writing proficiency, along with five criteria for evaluation: meaning, organization, use of transition, vocabulary, and grammatical/mechanical usage. Criteria appropriate to each level vary according to the developmental nature of writing.

<p><i>Level 6: Excellent</i></p>	<ul style="list-style-type: none"> <li>• Conveys meaning clearly and effectively</li> <li>• Presents multi-paragraph organization, with clear introductions, development of ideas, and conclusion</li> <li>• Shows evidence of smooth transitions</li> <li>• Uses varied, vivid, precise vocabulary consistently</li> <li>• Writes with few grammatical/mechanical errors</li> </ul>
----------------------------------	--

*Figure 2.4.* Holistic scoring rubric for writing assessment with ESL students.

<i>Level 5: Very good</i>	<ul style="list-style-type: none"> <li>• Conveys meaning clearly</li> <li>• Presents multi-paragraph organization logically, though some parts may not be fully developed</li> <li>• Shows some evidence of effective transitions</li> <li>• Uses varied and vivid vocabulary appropriate for audience and purpose</li> <li>• Writes with some grammatical/mechanical errors without affecting meaning</li> </ul>
<i>Level 4: Good</i>	<ul style="list-style-type: none"> <li>• Expresses ideas coherently most of the time</li> <li>• Develops a logical paragraph</li> <li>• Writes with a variety of sentence structures with a limited use of transitions</li> <li>• Choose vocabulary this is often adequate to purpose</li> <li>• Writes with some grammatical/mechanical errors that seldom diminish communication</li> </ul>
<i>Level 3: Just adequate</i>	<ul style="list-style-type: none"> <li>• Attempts to express ideas coherently</li> <li>• Begins to write a paragraph by organizing ideas</li> <li>• Writes primarily simple sentences</li> <li>• Uses high frequency vocabulary</li> <li>• Writes with some grammatical/mechanical errors that sometimes diminish communication</li> </ul>

Figure 2.4. (continued).

<i>Level 2: Fair</i>	<ul style="list-style-type: none"> <li>• Begins to convey meaning</li> <li>• Writes simple sentences/phrases</li> <li>• Uses limited or repetitious vocabulary</li> <li>• Spells inventively</li> <li>• Uses little or no mechanics, which often diminishes meaning</li> </ul>
<i>Level 1: Poor</i>	<ul style="list-style-type: none"> <li>• Draws pictures to convey meaning</li> <li>• Uses single words/phrases</li> <li>• Copies from a model</li> </ul>

*Figure 2.4. (continued).*

## 2. Primary trait scoring

The second type of scoring rubric is primary trait scoring. It was developed by the National Assessment of Educational Progress (NAEP) in the mid-1970s (Lloyd-Jones, 1977). This scoring could be a language-based feature emphasizing any one or more of the criteria for holistic scoring presented above to make it fit the specific task. For example, teachers may evaluate students' writings on organization or sentence structure. Thus, the advantage of this type of scoring is in focusing on specific aspects of instruction which most reflect the objectives being covered when the writing task is given. Therefore, it is suitable for evaluating students' specific writing skills (Beers, 2000; Cohen, 1994; Weigle, 2002). Figure 2.5 presents a primary trait scoring rubric by Cohen (1994: 321).

<p>0 – The writer gives no response or a fragmented response.</p> <p>1 – The writer does not take a clear position, takes a position but gives no reason, restates the stem, fives and then abandons a position, represents a confused or undefined position, or gives a position without reasons.</p> <p>2 – The writer takes a position and gives one unelaborated reason.</p> <p>3 – The writer takes a position and gives one elaborated reason, one elaborated reason plus one unelaborated reason, or two or three unelaborated reasons.</p> <p>4 – The writer takes a position and gives two or more elaborated reasons, one elaborated reason plus two or more unelaborated reason, or four or more unelaborated reasons.</p>
---

Figure 2.5. Primary trait scoring rubric (Cohen, 1994)

### 3. Analytic scoring

The third type of rating scale is analytic scoring. Analytic scoring separates the criteria for evaluating students' writing into components that are each scored separately. Depending on the purpose of the assessment, the separate components might be given different weights. The main advantage of this type of scoring rubric is that the analytic scales are "more appropriate for L2 writers as different aspects of writing ability develop at different rate" (Weigle, 2002: 109). Thus, the analytic scales are more reliable than the holistic ones. However, this analytic method is a time-consuming process because of separated scales weighted. In comparison to the holistic scoring,

scorers may have to spend more time completing the analytic scoring, even with practice (Hughes, 2003; Weigle, 2002).

One of the most well-known and widely used analytic scoring rubric is Jacob et al.'s (1981) scoring profile. The criteria for evaluating a composition are assigned along five dimensions: content, organization, vocabulary, language use, and mechanics. These five dimensions are weighted differently: 30 points for content, 25 points for language use, 20 points for organization and vocabulary, and 5 points for mechanics (see Table 2.4).

Table 2.4

*Analytic scoring rubric* (Jacobs et al., 1981)

Score	Points	Criteria
Content (30 points)	30-27	<i>Excellent to Very good</i> : knowledgeable, substantive, thorough development of thesis, relevant to assigned topic
	26-22	<i>Good to Average</i> : some knowledge of subject, adequate range, limited development of thesis, mostly relevant to topic, but lacks detail
	21-17	<i>Fair to Poor</i> : limited knowledge of subject, little substance, inadequate development of topic
	16-13	<i>Very poor</i> : does not show knowledge of subject, non-substantive, not pertinent, or not enough to evaluate

Table 2.4 (continued)

Score	Points	Criteria
Organization (20 points)	20-18	<i>Excellent to Very good</i> : fluent expression, ideas clearly stated/supported, succinct, well-organized, logical sequencing, cohesive
	17-14	<i>Good to Average</i> : somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	13-10	<i>Fair to Poor</i> : non fluent, ideas confused or disconnected, lacks logical sequencing and development
	9-7	<i>Very poor</i> : does not communicate, no organization, or not enough to evaluate
Vocabulary (20 points)	20-18	<i>Excellent to Very good</i> : sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate register
	17-14	<i>Good to Average</i> : adequate range, occasional errors of word/idiom form, choice, usage <b>but meaning not obscured</b>
	13-10	<i>Fair to Poor</i> : limited range, frequent errors of word/idiom form, choice, usage, <b>meaning confused or obscured</b>
	9-7	<i>Very poor</i> : essentially translation, little knowledge of English vocabulary, idioms, word form, or not enough to evaluate

Table 2.4 (continued)

Score	Points	Criteria
Language use (25 points)	25-22	<i>Excellent to Very good</i> : effective complex construction, few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions
	21-18	<i>Good to Average</i> : effective but simple constructions, minor problems in complex constructions, several errors of agreement, tense number, word order/function, articles, pronouns, prepositions <b>but meaning confused or obscured</b>
	17-11	<i>Fair to Poor</i> : major problems in simple/complex construction, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions, <b>meaning confused or obscured</b>
	10-5	<i>Very poor</i> : virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate



Table 2.4 (continued)

Score	Points	Criteria
Mechanics (5 Points)	5	<i>Excellent to Very good</i> : demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing
	4	<i>Good to Average</i> : occasional errors of spelling, punctuation, capitalization, paragraphing <b>but meaning not obscured</b>
	3	<i>Fair to Poor</i> : frequent errors of spelling, punctuation, capitalization, poor handwriting paragraphing, <b>meaning confused or obscured</b>
	2	<i>Very poor</i> : no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate

Another well-known analytic scoring rubric is Weir's (1990) the Test in English for Educational Purposes (TEFP) attribute writing scales, which evaluates seven aspects of writing ability, with three points given to each aspect: relevance and adequacy of content, compositional organization, cohesion, adequacy of vocabulary for purpose, grammar, mechanical accuracy I (punctuation), and mechanical accuracy II (spelling) (see Figure 2.6).

*A. Relevance and adequacy of content*

3. Relevant and adequate answer to the task set.
2. For the most part answers the tasks set, though there may be some gaps or redundant information.
1. Answer of limited relevance to the task set. Possibly major gaps in treatment of topic and/or pointless repetition.
0. The answer bears almost no relation to the task set. Totally inadequate answer.

*B. Compositional organization*

3. Overall shape and internal pattern clear. Organizational skills adequately controlled.
2. Some organizational skills in evidence, but not adequately controlled.
1. Very little organization of content. Underlying structure not sufficiently controlled.
0. No apparent organization of content.

*C. Cohesion*

3. Satisfactory use of cohesion resulting in effective communication.
2. For the most part satisfactory cohesion although occasional deficiencies may mean that certain parts of the communication are not always effective.
1. Unsatisfactory cohesion may cause difficulty in comprehension of most of the intended communication.
0. Cohesion almost totally absent. Writing so fragmentary that comprehension of the intended communication is virtually impossible.

*Figure 2.6. Analytic scoring rubric (Weir, 1990).*

*D. Adequacy of vocabulary for purpose*

3. Almost no inadequacies in vocabulary for the task. Only rare inappropriacies and/or circumlocution.
2. Some inadequacies in vocabulary for the task. Perhaps some lexical inappropriacies and/or circumlocution.
1. Frequent inadequacies in vocabulary for the task. Perhaps frequent lexical inappropriacies and/or repetition.
0. Vocabulary inadequate even for the most basic parts of the intended communication.

*E. Grammar*

3. Almost no grammatical inaccuracies.
2. Some grammatical inaccuracies.
1. Frequent grammatical inaccuracies.
0. Almost all grammatical patterns inaccurate.

*F. Mechanical accuracy I (punctuation)*

3. Almost no inaccuracies in punctuation.
2. Some inaccuracies in punctuation.
1. Low standard of accuracy in punctuation.
0. Ignorance of conventions of punctuation.

Figure 2.6. (continued).

*G. Mechanical accuracy II (spelling)*

3. Almost no inaccuracies in spelling.
2. Some inaccuracies in spelling.
1. Low standard of accuracy in spelling.
0. Ignorance of conventions of spelling.

*Figure 2.6. (continued).*

In this study, the primary trait scoring rubric developed from Jacobs et al. (1981) and O'Malley and Pierce (1996) was used to evaluate students' use of academic verb collocations because it is appropriate for measuring students' specific writing skills (Cohen, 1994; Weigle, 2002). On the other hand, the analytic scoring rubric adapted from Weir (1990) was used to measure students' writing ability because the grading criteria of this rubric are weighted equally and easy to understand. Using Jacob et al.'s (1981) may affect the reliability of the scoring since the criteria are weighed differently.

## Resources of Academic Words

In this section, the researcher reviewed two outstanding lists of academic words available of educational purposes: the University Word List (UWL) and the Academic Word List (AWL).

### The University Word List

The University Word List (UWL) was developed by Xue and Nation, and first published in 1984. It is a list of words which is not included in West's (1953) the *General Service List of English Words* (GSL), but is common in a wide range of academic texts. Nation (1990) estimated that the words on the UWL account for 8 percent of the words in a typical academic text. The UWL was designed to be a list of specialized academic words for students who know about 2,000 common words and plan to study the English language in the college or university level.

The UWL consists of 808 words which were divided into 11 levels. Level 1 contains the most frequent words. Level 2 contains the next most frequent words, and so on. The occurrences of the words of the first three levels are about half of the total occurrences of the entire list.

However, according to, the UWL is now considered as the out-of-date list of academic words since it has been replaced by the Academic Word List (Bauman, n.d.), which is discussed in the next part.

## The Academic Word List

In 1998, the Academic Word List (AWL) was developed by Averil Coxhead, a lecturer in English for Academic Purposes, as her MA thesis at the School of Linguistics and Applied Language Studies at Victoria University of Wellington in New Zealand. Coxhead attempted to develop the AWL because she would like a new, useful academic word list compiled from a large, well-designed corpus of academic English to become available for teachers and learners of English worldwide (Coxhead, 2000).

To develop the AWL, first of all, Coxhead created a corpus named the *Academic Corpus*. This corpus contained 414 academic texts written by over 400 authors, with 3,513,330 tokens (running words) altogether. There were four sub-corpora in the Academic Corpus, which covered 28 different subject areas from four disciplines: arts, commerce, law, and science (see Table 2.5). The written texts came from 158 journal articles, 51 edited journal articles from Internet sources, 43 complete university textbooks or course books, 42 texts from the Learned and Scientific section of the Wellington Corpus of Written English by Bauer (1993), 41 texts from the Learned and Scientific section of the Brown Corpus by Francis and Kucera (1982), 33 chapters from university textbooks, 31 texts from the Learned and Scientific section of the Lancaster-Oslo/Bergen (LOB) Corpus by Johansson (1978), 13 books from the Academic Texts section of the MicroConcord academic corpus by Murison-Bowie (1993), and 2 university psychology laboratory manuals. Although most of the sources were from New Zealand English sources (64%), 20% were from British English, 13% from American English, 2% from Canadian English, and 1% from Australian English (Coxhead, 2000).

Table 2.5

*Composition of the Academic Corpus*

Discipline					
	Arts	Commerce	Law	Science	Total
Running words	883,214	879,547	874,723	875,846	3,513,330
Texts	122	107	72	113	414
Subject areas	Education	Accounting	Constitutional	Biology	
	History	Economics	Criminal	Chemistry	
	Linguistics	Finance	Family and	Computer	
	Philosophy	Industrial	medicolegal	science	
	Politics	relations	International	Geography	
	Psychology	Management	Pure	Geology	
	Sociology	Marketing	commercial	Mathematics	
		Public policy	Quasi-	Physics	
			commercial		
			Rights and		
			remedies		

(Coxhead, 2000: 220)

After creating the Academic Corpus, Coxhead checked how frequently and how widely different words were used by using the corpus analysis program, *Range*. The selection of words for the AWL was based on the three following criteria. Firstly, the

2000 most frequent words presented in West's (1953) the General Service List of English Words (GSL) were excluded. Secondly, words had to appear at least 10 times in each of the four disciplines, as well as in 15 or more of the 28 subject areas. Lastly, words had to occur at least 100 times in the Academic Corpus.

As a result, the AWL contains 570 headwords (mostly in stem noun or verb forms), and is divided into 10 sublists, with around 3,000 family members in total. There are 60 headwords in each sublist, except for Sublist 10, which contains 30 headwords. All sublists were ordered such that the words in the first sublist were the most common words, and those in the last sublist were the least common words in the Academic Corpus (see Appendix A).

In this study, the researcher selected high frequency academic words on the AWL because they are commonly used in academic texts or formal papers such as secondary-school and university textbooks, journals, manuals, newspapers, reports, and so on. Moreover, high frequency words are important to know and learn, and the AWL is the only outstanding list of academic words to date. Since the participants of this study were undergraduate English majors, they would be asked to write such academic projects as essays, reports, independent studies, and even research studies. Thus, it is appropriate to select academic words on the AWL to be studied.

### **Previous Studies on Collocations and Writing**

Chang (1997) investigated collocation errors in English compositions of college freshmen. The findings revealed that less proficient students made more errors than more proficient ones. In addition, he found that among three groups of different English proficiency, the students of the *low* group and the *mid* group had problems using proper



prepositions, adjectives, and verbs in combination with other words. The errors were also found in the writing of the students in the *high* group, but they were significantly fewer in number. Furthermore, regarding to the lexical collocation errors, he found that the adjective-noun collocations were the most noticeable errors, and the verb-noun collocations were the second most noticeable errors. Regarding to the grammatical collocation errors, on the other hand, the preposition-noun collocation errors occurred most frequently, followed by the verb-preposition collocation errors.

Liu (1999b) studied collocation errors of Chinese college students by analyzing 127 copies of final examinations papers and 94 copies of compositions. The findings showed that 63 errors which were classified into fourteen types of grammatical and lexical collocation errors based on a modified classification proposed by Benson et al. (1986) were found in their writing, and most of them were verb-noun collocation errors. She also found that negative transfer was the most frequent source of errors.

Liu (2002) investigated collocation errors in EFL learners' essays collected in the English Taiwan Learner Corpus (English TLC) from a web-based writing environment. The analysis revealed that 87% of the lexical collocation errors (233/265) were attributed to verb-noun collocation errors, and 96% of them (224/233) were due to the misuse of verbs. She also found that 56% of the verb-noun collocation errors (131/233) were semantically related such as synonyms (e.g. *\*carry out my goal*, instead of *achieve my goal*), hyponyms (e.g. *\*create songs*, instead of *compose songs*), and troponyms (e.g. *\*break the foundation*, instead of *damage the foundation*). Liu concluded that, among various types of collocations, the verb-noun collocation was found to be the most difficult for learners to acquire; further, there were three main factors correlating with learners' difficulties with verb-noun collocations: (1) L1 interference, (2) misuse of de-lexicalized

verbs, and (3) lack of knowledge of collocation restrictions with respect to their lexical relations such as synonyms, hyponyms, and troponyms.

Similarly, Nesselhalf (2003) investigated verb-noun collocation problems in 32 essays written by advanced German-speaking university students of English, mainly in their third or fourth year. Among different types of collocation errors, she found that their use of wrong choice of verbs (24/65) (e.g., *\*carry out races*, instead of *hold races*) appeared most frequently. Additionally, she observed the great influence of learners' L1 on verb-noun collocations, and she found that the learners' L1 influenced their production of verb-noun collocations in their L2, and the non-congruent collocations attributed to learners' L1 and L2 were far more difficult for learners to acquire. She emphasized that, in the teaching of verb-noun collocations, the focus should be on the verb, since the verb causes the greatest difficulties. Teachers should also make learners aware that the verb cannot be used freely. Moreover, Nesselhalf suggested that when teachers teach collocations, they should teach the entire combinations including preposition, articles, and so on (e.g., *raise the question of*, but not *\*raise the question* or *\*raise the question about*).

Using a modified classification originally established by Benson et al. (1986), Li (2005) examined lexical and grammatical collocation errors in EFL learners' writing samples, including 38 assignments and 38 in-class practice. 61 sophomores in the Department of Applied English at Ming Chuan University in Taiwan participated in the study. In addition to the 76 writing samples, a questionnaire was administered to find out the participants' perceptions of difficulty in collocations. The error analysis revealed that, among 188 collocation errors (121 grammatical collocation errors and 67 lexical collocation errors), (L1) verb-noun collocation errors (57/188) occurred most frequently in the participants' writing samples while (G6) adjective-to infinitive collocation errors

(1/188) occurs least frequently. The results of the questionnaire indicated that the participants considered the (G4) preposition-noun and (G5) adjective-preposition collocations the most difficult patterns and the (G8) (M) verb-object-to be-complement, (G8) (N) verb-object-complement, and (G8) (S) verb-compliment collocations the easiest patterns. Therefore, the participants' perceptions of difficulty in collocations were different from the collocation errors they made in their writing. Li concluded that collocation errors can be attributed to six main reasons, and ignorance of rule restrictions occurred most frequently – (1) false concept hypothesized (e.g., *\*take more respect*, instead of *pay more respect*; *\*have a great grade*, instead of *get a great grade*), (2) overgeneralization (e.g., *\*I was very surprising*, instead of *I was very surprised*), (3) the use of synonym (e.g., *\*breach her privacy*, instead of *invade her privacy*), (4) ignorance of rule restrictions (e.g., *\*my interest about English*, instead of *my interest in English*), (5) negative transfer (e.g., *\*listening some classical music*, instead of *listening to some classical music*), and (6) approximation (e.g., *\*changed our secrets*, instead of *exchanged our secrets*; *\*she punished us very seriously*, instead of *she punished us very severely*). Li finally provided five suggestions for teaching collocations, including raising learners' awareness of collocations, reinforcing learners' concept of collocations, increasing learners' collocation competence in L2, and avoiding literal translation.

Regarding to the research in collocations of Thai students, Mallikamas and Pongpairoj (2005) examined Thai students' receptive and productive knowledge of three types of English collocations: lexical, grammatical, and bound. The data were collected from multiple choice, error recognition, and gap-filling tasks. The results revealed that grammatical collocations were a problem for learners in both tasks. Lexical and bound collocations caused more problems in reception than production. They also found that

students were more likely to be able to identify and correct lexical and bound collocation errors, but they were less able to correct a grammatical collocation error although they could recognize it. The researchers suggested the *lexical approach* to help develop collocation knowledge of Thai students.

Mongkolchai (2008) studied the collocation ability of third-year English majors at Srinakharinwirot University. A collocation test consisting of 56 items, based on seven collocation patterns of Lewis's (2000) classification, was used as her instrument. Her findings revealed that the noun-noun collocation errors occurred most frequently (e.g., \**firework fair*, instead of *firework display*; \**private support*, instead of *state support*). She also found that the sources of errors were due to the students' limited knowledge of collocations, the students' application of the strategy of transferring L1 to L2 collocations, the engrossing effect of the source text patterning, the students' application of the strategy of synonymy, and the students' limited knowledge of cultural-specific collocations.

Zhang was probably one of the first researchers who set off a trend in collocation studies on the correlations between EFL students' knowledge of collocations and writing ability (Cao, 2008). Zhang (1993) tested 60 (30 native and 30 non-native) college freshman at Indiana University of Pennsylvania by using a fifty-item blank-filling collocation test and one paper-and-pencil TOFEL-like writing test. The collocation test was designed to measure collocation knowledge of students while the writing test was designed to collect their use of collocation and writing quality. The findings showed that native students outperformed non-native ones in terms of their use of correct collocations in writing. Zhang concluded that: "(1) collocation knowledge was a source of fluency in written communication among college freshmen; and (2) the quality of collocations in

terms of variety and accuracy was indicative of the quality of college freshmen writing” (p. v).

In a later study, Hsu (2007) studied the use of English lexical collocations and their relation to the online writing of 41 college English and 21 non-English majors in Taiwan by using a 45-minute online writing test administered by the web-based writing program, Criterion Version 7.1. The test was designed to investigate students’ use of lexical collocations and to measure writing scores of the two students groups. The findings showed that there was a significant correlation between the students’ fluency and variety of collocations and their online writing scores.

In conclusion, previous studies have shown that many learners of English have problems in collocations in their writing, with particular regard to verb-noun collocations, that negative transfer was the most noticeable source of collocation errors, and that there was a relation between students’ collocation knowledge and writing ability. However, as far as the research in collocations was concerned, there have been a limited number of studies on the use of collocations of academic words and the relationship between the use of collocations of academic words and writing ability of undergraduate English-major students. Consequently, it is appropriate to conduct a study in this area so as to emphasize the importance of collocations and writing ability in Thailand.

### **Framework of the Present Study**

The framework of this study consists of four main aspects: classification of academic verb collocations, selection of words, academic verb collocation writing ability test, and scoring rubrics (see Figure 2.7).

First, the classification of academic verb collocations was based on the categories of collocations proposed by Benson et al. (1986) with slight modification. As mentioned earlier, since the patterns of L1 and L2 were similar, the researcher followed Li's (2005) study by combining these two patterns into one pattern which is L1 (verb + noun/pronoun). Moreover, the pattern of L4 (noun + verb) was eliminated from this study because the researcher considered this pattern as a noun collocation rather than a verb collocation. Thus, there were 21 verb collocation patterns to be studied: L1, L7, G8 (A-S) (see Table 2.1 and 2.2 for more detail).

Second, academic verbs on the Academic Word List (AWL) (Coxhead, 1998) used in this study were carefully selected based on their frequency presented in Longman Dictionary of Contemporary English (LDOCE) (2009). This will be discussed further in the next chapter.

Third, the design of the academic verb collocation writing ability test used as the main instrument in the study was based on the integration of different types of writing task formats. The *sentence building* task was adapted from Kaur and Hegelheimer (2005). The *email* task developed by the researcher. The *storytelling* task was adapted from Hughes (2003), and the *essay* task was developed by the researcher. This will be discussed further in the next chapter.

Last, The scoring rubrics used to measure students' use of academic verb collocations and writing ability were the primary trait scoring rubric developed from Jacobs et al. (1981) and O'Malley and Pierce (1996), and the analytic scoring rubric adapted from Weir (1990). The sentence building task was graded by using the primary trait scoring rubric while the email, storytelling, and essay tasks were graded by using the analytic scoring rubric. This will be discussed further in the next chapter.

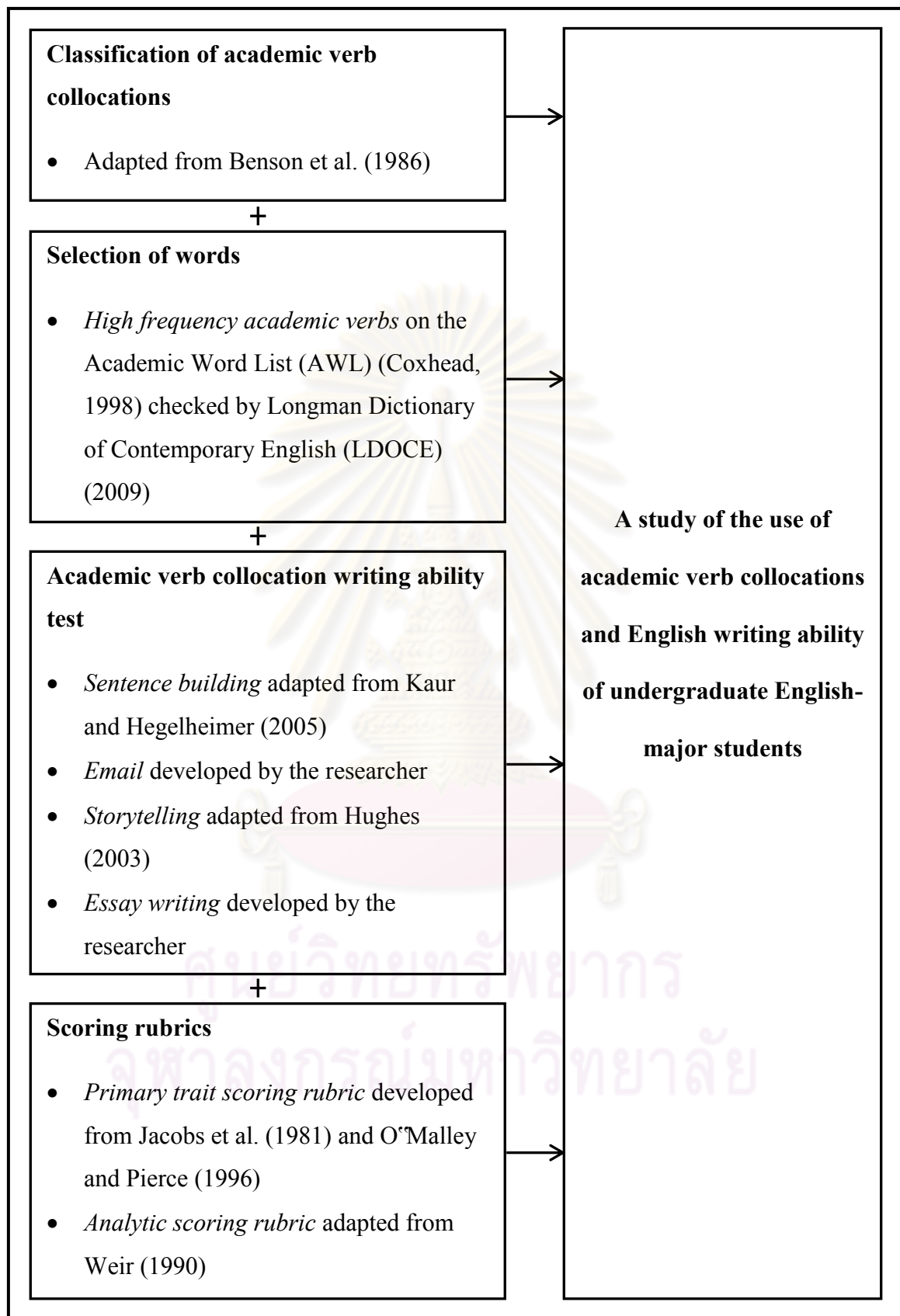


Figure 2.7. Framework of the present study.

## CHAPTER III

### RESEARCH METHODOLOGY

In this chapter, the researcher attempts to describe the research methodology and procedures used in the study. Since this study aimed primarily at studying the use of academic verb collocations of the 18 most frequent academic verbs on the Academic Word List (AWL) and writing ability of undergraduate English-major students at Walailak University, details about the research procedures, context of the study, population and samples, research instruments, data collection, and data analysis are presented respectively.

In order to help readers follow the research methodology and procedures of the present study conveniently, the research objectives are reiterated.

1. To explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University.
2. To compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability.
3. To examine the relationship between the use of academic verb collocations and writing ability among three groups of students.

#### **Research Procedures**

The procedures of this research study were divided into three main stages (see Figure 3.1). The first one was the preparatory stage which was the construction and validation of research instrument. First of all, the researcher studied relevant theories as

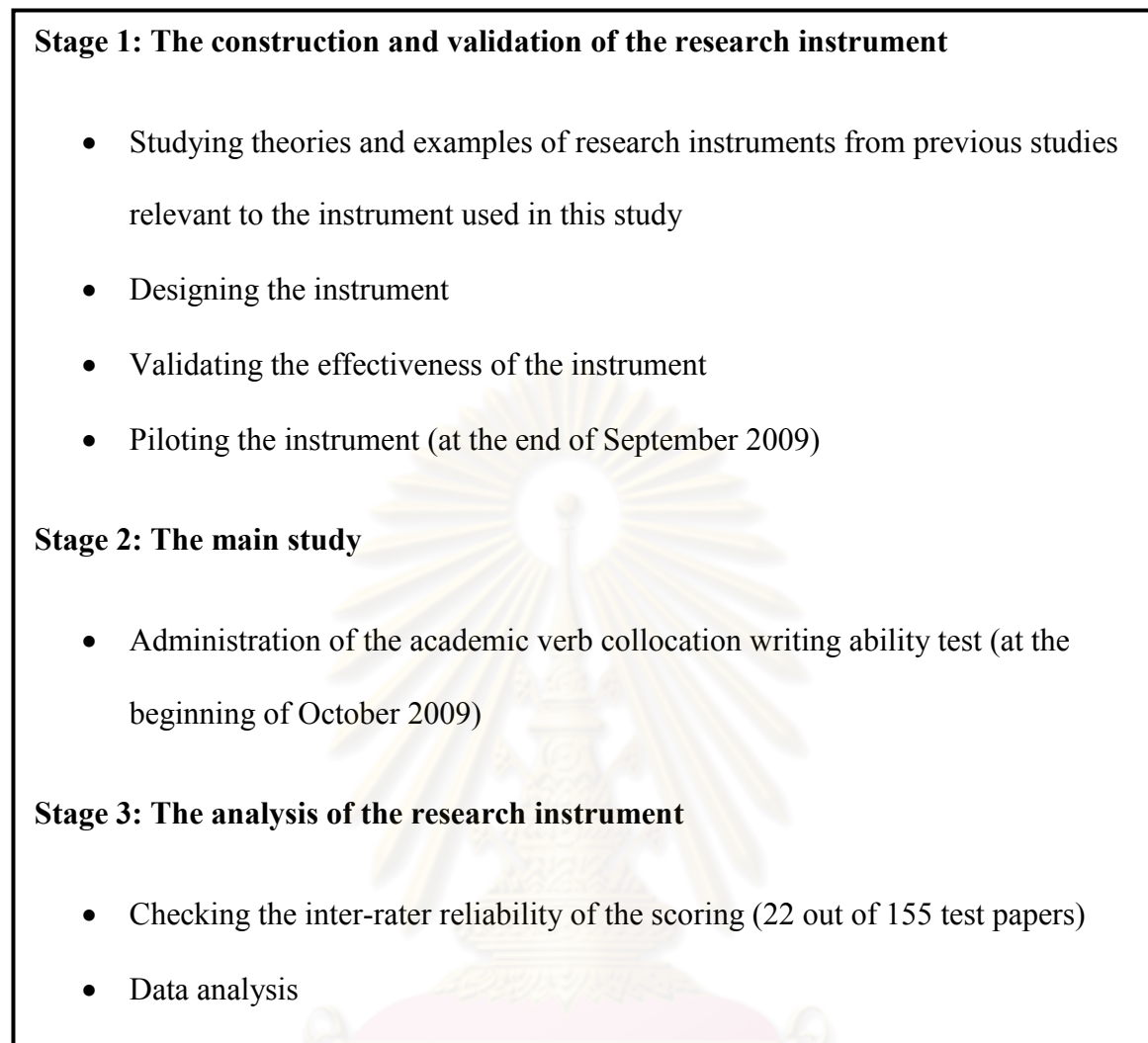


well as examples of research instruments from previous work in the literature. The instrument then was designed to ensure that it measured the objectives of the study. After that, the effectiveness of the instrument was validated by three experts in the field of Teaching English as a Foreign Language (TEFL). Finally, the researcher carried out a pilot study with a group of 10 students at Walailak University so as to check the quality and efficiency of the instrument prior to the main study.

The second stage was the administration of the research instrument. The students were asked to take the academic verb collocation writing ability test concerning 18 academic verbs in the second trimester of academic year 2009 (at the beginning of October 2009).

The final stage was the analysis of the research instrument. After the main study, 22 test papers from a total of 155 were selected by using the systematic random sampling method and scored by two raters, the researcher and another rater, to check the inter-rater reliability of the scoring. After that, the researcher analyzed all test papers by using descriptive statistics, one-way analysis of variance (one-way ANOVA), and Pearson's Product-Moment Correlation Coefficient.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



*Figure 3.1.* Presentation of research procedures.

### **Context of the Study**

The main study was conducted at Walailak University (WU), an autonomous university, located in Thasala District, Nakhon Si Thammarat Province, Thailand. The academic year is divided into three trimesters – three months or 12 weeks each. The first trimester starts from the beginning of June to the end of August; the second trimester begins from the middle of September to the middle of December; and the third trimester starts from the beginning of January to the end of March. The university is organized into 11 Schools including School of Liberal Arts. The School of Liberal Arts offers three Bachelor of Arts programs in English, Regional Studies, and Chinese, and three Master of Arts programs in Cultural Studies, Teaching English as a Foreign Language (TEFL), and Southeast Asian Studies.

### **Population and Participants**

The population for this study was undergraduate English-major students at Walailak University. The majority of students are females, with a small number of males. Most of them came from southern provinces of Thailand such as Surat Thani, Nakhon Si Thammarat, and Songkhla.

The participants were 155 students who were studying in the English program in the second trimester of academic year 2009. Of these 155 students, 72 were the second year; 83 were the third year. Owing to the assumption of the study, the reason they were chosen was that they had registered and passed three required foundation English courses: ENG-101 English Foundations, ENG-102 English for Applications, and ENG-104 English Communication in Social Sciences. It was assumed that they had adequate, fundamental knowledge of the English language and were ready to take the academic

verb collocation writing ability test administered in the study. Therefore, first-year students were excluded from the study because they did not pass the criterion mentioned above. Unfortunately, fourth-year students could not participate in the study because they had to enroll in ENG-491 Cooperative Education course and work as full-time staff members of the workplaces related to the program of study for the whole trimester.

### **Classification of Students**

To compare differences in the students' production of academic verb collocations and to find out the relationship between the use of academic verb collocations and writing ability of the students, all students participating in the study were classified into three groups based on their average grades in the three required foundation English courses. Students who got the average grades of 3.01 and above were grouped into the *high English language ability*. Students who got the average grades between 2.51 and 3.00 were grouped into the *moderate English language ability*. Those who obtained the average grades of 2.50 and below were grouped into the *low English language ability*.

As a result, 42 students (27.10%) were classified in the high English language ability; 70 (45.16%) were grouped in the moderate English language ability; and 43 (27.74%) were grouped in the low English language ability (see Table 3.1).

Table 3.1

*Number of Students in Each Group*

Group of students	Grades	Number of students	Percentage (%)
High English language ability	3.01-4.00	42	27.10%
Moderate English language ability	2.51-3.00	70	45.16%
Low English language ability	0.00-2.50	43	27.74%
Total		155	100 %

**Research Instrument**

In order to examine academic verb collocation problems of undergraduate English-major students at Walailak University, to compare differences in the production of academic verb collocations of the 18 academic verbs among three groups of students, and to find out the relationship between the use of academic verb collocations and writing ability of the students, the researcher used the academic verb collocation writing ability test as the main research instrument in the study. In this part, details about the selection of words used to design the test, and the construction and validation of the test are discussed.

**Selection of Words**

All the words used in this study were selected from Coxhead's (1998) the Academic Word List (AWL). The selection for vocabulary was done in the following steps.

First of all, with the assistance of Longman Dictionary of Contemporary English (LDOCE) (2009), the researcher carefully checked the part of speech of every word from the 10 sublists on the AWL, and then listed all verbs only in the base form. At this stage, the researcher found 389 verbs (see Appendix A).

Second, consulting LDOCE for reference, the researcher double-checked word frequency of the 389 verbs to see whether or not the word was one of the 1000 most common words, with particular regard to written English. Therefore, based on the information from LDOCE, any word which was not one of the 1000 most common words used in written English was eliminated from the study.

After comparing a number of commercial dictionaries, the researcher decided to use LDOCE as the main reference because it is the only advanced learners' dictionary that distinguishes between written and spoken frequency, helping the researcher select words for the test easily. *W1*, *W2*, and *W3* mean that the word is one of the 1000, 2000, and 3000 most frequent words used in written English, while *S1*, *S2*, and *S3* mean that the word is one of the 1000, 2000, and 3000 most frequent words used in spoken English. Furthermore, words which have more than one part of speech are presented separately along with the frequency of each part of speech, helping the researcher check the frequency only for words functioning as verbs more quickly (see Figure 3.2). Therefore, it is appropriate to select LDOCE as the main referent tool for checking word frequency of the verb on the AWL.

Finally, the researcher selected the top 18 academic verbs in the list of LDOCE's 1,000 most frequent words in written English, which were (1) achieve, (2) affect, (3) assume, (4) create, (5) design, (6) enable, (7) ensure, (8) establish, (9) identify, (10) indicate, (11) involve, (12) maintain, (13) occur, (14) publish, (15) remove, (16) require,

(17) reveal, and (18) seek. All of the 18 verbs were the basis of the academic verb collocation writing ability test administered in the study (see Appendix B).

AC = words from the Academic Word List 13 acid

a crime and that they must go to court: *She was charged with murder.*  
**indict** AmE law to officially accuse someone of a crime so that they will be judged in court under the American legal system: *He was indicted on charges of fraud.*

**ac-cused** /ə'kjuzd/ n the **accused** [singular or plural] the person or group of people who have been officially

Different parts of speech are presented separately.

**ac-cus-tom** /ə'kʌstəm/ v [T] to make yourself or another person become used to a situation or place: **accustom yourself to sth** *It took a while for me to accustom myself to all the new rules and regulations.*

**ac-cus-tomed** /ə'kʌstəmd/ adj 1 **be accustomed to (doing) sth** to be familiar with something and accept it as normal: *We were accustomed to working together.* | **become/grow/get accustomed to sth** *Her eyes quickly became accustomed to the dark.*

**REGISTER**  
 In everyday English, people usually say **be used to** instead of **be accustomed to**, and **get used to** instead of **get/become accustomed to**: *She's used to working with children.* | *It's hard at first, but you'll get used to it.*

Top 2000 words in spoken and top 1000 words in written English

**ache**<sup>1</sup> /eɪk/ v [I] 1 if part of your body aches, you feel a continuous, but not very sharp pain there **[SYN] hurt**: *His feet were aching from standing so long.* **THESAURUS** → HURT

**REGISTER**  
 In everyday English, people usually say they have a **headache**, **have (a) backache**, **have (a) stomach ache**, or **have (a) toothache** rather than saying that their **head, back, etc aches**: *My head aches terribly.* → *I have a terrible headache.*

2 to want to do or have something very much: **[+for]** *I'm aching for sleep.* | **ache to do sth** *He ached to reach out and hold her close.* 3 to have a strong unhappy feeling: **[+with]** *Sarah ached with sadness that her brother was so ill.* | *Tim's heart was aching for her.*

**ache**<sup>2</sup> n [C] 1 a continuous pain that is not sharp or very strong: *a stomach ache* | *A dull ache throbbed at the back of David's head.* | **aches and pains** (=slight feelings of pain that are not considered to be serious) *Apart from the usual aches and pains, she felt all right.* **THESAURUS** → PAIN 2 a strong, mostly unhappy, feeling: *the ache of his loneliness* — **achy** adj: *I'm feeling tired and achy.*

**a-chieve** **S2 W1 AC** /ə'tʃi:v/ v  
 1 [T] to successfully complete something or get a good result, especially by working hard: *Frances achieved very good exam results.* | *Wilson has achieved considerable success as an artist.* | *She eventually achieved her goal of becoming a professor.* **THESAURUS** → SUCCEED

**REGISTER**  
 In everyday English, people usually say someone **gets** a result rather than **achieves** it: *He got good grades in his final exams.*

2 [I] to be successful in a particular kind of job or activity: *We want all our students to achieve within their chosen profession.* — **achievable** adj

**a-chieve-ment** **S3 W2 AC** /ə'tʃi:vmənt/ n  
 1 [C] something important that you succeed in doing by your own efforts: **[+of]** *We try to celebrate the achievements of our students.* | *His great achievement is to make all the players into a united team.* | **sb's achievement in (doing) sth** *The test measures children's achievements in reading, spelling, and maths.*  
 2 [U] when you achieve something or when people achieve something: *Roberts is researching the effect of social class on educational achievement.* | *As we climbed the final few metres, we felt a sense of achievement.*

Figure 3.2. Samples of word frequency in LDOCE.

For a clear picture, Figure 3.3 illustrates the process of word selection.

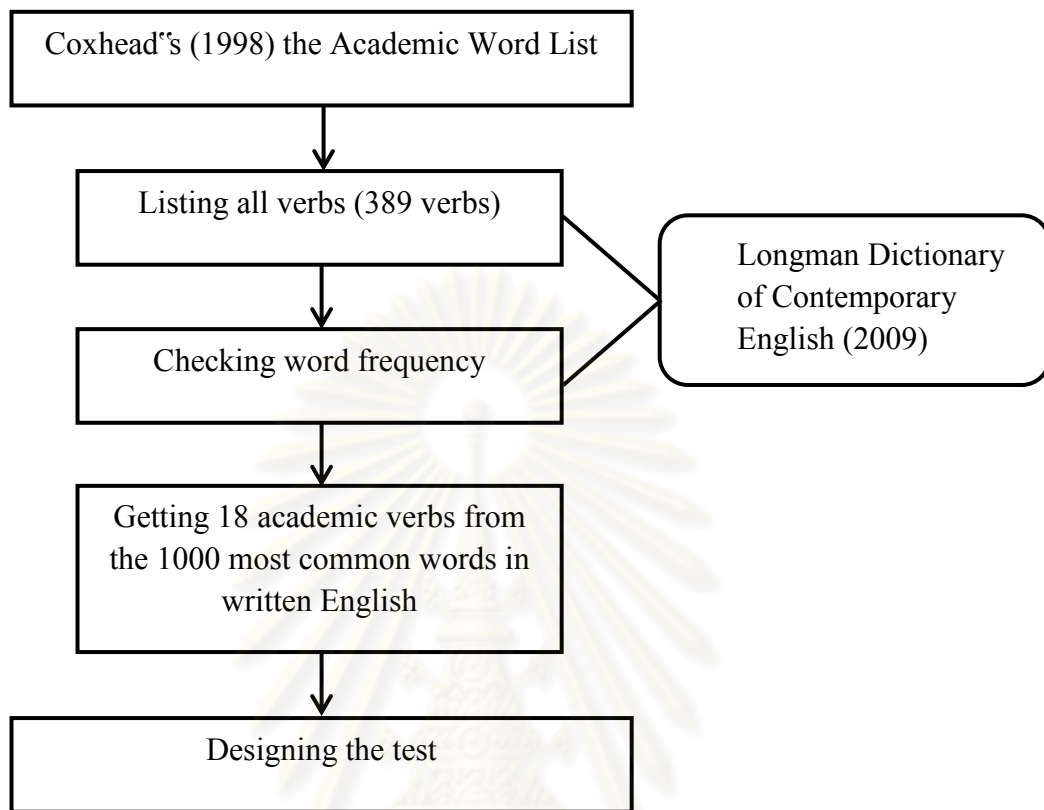


Figure 3.3. Process of word selection.

### Academic Verb Collocation Writing Ability Test and Test Development

The academic verb collocation writing ability test designed and developed by the researcher was used as the main research instrument in the present study. The researcher designed the test based on the following objectives.

1. To explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of the participants.
2. To compare differences in the use of academic verb collocations among three groups of participants.



3. To examine the relationship between the use of academic verb collocations and writing ability among three groups of participants.

The academic verb collocation writing ability test consisted of two main sections: sentence building and writing tasks. The details of the test are described as follows.

#### *1. Sentence building*

The first section, *sentence building*, was designed to measure participants' knowledge of academic verb collocations of the top 18 most frequent academic verbs at the sentence level. The researcher designed this section of the test based on relevant theories on how to assess learners' collocation knowledge and ability from previous work in the literature. After comparing different types of collocation writing tasks, the researcher decided to use the sentence building task adapted from Kaur and Hegelheimer's (2005) study. The rationale for using only this task was that the participants could demonstrate their understanding of the meaning and collocation of the 18 academic verbs, as well as their productive writing skills, while the other tasks are designed to measure participants' specific collocation knowledge (e.g., verb-adverb, adverb-adjective, and verb-noun collocations) or to check whether the students know the meaning of particular words. Moreover, using authentic production such as participants' essays seemed to be difficult for the researcher to explore the types and sources of verb collocation problems because the participants might not use the 18 target words in their production.

The first section consisted of 18 items, with three points for each item. Therefore, it had an overall score of 54 points. The participants were asked to write a complete *correct* sentence in a space provided below each verb.

## 2. *Writing tasks*

The second section, *writing tasks*, was designed to measure participants' ability to write in English and to study the relationship between participants' use of academic verb collocations in the sentence building section and their writing ability in this section. To design the writing tasks, the researcher began by studying the course descriptions, including the course syllabuses and expected learning outcomes of the three required foundation courses. Moreover, the researcher consulted course developers for more specific information about these three courses. After that, three writing tasks were chosen based on their relation to what participants had learned in the three courses. The reason for having different types of writing tasks was to "minimize the difference between participants' learning preferences" (Kaur and Hegelheimer, 2005: 293). Table 3.2 presents the course description of the three required courses.

Table 3.2

### *Course Descriptions of Three Required Courses*

Course	Course Description
ENG-101 English Foundations	Study and review of everyday English-listening, speaking, reading and writing using entertaining teaching and learning approaches aiming for the application in real situations

Table 3.2 (continued)

Course	Course Description
ENG-102 English for Applications	A basic college English course with an aim to further develop four essential skills – listening, speaking, reading and writing; training in the use of resources towards improving abilities necessary for communicative purposes based on selected theme-based materials; preparation for authentic academic discourse, with grammar and vocabulary development exercises
ENG-104 English Communication in Social Sciences	A foundation course with an aim to consolidate the four skills in English in the application of lexis and structural forms to the themes commonly raised in social sciences; development of essential English vocabulary through discussion of issues arising from selected texts and written practice

The writing tasks section consisted of three parts: email, storytelling, and essay. In the first part, *email*, the participants were asked to write an email to a teacher on an assigned situation. In the second part, *storytelling*, the participants were asked to write a narrative based on the given illustrations. In the third part, *essay*, they were asked to write an essay containing 150-200 words on an assigned topic. The total score of each task was 18 points, with three points given to six areas as follows:

1. Relevance and adequacy of content
2. Compositional organization

3. Cohesion
4. Adequacy of vocabulary for purpose
5. Grammar
6. Mechanical accuracy (punctuation and spelling).

Therefore, the total scores for all three tasks in the writing tasks section were 54 points.

In short, there were 21 test items in the academic verb collocation writing ability test, with a total score of 108 (see Appendix C).

The details of test sections, number of test items, scoring of the test, and time allowed for each section are demonstrated in Table 3.3.

Table 3.3

*Details of Academic Verb Collocation Writing Ability Test*

Section	Title	Number of items	Scores	Time (minutes)
1	Sentence building	18	54	60
2	Writing tasks			
	• Email	1	18	30
	• Storytelling	1	18	30
	• Essay	1	18	40
	Total	21	108	160

## Scoring Rubrics

The academic verb collocation writing ability test was scored by using two scoring rubrics because of the different types of test formats (see Appendix D). In the sentence building section, the researcher evaluated the participants' production of academic verb collocations of the 18 academic verbs by using a primary trait scoring rubric. The primary trait scoring rubric was chosen because it is appropriate for measuring specific writing skills of the participants (Cohen, 1994; Weigle, 2002). As far as the research in collocations was concerned, this study might be the first which examined the verb collocation problems of the 18 academic verbs by using the sentence building task, and there might be no scoring rubric suitable for this study. Therefore, the researcher had to base the rubrics on Jacobs et al.'s (1981) and O'Malley and Pierce's (1996) as the model and then developed it by himself.

In the writing tasks section, the researcher evaluated the participants' writing ability by using the analytic scoring rubric adapted from Weir's (1990) the Test in English for Educational Purposes (TEFP) attribute writing scales. This scoring rubric consisted of six aspects to be scored as follows:

1. Relevance and adequacy of content
2. Compositional organization
3. Cohesion
4. Adequacy of vocabulary for purpose
5. Grammar
6. Mechanical accuracy (punctuation and spelling).

Each aspect was divided into four levels ranging from 0 to 3. Details about each level of the six aspects are presented in Appendix D.

### **Validation of the Test**

Using the Index of Congruency (IOC) adapted from Lerdejdech (2007) and Phochanapan (2007), the content validity of the test items was validated by three experts in the field of Teaching English as a Foreign Language (TEFL) in July 2009. (See the list of experts in Appendix E). The criteria for choosing the experts were their experience in teaching English writing and their understanding of collocation instruction. The experts were requested to give their opinions on five aspects to be rated in the IOC as follows:

1. Consistency with the objectives of the study
2. Appropriateness of the test format
3. Clarity of the directions
4. Appropriateness of time
5. Appropriateness of the scoring

The IOC consisted of two parts, a checklist for validating the test items and a written comment (see Appendix F). It was evaluated according to the following criteria:

+1 means the topic is appropriate.

0 means not sure.

1 means the topic is inappropriate.

The mean score on the IOC could be interpreted into two ways, with higher than or equal to 0.5 considered appropriate for the level of the participants and the theme, and

with less than 0.5 considered inappropriate for the level of the participants and the theme (Lerdejdecha, 2007; Phochanapan, 2007).

According to the experts' validation, Table 3.4 presented below was the result of the content validity of the test obtained from the three experts.

Table 3.4

*Results of Experts' Evaluation*

Category	Mean ( $\bar{X}$ )			
	Sentence building	Email	Storytelling	Essay
1. Consistency with research objectives	0.00	0.33	0.33	0.33
2. Appropriateness of test format	-0.33	0.66	0.66	0.66
3. Clarity of directions	0.00	0.66	0.66	0.66
4. Appropriateness of time	0.00	0.66	0.33	0.33
5. Appropriateness of scoring	0.00	0.33	0.33	0.33

In addition to rating the overall test, the experts provided very useful comments on each test item as the following:

*1. Sentence building*

- Regarding the appropriateness of the test format, all experts agreed that the test format was quite difficult for students to demonstrate their background knowledge of academic verb collocations. One expert suggested that the number of words should be reduced from 2,000 most frequent words including speaking and writing if the researcher intended not to change the test format. Thus, the criterion for selecting words was to choose only the verbs in the list of Longman's 1000 most frequent words in writing.
- Regarding the directions, one expert mentioned that the directions were not clear and should be modified. This expert was concerned that some students would make sentences containing noun collocations instead of verb collocations, especially the words that had more than one part of speech. The directions, therefore, were changed from „Make a complete sentence with the given words in the space provided“ to „Make a complete sentence with the given VERBS in the space provided.“
- One expert stated that the examples of sentences provided were not sufficient for students to use as guideline for making sentences, and then suggested that the researcher provide more examples. Thus, the researcher added more examples of sentences according to the suggestion.
- Two experts recommended that the researcher add more time for this section. They were concerned that students in the low English proficiency



group could not finish in time because of the nature of the test format. Therefore, the time allowed for this section was changed from 50 minutes to 60 minutes.

## 2. *Email, storytelling, and essay*

- Regarding the appropriateness of the scoring, one expert mentioned that the original version of the analytic scoring rubric used to evaluate students' writing seemed to cover all aspects, but weighed too much on mechanics (i.e., punctuation and spelling were separated into two aspects). Consequently, the mechanics were grouped into one aspect.
- One expert stated that asking students to write an essay containing 200-300 words was not appropriate for the level of students, so the researcher reduced the number of words to 150-200 words instead.
- Regarding the appropriateness of time allowed for the essay section, one expert suggested that the researcher reduce the time. This expert mentioned that giving too much time for a student to write an essay was not appropriate because the student who wrote a long essay might not be proficient in the language but instead he or she had time to write. Thus, the time allowed for this section was changed from 50 minutes to 40 minutes.

## 3. *Other comments*

- One expert suggested that the researcher provide English and Thai directions in every part of the test because students who were not good at

English might misunderstand what they were asked to do. The researcher, therefore, modified the directions accordingly.

- Since this study focused on studying the types and sources of academic verb collocation problems of the 18 verbs, one expert suggested that the researcher provide description of what collocation patterns of 18 academic verbs were possible, including description of sources of collocation errors for reference. Thus, the researcher provided the list of collocation patterns of 18 academic verbs as shown in Appendix G, and the list of sources of collocation errors as shown in Appendix H according to the suggestions.

After the researcher revised the preliminary version of the test based on the experts' professional judgments, the revised test was used to conduct a pilot study.

### **The Pilot Study**

After the modification of the instrument based on the three experts' judgments, the researcher piloted the instrument with a group of 10 students majoring in Regional Studies at Walailak University at the end of September 2009, in the second trimester of academic year 2009, so as to check the quality and efficiency of the test, and the amount of time the students complete the test, as well as to assess problems or difficulties which might arise during the main study. All students had registered and passed three required foundation English courses, so it implied that they had similar English ability to that of participants.

From the pilot study, the researcher found that giving students pieces of additional paper to draft their writing was not a good way to do a writing test because when they wrote the rough draft, they could not finish their writing in time, and most of them tended

not to use the paper provided. Therefore, one of the rules for test takers was changed from „Read all questions carefully and write your draft in the additional paper provided“ to „Read all questions carefully.“

### **Inter-rater Reliability Check**

To check the reliability of the scoring, the researcher and inter-rater graded the academic verb collocation writing ability test by using an evaluation form for checking inter-rater reliability of the scoring (see Appendix I). The inter-rater was a native speaker of English and had eight years of teaching English at Walailak University. Using the systematic random sampling method, 22 out of 155 test papers were selected and scored by the two raters. After that, the mean scores from the two raters were compared by using Cronbach’s Alpha Coefficient. The result was 0.94 calculated by the SPSS program. The result of Cronbach’s Alpha indicated that the reliability level was higher than 0.7 which was considered high. Thus, it is apparent that the scoring was reliable.

For a clear picture, the process of test construction and validation is presented in Figure 3.4.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

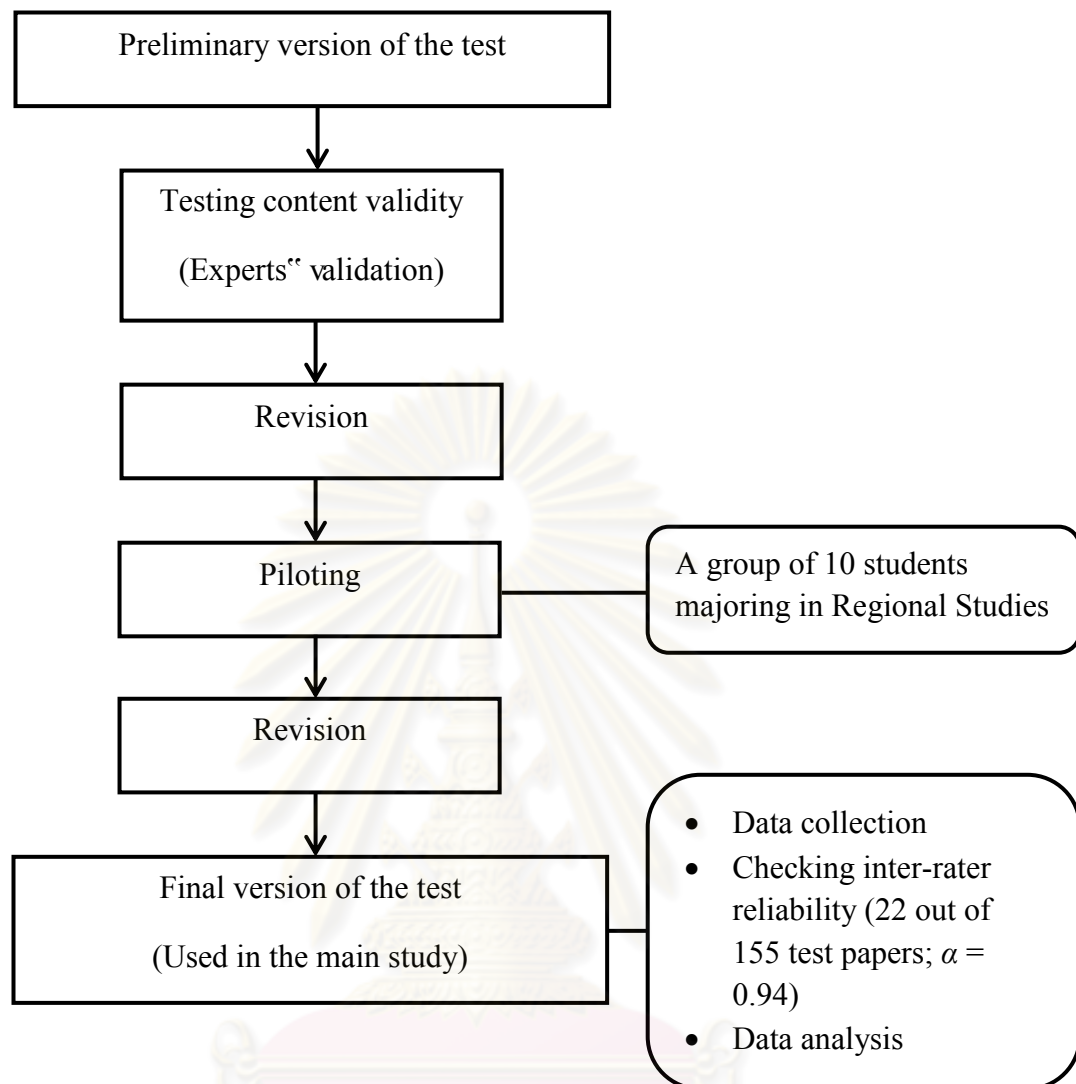


Figure 3.4. Process of test construction and validation.

### Data Collection

The data were collected by using the research instrument described in the previous section for the purpose of exploring the academic verb collocation problems of 18 verbs of undergraduate students majoring in English at Walailak University, comparing differences in the production of academic verb collocations among three groups of students, as well as finding out the relationship between the use of academic verb collocations and writing ability of the students.

The researcher collected the data one week after conducting the pilot study (at the beginning of October 2009) at Walailak University. The students participating in the study were asked to take the academic verb collocation writing ability test for 2 hours and 40 minutes.

### **Data Analysis**

Data analysis was explained in detail according to the three research questions proposed in the present study. The researcher analyzed and interpreted all of the collected data as follows.

#### **Data Analysis for Research Question 1**

*Research question 1: What are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University?*

1. The researcher typed the raw data obtained from the sentence building section in a computer database by using Microsoft Office Excel 2010. The computer database consisted of the assigned number of participants, participants' groups, sentences written by the participants, types of collocation patterns, sources of collocation errors, earned scores, and additional notes.
2. The researcher analyzed the types and sources of collocation errors in the computer database by using the list of collocation patterns of 18 academic verbs according to the classification of collocation patterns adapted from Benson et al. (1986) (see Appendix G), the list of sources of collocation errors adapted from Liu (1999b) (see Appendix H), as well as the Oxford

Collocations Dictionary for Students of English (2002) as references to identified the students' collocation errors.

3. The results were calculated in terms of frequency and percentage, and were reported by using table presentation.

### **Data Analysis for Research Question 2**

*Research question 2: Are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability?*

1. The researcher evaluated every sentence in the sentence building section by using the primary trait scoring rubric shown in Appendix D.
2. All participants' achievement scores on the sentence building section of the test were put in the SPSS program, and were then calculated in terms of minimum, maximum, arithmetic mean, and standard deviation. After that, the researcher reported the results by using table presentation.
3. Using the SPSS program, a one-way analysis of variance (one-way ANOVA) was conducted so as to investigate whether there was a statistically significant difference in the mean scores on the sentence building section among three groups of participants. The results were then reported by using table presentation.

### **Data Analysis for Research Question 3**

*Research question 3: Is there any relationship between the use of academic verb collocations and writing ability among three groups of students?*

1. The researcher evaluated the writing tasks section by using the analytic scoring rubric presented in Appendix D.
2. All students' achievement scores on the writing tasks section of the test were put in the SPSS program, along with their scores on the sentence building section, and were then computed in terms of minimum, maximum, arithmetic mean, and standard deviation. After that, the researcher reported the results by using table presentation.
3. Using the SPSS program, Pearson's Product-Moment Correlation Coefficient was conducted to see whether or not the relationship between the use of academic verb collocations (the mean scores on the sentence building section) and writing ability (the mean scores on the writing tasks section) of the students was statistically significant. The results were then reported by using table presentation.

The connections between research questions, objectives, instrument, and data analysis are presented in Table 3.5.

Table 3.5

*Connections between Research Questions, Objectives, Instruments, and Data Analysis*

Research questions	Objectives	Instruments	Data analysis
1. What are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University?	1. To explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University.	<ul style="list-style-type: none"> <li>• Academic verb collocation writing ability test</li> <li>• Lists of collocation patterns and sources of collocation errors</li> <li>• Oxford Collocations Dictionary for Students of English (2002)</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> </ul>



Table 3.5 (continued)

Research questions	Objectives	Instruments	Data analysis
2. Are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability?	2. To compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability.	<ul style="list-style-type: none"> <li>Academic verb collocation</li> <li>writing ability test</li> <li>Primary trait scoring rubric</li> </ul>	<ul style="list-style-type: none"> <li>Descriptive statistics</li> <li>One-way ANOVA (Using SPSS program)</li> </ul>
3. Is there any relationship between the use of academic verb collocations and writing ability among three groups of students?	3. To examine the relationship between the use of academic verb collocations and writing ability among three groups of students.	<ul style="list-style-type: none"> <li>Academic verb collocation</li> <li>writing ability test</li> <li>Analytic scoring rubric</li> </ul>	<ul style="list-style-type: none"> <li>Descriptive statistics</li> <li>Pearson's Product-Moment Correlation Coefficient (Using SPSS program)</li> </ul>

## CHAPTER IV

### RESEARCH FINDINGS

In this chapter, the researcher presents the research findings of the collected data in the same order as that of the three research questions. The first section probes into types and sources of collocation errors the participants produced. It concerns qualitative and quantitative analysis of data for the first research question. The second section reports the quantitative analysis of data for the second research question. The last section points out the relationship between the participants' use of academic verb collocations and writing ability. It concerns quantitative analysis of data for the third research question.

#### **Findings of Research Question 1**

*Research question 1: What are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University?*

*Hypothesis 1: Verb-noun collocation will be the most frequent type of errors, and negative transfer will be the most frequent source of errors of the students.*

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## General Findings

Table 4.1

### Correct Collocations and Collocation Problems

Category	Frequency	Percentage (%)
Correct collocations	573	20.54%
Collocation errors	1,423	51%
No and incomplete collocations presented	794	28.46%
Total	2,790	100%

The collected data were analyzed to explore the verb collocation errors of the 18 most frequent academic verbs the participants made in the sentence building section of the academic verb collocation writing ability test and to test the first hypothesis of this study. As presented in Table 4.1, from the total number of 2,790 sentences, the researcher found that the participants made 1,423 (51%) collocation errors in their writing. In addition, there were 794 (28.46%) sentences that the participants did not write, or they attempted to write something on the test papers but they stopped writing at last. Therefore, the total of 2,217 (79.46%) sentences was considered as collocation problems.

Table 4.2

## Collocation Problems of Each Academic Verb

Verb	Frequency		Total	Percentage (%)
	Collocation errors	No or incomplete collocations presented		
Achieve	99	46	145	6.54%
Affect	94	43	137	6.18%
Assume	93	52	145	6.54%
Create	68	20	88	3.97%
Design	32	14	46	2.07%
Enable	95	52	147	6.63%
Ensure	96	56	152	6.86%
Establish	60	69	129	5.82%
Identify	96	38	134	6.04%
Indicate	72	60	132	5.95%
Involve	92	54	146	6.58%
Maintain	69	60	129	5.82%
Occur	75	23	98	4.42%

Table 4.2 (continued)

Verb	Occurrences		Total	Percentage (%)
	Collocation errors	No or incomplete collocations		
Publish	67	58	125	5.64%
Remove	97	9	106	4.78%
Require	60	31	91	4.10%
Reveal	54	70	124	5.59%
Seek	104	39	143	6.45%
Total	1,423	794	2,217	100%

In order to specify the results, the total number of collocation errors of each academic verb is presented in Table 4.2. The findings revealed that the verb collocation errors of the word *ensure* occurred most frequently (6.86%) while the verb collocation errors of the word *design* occurred least frequently (2.07%).

## Types of Collocations Errors

From a total of 21 verb collocation patterns according to the modification version of the classification of collocations proposed by Benson et al. (1986), the students made 17 collocation error types which were the followings:

- *Lexical collocations*
  1. L1 (Verb + noun/pronoun) e.g., \*He *creates a new presentation*.
  2. L7 (Verb + adverbs) e.g., \*Many packages are made to *reveal easily*.
- *Grammatical collocations*
  3. G8 (B) (Verb + indirect object + to + direct object) e.g., \*My father *design home to his friend*.
  4. G8 (C) (Verb + indirect object + for + direct object/Verb + indirect object + direct object) e.g., \*My teacher *design a new teaching for her students next year*.
  5. G8 (D) (Verb + preposition + object/Verb + object + preposition + object) e.g., \*Smoking *affects to your health*.
  6. G8 (E) (Verb + to + infinitive) e.g., \*He *enable to swim*.
  7. G8 (F) (Verb + bare infinitive) e.g., \*I *enable enjoy with my friends*.
  8. G8 (G) (Verb + verb in -ing) e.g., \*She could *assume writing short stories*.
  9. G8 (H) (Verb + object + to + infinitive) e.g., \*They could *involve us to know that thing* clearly.
  10. G8 (I) (Verb + object + bare infinitive) e.g., \*University life *enable me grow up*.

11. G8 (J) (Verb + object + verb in -ing) e.g., \*We *maintain our product increasing*.
12. G8 (L) (Verb + (object) + that-clause) e.g., \*I *ensure that it's true*.
13. G8 (M) (Verb + object + to be + complement) e.g., \*She *assumes herself to be Mariah Carey*.
14. G8 (N) (Verb + object + complement) e.g., \*He *achieve himself all pleasures and luxuries*.
15. G8 (P) (Verb + (object) + adverbial) e.g., \*The party will *occur on Sunday*.
16. G8 (Q) (Verb + (object) + wh-clause/wh-phrase) e.g., \*The architecture *designs how to build my house*.
17. G8 (S) (Verb + complement) e.g., \*The flower *assume very beautiful*.

*Note.* In this study, even though some sentences like \*my teacher **design** a new teaching for her students next year and \*she **assumes** herself to be Mariah Carey contained errors due to the misuse of verbs, which was a lexical error, the researcher considered these sentences as grammatical collocation errors since the whole sentences were written by using the patterns of grammatical collocations.

Table 4.3

## Different Types of Collocation Errors

Type	Pattern	Frequency	Percentage (%)
1	L1	577	40.55%
2	L7	1	0.07%
3	G8 (B)	10	0.70%
4	G8 (C)	1	0.07%
5	G8 (D)	483	33.94%
6	G8 (E)	111	7.80%
7	G8 (F)	17	1.19%
8	G8 (G)	11	0.77%
9	G8 (H)	21	1.48%
10	G8 (I)	8	0.56%
11	G8 (J)	1	0.07%
12	G8 (L)	38	2.67%
13	G8 (M)	9	0.63%
14	G8 (N)	9	0.63%
15	G8 (P)	116	8.15%



Table 4.3 (continued)

Type	Pattern	Frequency	Percentage (%)
16	G8 (Q)	8	0.56%
17	G8 (S)	2	0.14%
Total		1,423	100%

As shown in Table 4.3, from the total number of 1,423 collocation errors based on types of patterns adapted from Benson et al. (1986), the error analysis revealed that the L1 collocation errors were the most noticeable errors (40.55%), and the G8 (D) errors were the second most noticeable errors (33.87%). On the other hand, the L7, G8 (C), and (J) collocation errors were the least noticeable errors in the participants' test papers (0.01%).

Table 4.4

## Lexical and Grammatical Collocation Errors

Category	Frequency	Percentage (%)
Lexical collocation errors	578	40.62%
Grammatical collocation errors	845	59.38%
Total	1,423	100%

As presented on Table 4.4, when combining the number of lexical and grammatical collocation errors together, the researcher found that the participants made more grammatical collocation errors (59.38%) than lexical collocation errors (59.38%).

### Sources of Collocation Errors

In order to gain a clearer understanding of why the participants made collocation errors, the researcher also needed to investigate the sources of collocation errors. The findings revealed that all of the errors were based on seven sources of collocation errors adapted from Liu (1999b). The modification version is shown in Table 4.5.

Table 4.5

Sources of Collocation Errors in the Present Study

Strategies	Category	Sources of errors
Cognitive strategies	Intralingual transfer	<ul style="list-style-type: none"> <li>• False concept hypothesized</li> <li>• Ignorance of rule restrictions</li> <li>• Overgeneralization</li> <li>• Use of synonyms</li> </ul>
	Interlingual transfer	<ul style="list-style-type: none"> <li>• Negative transfer</li> </ul>
Communication strategies	Paraphrase	<ul style="list-style-type: none"> <li>• Approximation</li> </ul>
Others		<ul style="list-style-type: none"> <li>• No or incomplete collocations presented</li> </ul>

### 1. False concept hypothesized

False concept hypothesized refers to students' faulty comprehension of distinctions in the target language (Li, 2005). In this study, students misunderstood the meaning of *achieve* because they thought that it has the same meaning with *gain*, *get*, and *receive*. For example, according to Adrian-Vallance et al. (2009: 13), *achieve* means "to successfully complete something or get a good result" while *get* means to receive or obtain something. Therefore, they made collocation errors like *\*achieves an experience* instead of *has/gains/gets experience*, and *\*achieve this email* instead of *get/receive this email* (see Table 4.6).

Table 4.6

Samples of Collocation Errors Resulting from False Concept Hypothesized

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>*Thailand <i>achieve income</i> from export product to America.</li> </ul>	<ul style="list-style-type: none"> <li>Thailand <i>has/receives/earns an income</i> from exporting products to America.</li> </ul>
<ul style="list-style-type: none"> <li>*My son <i>achieves an experience</i> from working and travelling in America.</li> </ul>	<ul style="list-style-type: none"> <li>My son <i>has/gains/gets experience</i> from working and travelling in America.</li> </ul>
<ul style="list-style-type: none"> <li>*I <i>achieve this email</i> from my friend last night.</li> </ul>	<ul style="list-style-type: none"> <li>I <i>got/received this email</i> from my friend last night.</li> </ul>

## 2. Ignorance of rule restrictions

Ignorance of rule restrictions refers to “analogy and failure to observe the restrictions of existing structures” (Richards, 1973, as cited in Li, 2005: 25). Liu (1999a) mentioned that some students did not realize that some collocation restrictions were based on the meaning of the word and range; others did not take grammar to consideration. For example, such errors as *\*affect with people* instead of *affect people*, and *\*identify of a dead person* instead of *identify a dead body* were a false analogy of the construction of verb + preposition + object. Besides, *\*designs home to his friend* instead of *designs a house for his friend* was a false analogy of the construction of verb + indirect object + to + direct object. *\*enables to connect the Internet* instead of *enables (somebody) to connect the Internet* was a false analogy of verb + to + infinitive (see Table 4.7).

Table 4.7

Samples of Collocation Errors Resulting from Ignorance of Rule Restrictions

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li><i>*My father design home to his friend.</i></li> </ul>	<ul style="list-style-type: none"> <li>My father <i>designs a house for his friend</i>. (=My father <i>designs his friends a house</i>.)</li> </ul>
<ul style="list-style-type: none"> <li><i>*Many problems in nowadays will affect with people in the future.</i></li> </ul>	<ul style="list-style-type: none"> <li>Many problems nowadays will <i>affect people</i> in the future.</li> </ul>

Table 4.7 (continued)

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>*The policeman can <i>identify of a dead person</i> in a few hours.</li> <li>*It <i>enables to connect the Internet</i>.</li> </ul>	<ul style="list-style-type: none"> <li>The policeman can <i>identify a dead body</i> in a few hours.</li> <li>It <i>enables (somebody) to connect the Internet</i>.</li> </ul>

### 3. Overgeneralization

Students used overgeneralization when the item did not carry any obvious contrast to them. In other words, “it generally involves the creation of a deviant structure on the basis of his experience of other structures in the target language” (Richards, 1973: 174, as cited in Li, 2005: 58). For example, a collocation error *\*require to buy something* was made instead of *want/need to buy something*. They probably knew the combinations of *want/need to do something* and *want/need/require somebody to do something*, but were unable to distinguish the two clearly (see Table 4.8).

Table 4.8

Samples of Collocation Errors Resulting from Overgeneralization

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>*He <i>enable to swim</i>.</li> <li>*I <i>require to buy something</i>.</li> </ul>	<ul style="list-style-type: none"> <li>He <i>is able to swim</i>.</li> <li>I <i>want/need to buy something</i>.</li> </ul>

#### 4. Use of synonyms

Students used synonyms to solve L2 lexical problems when they encounter the collocations that they were not able to bring out the right words (Liu, 2000b). It is taken as “a straightforward application of the open choice principle” (Farghal and Obiedat, 1995, as cited in Li, 2005: 25). In this study, participants made errors as shown in Table 4.9.

Table 4.9

Samples of Collocation Errors Resulting from the Use of Synonyms

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>• *I want to <i>achieve in my career</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• I want to <b>succeed</b> <i>in my career</i>.</li> </ul>
<ul style="list-style-type: none"> <li>• *I <i>enable enjoy with my friends</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• I <b>can</b> <i>enjoy with my friends</i>.</li> </ul>

#### 5. Negative transfer

Negative transfer or L1 interference means that students’ first language influences their production of collocations in the target language. In this study, some students tended to disregard the English verb „be” when they made the sentences in the passive voice in their written product. However, there seems to be no equivalent usage to encompass the above-mentioned function in the Thai language (e.g., \**this book has published for a long time*, instead of *this book has **been** published for a long time*). In addition, some students translated their thought from L1 to L2 directly to produce collocations (Liu, 1999a). For example, a collocation error \**affects to your health* (ส่งผลกระทบต่อสุขภาพ) and

\*design my life (ออกแบบชีวิต) was made because it was translated from L1 to L2 directly (see Table 4.10).

Table 4.10

## Samples of Collocation Errors Resulting from Negative Transfer

Collocation errors	Correct collocations
• * <i>The lamp designed by Jane.</i>	• <i>The lamp <b>is/was</b> designed by Jane.</i>
• * <i>This book has published for a long time.</i>	• <i>This book has <b>been</b> published for a long time.</i>
• * <i>I design my life by myself.</i>	• I <b>rule</b> my life by myself.
• * <i>Smoking affects <b>to</b> your health.</i>	• Smoking <i>affects your health.</i>

## 6. Approximation

Approximation means that students use a vocabulary item or structure, which students knows that it is incorrect, but which shares enough semantic features in common with the desired item to satisfy the speaker (Tarone, 1978). In other words, it is a process of paraphrasing their thought from L1 to L2. Students sometimes rely on their intuition to produce their own collocations and choose approximate translation as a strategy for producing collocations (Liu, 2000b). In addition, Li (2005) stated that some errors possibly occurred from the similarity of spelling and pronunciation between words. In this study, participants made errors as presented in Table 4.11.

Table 4.11

## Samples of Collocation Errors Resulting from Approximation

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>• *It <i>maintains 15 pieces per box</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• It <b><i>contains</i></b> 15 pieces per box.</li> </ul>
<ul style="list-style-type: none"> <li>• *While you stay in hospital, you can't <i>assume spicy food</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• While you stay in hospital, you can't <b><i>consume</i></b> spicy food.</li> </ul>
<ul style="list-style-type: none"> <li>• *Many packages are made to <i>reveal easily</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• Many packages are made to <b><i>be opened/resealed</i></b> easily.</li> </ul>
<ul style="list-style-type: none"> <li>• *I <i>ensure that it's true</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• I'm <b><i>sure</i></b> that it's true.</li> </ul>
<ul style="list-style-type: none"> <li>• *The architecture <i>designs how to build my house</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• The architect <b><i>decides</i></b> how to build my house.</li> </ul>

## 7. No or incomplete collocations presented

Many participants tended not to write any collocations of the main academic verbs provided. Moreover, many students attempted to write something in the test paper, but they were unable to continue because of language difficulties. Table 4.12 presents examples of errors resulting from no or incomplete collocations presented.



Table 4.12

Samples of Collocation Errors Resulting from No or Incomplete Collocations Presented

Collocation errors	Correct collocations
<ul style="list-style-type: none"> <li>• *<i>Occur</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The explosion occurred at 5.30 a.m.</i></li> </ul>
<ul style="list-style-type: none"> <li>• *<i>He established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>He established his company in 1999.</i></li> </ul>

Table 4.13

Sources of Collocation Errors

Sources of collocation errors	Frequency	Percentages (%)
1. False concept hypothesized	69	3.11%
2. Ignorance of rule restrictions	208	9.38%
3. Overgeneralization	47	2.12%
4. Use of synonyms	170	7.67%
5. Negative transfer	94	4.24%
6. Approximation	835	37.66%
7. No or incomplete collocations presented	794	35.82%
Total	2,217	100%

From Table 4.13, the results revealed that approximation was the biggest source of collocation errors (37.66%). No or incomplete collocations presented was the second biggest source of errors (35.82%). On the other hand, overgeneralization (2.12%) was the smallest source of collocation errors.

In conclusion, the error analysis revealed that the verb-noun collocation (L1) was the most frequent type of collocation errors, and approximation was the most frequent source of collocation errors made by the students. Therefore, the results reject the first hypothesis that “verb-noun collocation will be the most frequent type of errors, and negative transfer will be the most frequent source of errors of the students”.

### **Findings of Research Question 2**

*Research question 2: Are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability?*

*Hypothesis 2: Students in the high English language ability group will gain significantly higher average scores on the sentence building section of the academic verb collocation writing ability test than students in the rest two groups at the significant level of .05.*

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

Table 4.14

## Total Scores of the Sentence Building Section

Group of students	<i>N</i>	Min	Max	$\bar{X}$	S.D.
High English language ability	42	6	34	21.79	7.24
Moderate English language ability	70	2	31	16.33	6.74
Low English language ability	43	0	32	12.72	7.51

Table 4.14 presents the means and standard deviation of the participants in the three groups. The results showed that the means of the high English language ability group was 21.79, with the standard deviation of 7.24. The means of the moderate English language ability group was 16.33, with the standard deviation of 6.74 while the mean of the low English language ability group was 12.72, with the standard deviation of 7.51. Therefore, it is obvious that the high English language ability group gained the higher average scores on the sentence building task of the test than the other two groups.

To test the hypothesis, a one-way analysis of variance (one-way ANOVA) was conducted by the SPSS program to investigate the significant differences between the scores. When conducting a one-way ANOVA, the assumption of the test of homogeneity of variances needed to be met (i.e., that homogeneity of the differences between samples groups).

Table 4.15

## The Result of the Test of Homogeneity of Variances

Levene Statistics	df1	df2	<i>p</i> value
.457	2	152	.634

From Table 4.15, the *p* value was more than .05 ( $p = 0.634$ ). This means that the assumption of the test of homogeneity of variances was assumed. This made the use of a one-way ANOVA possible because the assumption was not violated.

Table 4.16

## The Result of One-Way ANOVA

Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i> value
Between groups	1775.02	2	887.51	17.59	.000*
Within groups	7669.16	152	50.45		
Total	9444.19	154			

\* $p < .05$

As shown in Table 4.16, the result of the one-way ANOVA revealed that the students in the high English language ability group gained significantly higher average scores on the sentence building section of the test than those in the other two groups at the significant level of .05. Therefore, the result accepted the second hypothesis that “students in the high English language ability group will gain significantly higher average

scores on the sentence building section of the academic verb collocation writing ability test than students in the other two groups at the significant level of .05”.

### Findings of Research Question 3

*Research question 3: Is there any relationship between the use of academic verb collocations and writing ability among three groups of students?*

*Hypothesis 3: There will be a strong relationship between the use of academic verb collocations and writing ability of the students at the significant level of .05.*

Table 4.17

Scores of the Email Task

Group of students	<i>N</i>	Min	Max	$\bar{X}$	S.D.
High English language ability	42	0	16	12.21	2.84
Moderate English language ability	70	4	16	10.41	2.31
Low English language ability	43	0	11	7.56	3.29

Table 4.17 presents the means and standard deviation of the email task of the participants in the three groups. The results showed that the means of the high English language ability group was 12.21, with the standard deviation of 2.84. The means of the moderate English language ability group was 10.41, with the standard deviation of 2.31, while the means of the low English language ability group was 7.56, with the standard deviation of 3.29. Therefore, students in the high English language ability group gained higher average scores on the email task than the other two groups.

Table 4.18

## Scores of the Storytelling Task

Group of students	<i>N</i>	Min	Max	$\bar{X}$	S.D.
High English language ability	42	7	16	11.81	2.42
Moderate English language ability	70	2	16	9.19	2.83
Low English language ability	43	0	11	5.84	3.33

Table 4.18 shows the means and standard deviation of the storytelling task of the participants in the three groups. The results showed that the means of the high English language ability group was 11.81, with the standard deviation of 2.42. The means of the moderate English language ability group was 9.19, with the standard deviation of 2.83, while the means of the low English language ability group was 5.84, with the standard deviation of 3.33. Therefore, students in the high English language ability group gained higher average scores on the storytelling task than the other two groups.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

Table 4.19

## Scores of the Essay Task

Group of students	<i>N</i>	Min	Max	$\bar{X}$	S.D.
High English language ability	42	0	17	11.24	3.01
Moderate English language ability	70	0	17	8.64	2.84
Low English language ability	43	0	10	6.07	3.06

Table 4.19 shows the means and standard deviation of the storytelling task of the participants in the three groups. The results showed that the means of the high English language ability group was 11.24, with the standard deviation of 3.01. The means of the moderate English language ability group was 8.64, with the standard deviation of 2.84, while the means of the low English language ability group was 6.07, with the standard deviation of 3.06. Therefore, students in the high English language ability group gained higher average scores on the essay task than the other two groups.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

Table 4.20

## Total Scores of the Writing Tasks Section

Group of students	<i>N</i>	Min	Max	$\bar{X}$	S.D.
High English language ability	42	16	48	35.26	6.45
Moderate English language ability	70	9	47	28.39	6.82
Low English language ability	43	6	30	19.47	7.56

Table 4.20 presents the means and standard deviation of the writing tasks section of the participants in the three groups. The results showed that the means of the high English language ability group was 35.26, with the standard deviation of 6.45. The means of the moderate English language ability group was 28.39, with the standard deviation of 6.82, while the means of the low English language ability group was 19.47, with the standard deviation of 7.56. Therefore, it is obvious that the high English language ability group gained higher average scores on the writing tasks section of the test than the other two groups.

Using the SPSS program, Pearson's Product-Moment Correlation Coefficient was conducted to see whether or not the relationship between the use of academic verb collocations (the means on the sentence building section) and writing ability (the means on the writing tasks section) of the students is statistically significant. The results are shown in Table 4.20.



Table 4.21

The Result of Pearson's Product-Moment Correlation Coefficient

		Sentence building	Writing tasks
Sentence building	Pearson Correlation	1	.668
	Sig. (2-tailed)		.00*
	N	155	155
Writing tasks	Pearson Correlation	.668	1
	Sig. (2-tailed)	.00*	
	N	155	155

\* $p < .05$ 

From Table 4.21, the result of Pearson's Product-Moment Correlation Coefficient showed a moderate-level relationship between the students' use of academic verb collocations and their writing ability at the significant level of .05 ( $r = .668$ ;  $p = .00$ ). Therefore, the third research hypothesis which stated that "there will be a strong relationship between the use of academic verb collocations and writing ability of the students at the significant level of .05" was rejected because the result was less than 0.7.

### Conclusion

Based on the research findings stated above, the results of the study can be summarized as follows:

1. The verb-noun collocation (L1) was the most frequent type of error, and approximation was the most frequent source of errors of the students.
2. Students in the high English language ability group gained significantly higher average scores on the sentence building section of the test than those in the other two groups at the significant level of .05.
3. There was a moderate-level relationship between the students' use of academic verb collocations and their writing ability at the significant level of .05.

The next chapter presents the discussions of research findings.



## CHAPTER V

### CONCLUSION AND DISCUSSION

This final chapter consists of four main sections. The first section begins with the summary of the study and research findings. The second section provides the discussion of the findings. The third section points out some pedagogical implications for English teachers. The last section ends with some suggestions for future research.

#### **Summary of the Study**

The objectives of this present study were (1) to explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University, (2) to compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability, and (3) to examine the relationship between the use of academic verb collocations and writing ability among three groups of students.

There were three research questions in this study as follows: (1) what are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University; (2) are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability; and (3) is there any relationship between the use of academic verb collocations and writing ability among three groups of students?

Additionally, the first research hypothesis was set to correspond to the first research question that verb-noun collocation would be the most frequent types of errors, and negative transfer would be the most frequent source of errors of the students. The second hypothesis was set to correspond to the second research question that students in the high English language ability group would gain significantly higher average scores on the sentence building section of the academic verb collocation writing ability test than students in the other two groups at the significant level of .05. The third hypothesis was set to correspond to the second research question that there would be a strong relationship between the use of academic verb collocations and writing ability of the students at the significant level of .05.

The participants of the study were 155 second- and third-year English majors who were studying at Walailak University in Nakhon Si Thammarat Province in the second trimester of academic year 2009. They were divided into three groups based on their average grades in the three required foundation English courses: ENG-101 English Foundations, ENG-102 English for Applications, and ENG-104 English Communication in Social Sciences. As a result, 42 students were in the high English language ability group, 70 were in the moderate English language ability group, and 43 were in the low English language ability group. The reason they were chosen was that they had learned and passed all of the three required courses and had adequate, fundamental knowledge of the English language to take the academic verb collocation writing ability test used in the study.

All of the 18 academic verbs on the Academic Word List (AWL) by Coxhead (1998) were selected based on their frequency shown in Longman Dictionary of Contemporary English (LDOCE) (2009). They were the top 18 most frequent academic

verbs in the list of 1,000 most frequent words in writing. LDOCE was chosen because it is the only advanced learners' dictionary that distinguishes between written and spoken frequency. Moreover, words which have more than one part of speech are presented separately along with the frequency of each part of speech. All of the 18 verbs were the basis of the academic verb collocation writing ability test, with particular regard to the sentence building section of the test.

The research instrument was the academic verb collocation writing ability test used as the writing ability test in the present study. The researcher designed and developed the research instrument based on theories and some examples of research instruments relevant to this area. The test was validated by three experts to check the content validity of the test items. After that, the pilot test was conducted with a group of 10 students majoring in Regional Studies, whose characteristics were similar to the participants, so as to check the quality and efficiency of the test, including the amount of time the students complete the test, and to assess problems or difficulties which might arise during the main study. The test was improved based on the experts' judgments and the pilot study, and then carried out in the main study.

The academic verb collocation writing ability test consisted of two main sections: sentence building and writing tasks. The sentence building section was designed to measure participants' knowledge of academic verb collocations of the top 18 most frequent academic verbs. It comprised of 18 items and was graded by using the primary trait scoring rubric developed from Jacobs et al. (1981) and O'Malley and Pierce (1996), with three points for each item. Thus, it had an overall score of 54 points. The writing tasks section was designed to measure participants' ability to write in English, as well as to study the relationship between the students' writing ability and their use of academic

verb collocations in the sentence building section. It comprised of three items: email, storytelling, and essay. It was graded by using the analytic scoring rubric adapted from Weir (1990). The total score of each task was 18 points, with three points given to six aspects: (1) relevance and adequacy of content, (2) compositional organization, (3) cohesion, (4) adequacy of vocabulary for purpose, (5) grammar, and (6) mechanical accuracy. Thus, the total scores for all three tasks were 54 points. In sum, there were 21 test items in the academic verb collocation writing ability test, with a total score of 108.

In order to answer the first research question, “What are the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University?”, the data obtained from the sentence building of the test were analyzed in terms of frequency and percentage to investigate the types and most frequent types, and the sources and most frequent source of collocation errors the students made in their writing. In order to answer the second research question, “Are there any differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability?”, the collected data from the sentence building were analyzed by using one-way ANOVA in the SPSS program to compare the differences of the mean scores of the students in the three groups. In order to answer the third research question, “Is there any relationship between the use of academic verb collocations and writing ability among three groups of students?”, the mean scores from the sentence building and writing tasks sections of the test were compared by using the Pearson’s Product-Moment Correlation Coefficient in the SPSS program to find out the correlation between the students’ use of academic verb collocations and their writing ability.

In addition, using the Cronbach's Alpha Coefficient calculated by the SPSS program, 22 test papers from the total of 155 were systematically selected to check inter-rater reliability. The inter-rater reliability was used to find reliability of grading students' writing in the test. The result revealed that the correlation between the researcher and another rater was 0.94 which implied that grading the students' writing from the two raters was consistent at the high level.

Regarding to the findings of the study, the researcher found the followings.

1. The verb-noun collocation (L1) was the most frequent type of error, and approximation was the most frequent source of errors of the students.
2. Students in the high English language ability group gained significantly higher average scores on the sentence building section of the test than those in the other two groups at the significant level of .05.
3. There was a moderate-level relationship between the students' use of academic verb collocations and their writing ability at the significant level of .05.

## **Discussion**

The findings were discussed into three main aspects based on the three research questions proposed in the study as follows:

### **Students' Collocation Knowledge**

The findings from the collected data in the sentence building section of the academic verb collocation writing ability test revealed that the verb-noun collocation (L1) was the most noticeable type of errors of collocation pattern in their writing (i.e., \*she

*achieves an experience* instead of she *gains/gets experience*, and \*you can't *assume spicy food* instead of you can't *consume spicy food*). The results from the present study are consistent with those of Liu (1999b), Liu (2002), and Li (2005), who discovered that the verb-noun collocation pattern has been found to be the major weakness of many EFL students. There are at least three main reasons to explain why the students made more verb-noun collocation errors than any other types of collocation errors. The first and most important reason was that out of 18 academic verbs used in this study, 17 of them are transitive verbs which require the verb-noun collocations to form complete sentences, except for the word „occur“ which is an intransitive verb, so the verb-noun collocation is impossible for this verb to form the sentences. The second reason was that, based on the researcher's learning experience, the verb-noun collocation is probably the most basic collocation patterns of the English language. When students could not think of any other types of patterns they might not get used to, they attempted to make verb-noun collocation patterns rather than producing other types of collocation patterns. Furthermore, many students might understand only the basic meaning of the word but had no idea which word co-occurred with. The third reason might be that the English handouts and materials of the three required courses used by university students focuses only on communication skills, without making students aware of collocations. In other words, no detailed explanations are provided for the instruction of collocation patterns in those English handouts and materials. As a result, they produced a considerable number of verb-noun collocation errors in their writing.

When comparing the number of lexical and grammatical errors made by the students, however, the researcher found that students made more grammatical collocation errors than lexical collocation errors. The results from the present study are consistent



with Li's (2005) study, who found that the number of grammatical collocation errors was larger than those of lexical collocation errors in students' writing samples. This might be because there are a larger variety of grammatical collocations than lexical collocations proposed by Benson et al. (1986). When combining the number of errors of each pattern together, the researcher must have got more grammatical collocation errors than lexical collocation errors. Moreover, some students might think that they would get higher scores when writing a long sentence containing grammatical words such as prepositions, to-infinitives, and clauses. In short, the longer sentence the students wrote, the more errors they produced (i.e., my father *design home to his friend*, instead of my father *designs a house for his friend*). Thus, it was not surprised that students made more grammatical collocation errors than lexical collocation errors.

Regarding to the sources of collocation errors, the findings revealed that approximation (e.g., *\*assume spicy food* instead of *consume spicy food*, and *\*it maintains 15 pieces per box* instead of *it contains 15 pieces per box*) occurred most frequently in the participants' sentence building task. The results from this study are opposed to those of Liu (1999b) and Liu (2002), who found that negative transfer or L1 interference was the most noticeable errors, and Li (2005), who found that ignorance of rule restrictions was the most noticeable error in students' writing. These researchers studied collocation errors from students' authentic production such as essays, so they just investigated the errors based on what students already had demonstrated in their writing samples. The findings of this study were different because the research methodology between this present study and the previous studies was rather different. In this study, the students were asked to writing a complete sentence using each academic verb, while previous studies investigated students' ready-made writing samples. There were at least two main reasons

to explain why the students made approximation errors than any other scores of errors. The first reason was that the students' performance might be restricted by the format of the research instrument. By using the sentence building task, the students had to demonstrate their understanding of the meaning and collocation of specific academic verbs productively. As stated by Liu (1999a), when they were not able to recall proper collocations in their memory, they tended to use approximation translation because they sometimes relied on their intuition to produce their own collocations and choose approximate translation as another strategy for making collocations. The second reason was that the students made approximation errors due to the similarity of spelling and pronunciation between words (i.e., \*the architecture *designs how to build my house*, instead of the architecture *decides how to build my house*). The third reason was that, as stated on the test paper: "you have to write every sentence; otherwise, three points will be deducted from the total scores for each incomplete item," the students were concerned about losing their points in the sentence building section. Therefore, they tried to write something although they were not quite sure. In fact, the researcher did not deduct the points when they skipped or avoided writing any sentences on the test paper since the researcher wanted to encourage them to make collocations as best and possible as they could. This might be another factor that leads to the approximation errors in their writing.

### **Students' Collocation Knowledge and Levels of English Proficiency**

Regarding to the students' collocation knowledge and their levels of English proficiency, when the students' achievement scores on the sentence building section of the academic verb collocation writing ability test were compared by using one-way ANOVA to compare the differences of the mean scores of the students in the three groups, the findings revealed that the students in the high English language ability group

outperformed the students in the moderate and low English ability groups. The results of this study were likely to be consistent with Chang (1997), who investigated collocation errors in English compositions by college students in the three groups: *low*, *mid*, and *high*. He found that less proficient students made more errors than more proficient ones, and the number of errors occurring in the writing of the students in the *high* group was significantly fewer than the students in the other two groups. Chang's (1997) findings would have implications for the findings of the present study that students in the high English language ability group must have been able to recall and find proper stored collocations from their memory better than those of the other two groups. Another reason could be that they might know more vocabulary than the others, so making correct collocations might be easier for them. These would be the possible reasons to explain why students in the high English language ability group gained significantly higher average scores on the sentence building section of the test than those in the other two groups.

### **Students' Collocation Knowledge and Writing Ability**

Regarding to the relationship between the students' collocation knowledge and their writing, when the students' mean scores on the sentence building and writing tasks sections of the test were compared by using the Pearson's Product-Moment Correlation Coefficient to find out the correlation between the students' production of academic verb collocations and their writing ability. The finding revealed that there was a moderate-level relationship between the students' use of academic verb collocations and their writing ability at the significant level of .05. In this study, it could be said that students who gained high scores on collocations also gained high scores on writing. The results from the present study were consistent with Zhang's (1993) study, which revealed that

collocation knowledge was a source of fluency in written communication among college students; and the quality of collocations in terms of variety and accuracy was indicative of the quality of college students' written production, and with Hsu's (2007) study, which found that there was a significant correlation between the students' fluency and variety of collocations and their online writing scores. However, the results were against the research hypothesis that there would be a strong relationship between the use of academic verb collocations and writing ability of the students. The reason could be that some students in the high English language ability group gained high scores on the sentence building section, but gained low scores on the writing task section. On the other hand, some students in the low English language ability group gained low scores on the sentence building section, but gained high scores on the writing task section. In other words, students who were good at writing a short sentence in the sentence building section made more errors when they wrote longer in the writing tasks section because of different weight in terms of content, organization, and cohesion. However, students who were less able to write sentences containing verb collocation patterns of 18 academic verbs in the sentence building section probably performed better in their writing tasks section because these writing tasks are more flexible. In short, they could write freely without having to think about collocations of specific academic words. This might be possible reasons to explain why the relationship was not strong.

## **Pedagogical Implications**

Based on the findings of the present study, the researcher provides some pedagogical implications for collocation teaching and learning in classroom as follows:

First, English teachers should create more opportunities for students to access more collocation input by using authentic materials such as brochures, paper- and internet-based news from BBC, CNN, and Bangkok Post, user manuals, and so forth. If students have sufficient input of collocations, they will be aware of the correct use of collocation in the English language and eventually produce appropriate collocations to communicate and express ideas more naturally and effectively.

Second, in addition to increasing students' collocation input, teachers should also raise students' awareness of collocations in language learning. For example, teachers may ask students to underline all verb-noun collocations in a text, or ask them to find as many collocations as they can, or ask them to correct collocation errors. This will help increase their knowledge of the usage of words and collocations. Just as Liu (2000a) stated, the more English collocation students were taught, the more correct collocations students could produce.

Third, since it is impossible to teach every word or collocation in a particular English class, teachers need to select which words or collocations should be taught in their English classes. For example, teachers may select frequent words or collocations to be taught because those words/collocations seem to be used commonly in real situations. So, it is absolutely necessary for students to know highly frequent words or collocations first. Another example is that teachers may also select words or collocations based on class objectives. For instance, words such as *analyzed*, *illustrate*, or *sufficient*, and

collocations such as *do/conduct/undertake a study* or *achieve success/a good result* seem to be useful for an academic writing course.

Fourth, teachers should provide various kinds of task to improve students' knowledge of the usage of words and collocations (e.g., vocabulary tasks, speaking and writing tasks). Also, when the teachers design tests, they need to provide different types of test formats to investigate and gain a clearer picture of students' collocation knowledge in various situations.

Fifth, in spite of the fact that the verb-noun collocation (L1) was the most noticeable type of errors of collocation patterns, the researcher also found that students made more grammatical collocation errors than lexical collocation errors when combining different types of collocation patterns together. Therefore, when teachers teach students collocations, they should teach the entire combinations including preposition, articles, and so on (e.g, *everyone assumed him to be dead*, but not *\*everyone assumed him*).

Sixth, teachers should encourage students to use dictionaries in the classroom, with particular regard to monolingual dictionaries such as the *Longman of Contemporary English* and *Collins COBUILD English Dictionary*. Teachers may recommend collocation dictionaries to them, such as the *BBI Dictionary of English Word Combination* and *Oxford Collocations Dictionary for Students of English*. These dictionaries can help students develop their knowledge of the usage of words and collocations because they provide real examples of how words are used.

Last but not least, teachers should encourage students to have their own collocation notebook. The collocation notebook is very useful for them to record

collocations they learn both inside and outside the class. Collecting collocations is an effective way to increase students' knowledge of collocations.

### **Suggestions for Future Research**

In this section, some limitations of this study are discussed, and some suggestions are provided as useful guidelines for future research.

First, future research should have larger number of participants. For example, more participants from other universities in different areas in Thailand should be selected to gain a clearer picture of collocation knowledge of undergraduate students in Thailand. Besides, future researchers may also explore other independent variables such as levels of study, gender, and fields of study.

Second, future researchers who are interested in studying EFL learners' collocation competence may examine other types of collocations such as (L3) adjective-noun (e.g., *a difficult decision*), (L6) adverb-adjective (e.g., *quite/absolutely fascinating*), and (G5) adjective-preposition collocations (e.g., *aware of*), by using different types of elicitation tasks (e.g., cloze tests, multiple choice questions, and error corrections) or authentic production such as students' essays. Moreover, it is hoped that future researchers may explore students' collocation competence in speaking as well.

As a closing remark, a longitudinal study is needed to be conducted so as to explore students' improvement on collocations over a longer period of time more deeply. For example, future researchers may investigate students' improvement on collocations in one (or more) course and explore how students can apply knowledge of collocations they learn in other English courses.

## REFERENCES

- Adrian-Vallance, E., et al. (Eds.). (2009). *Longman dictionary of contemporary English* (5th ed.). Essex, England: Pearson Education.
- Aroonmanakun, W. (2005). Collocation extract: A tool for extracting collocation [Electronic version]. *Journal of English Studies*, 2, 28-39.
- Bauman, J. (n.d.). *Vocabulary resources*. [Online]. Available from:  
<http://jbauman.com/index.html> [2011, May 9]
- Bauer, L. (1993). *Manual of information to accompany the Wellington Corpus of Written New Zealand English*. Wellington: Victoria University of Wellington.
- Beers, B. (2000). *Evaluating student writing guidebook*. [Online]. Available from:  
<http://www.itps.org/files/filesystem/EvaluatingStudentWritingGuidebook.pdf>  
[2008, July 16]
- Benson, M., Benson, E., and Ilson, R. (1986). *The BBI combinatory dictionary of English: A guide to word combinations*. Amsterdam: John Benjamins.
- Cao, P. (2008). Review of empirical studies on collocation in the field of SLA [Electronic version]. *CELEA Journal*, 31(6), 72-81.
- Chan, T. P., and Liou, H. C. (2005). Effects of web-based concordancing instruction on EFL students' learning of verb-noun collocations. *Computer Assisted Language Learning*, 18(3), 231-250.
- Chang, W. C. (1997). *Freshman composition: An error analysis from the discourse perspective*. Taipei: Crane.
- Chang, Y. C., Chang, J. S., Chen, H. J., and Liou, H. C. (2008). An automatic collocation writing assistant for Taiwanese EFL learners: A case of corpus-based NLP technology. *Computer Assisted Language Learning*, 21(3), 283-299.



- Cohen, A. D. (1994). *Assessing language ability in context* (2nd ed.). Boston: Heinle and Heinle.
- Coxhead, A. (1998). *The Academic Word List*. [Online]. Available from:  
<http://www.victoria.ac.nz/lals/staff/averil-coxhead/awl/download/awlsublists.pdf>  
 [2009, January 30]
- Coxhead, A. (2000). A new academic word list [Electronic version]. *TESOL Quarterly*, 34(2), 213-238.
- Dauter, M., Greenan, J., Noble., J., and Phillips, J (Eds.). (2002). *Oxford collocations dictionary for students of English*. Oxford University Press.
- Farghal, M., and Obiedat, H. (1995). Collocations: A neglected variable in EFL. *IRAL*, 34(4), 315-333.
- Firth, J. (1968). A synopsis of linguistic theory. In F. Palmer (Ed.), *Selected papers of J. R. Firth 1952-59* (pp. 168-205). London: Longman.
- Francis, W. N., and Kucera, H. (1982). *Frequency analysis of English usage*. Boston: Houghton Mifflin.
- Grabe, W., and Kaplan, R. B. (1996). *Theory & practice of writing*. Essex, England: Pearson Education.
- Hill, J. (2000). Revising priorities: From grammatical failure to collocational success. In M. Lewis (Ed.), *Teaching collocation: Further development in the lexical approach* (pp. 47-69). Boston: Thomson Heinle.
- Howell-Richardson, C., and Bish, D. (1997). Electronic communications and teaching of writing in ESOL. In G. Fulcher (Ed.), *Writing in the English language classroom* (pp. 41-60). Prentice Hall Europe ELT.

- Hsu, J. Y. (2007). Lexical collocations and their relation to the online writing of Taiwanese college English majors. *Electronic Journal of Foreign Language Teaching*, 4(2), 192-209. [Online]. Available from: <http://e-flt.nus.edu.sg/v4n22007/hsu.pdf> [2011, January 17]
- Hughes, A. (2003). *Testing for language teachers* (2nd ed.). Cambridge University Press.
- Jacobs, H. L., Zingraf, S. A., Wormuth, D. R., Hartfield, V. F., and Hughey, J. B. (1981). *Testing ESL composition: A practical approach*. Rowley, MA: Newbury House.
- Johansson, S. (1978). *Manual of information to accompany the Lancaster-Oslo/Bergen Corpus of British English, for use with digital computers*. Oslo, Norway: University of Oslo.
- Kaur, J., and Hegelheimer, V. (2005). ESL students' use of concordance in the transfer of academic word knowledge. *Computer Assisted Language Learning*, 18(4), 287-310.
- Kozlowski, A., and Seymour, L. (2003). The importance of collocation in English language teaching. *Contact*, 29(3), 41-49.
- Lerdejdecha, W. (2007). *Effects of collocation vocabulary instruction on lower secondary school students' writing ability*. Master's Thesis, Faculty of Education, Chulalongkorn University.
- Lewis, M. (Ed.). (2000). *Teaching collocation: Further development in the lexical approach*. Boston: Thomson Heinle.
- Lewis, M. (2002). *Implementing the lexical approach: Putting theory into practice*. Boston: Thomson Heinle.
- Li, C. C. (2005). *A study of collocational error types in ESL/EFL college learners' writing*. Master's Thesis, Ming Chuan University.

- Liu, C. P. (1999a). A study of Chinese Culture University freshmen's collocational competence: "Knowledge" as an example. *Hwa Kang Journal of English Language Literature*, 5, 81-99.
- Liu, C. P. (1999b). An analysis of collocational errors in EFL writings. *The proceedings of the eighth international symposium on English teaching* (pp. 483-494). Taipei: Crane.
- Liu, C. P. (2000a). An empirical study of collocation teaching. *Proceedings of the seventeenth conference on English teaching and learning in the Republic of China* (pp. 165-178). Taipei: Crane.
- Liu, C. P. (2000b). A study of strategy use in producing lexical collocations. *Selected papers from the tenth international symposium on English teaching* (pp. 482-492). Taipei: Crane.
- Liu, L. E. (2002). *A corpus-based lexical semantic investigation of verb-noun miscollocations in Taiwan learner's English*. Master's Thesis, Tamkang University.
- Lloyd-Jones, R. (1977). Primary trait scoring. In C. R. Cooper and L. Odell (Eds.), *Evaluating writing* (pp. 33-69). NY: National Council of Teachers of English.
- Malligamas, P., and Pongpairroj, N. (2005). Thai's learners' knowledge of English collocations. *HKBU Papers in Applied Language Studies*, 9, 1-28.
- Meng, J. (2008). Erroneous collocations caused by language transfer in Chinese EFL writing [Electronic version]. *US-China Foreign Language*, 6(9), 57-61.
- Mongkolchai, A. (2008). *A study of university students' ability in using English collocations*. Master's Thesis, Srinakharinwirot University.
- Murison-Bowie, S. (1993). *MicroConcord manual*. Oxford University Press.
- Nation, I. S. P. (1990). *Teaching and learning vocabulary*. Boston, MA: Heinle & Heinle.

- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Nesselhauf, N. (2003). The use of collocations by advanced learners of English and some implications for teaching. *Applied Linguistics*, 24(2), 223-242.
- O'Malley, J. M., and Pierce, P. V. (1996). *Authentic assessment for English language learners*. Addison-Wesley.
- Phochanapan, D. (2007). *Effects of self-monitoring writing strategies instruction on English writing ability of pre-cadets*. Master's Thesis, Faculty of Education, Chulalongkorn University.
- Richards, J. C. (1973). A noncontrastive approach to error analysis. In J. W. Oller and J. C. Richards (Eds.), *Focus on the learner: Pragmatic perspective for the language teacher*. Massachusetts: Newbury House.
- Sinclair, J. (1991). *Corpus, concordance, collocation*. Hong Kong: Oxford University Press.
- Sun, Y. C., and Wang, L. Y. (2003). Concordancers in the EFL classroom: Cognitive approaches and collocation difficulty. *Computer Assisted Language Learning*, 16(1), 83-94.
- Tarone, E. (1978). Conscious communication strategies in interlanguage: A progress report. In H. D. Brown, C. A. Yorino, and R. C. Crymes (Eds.), *On TESOL '77: Teaching and learning* (pp. 194-203). Washington, DC: TESOL.
- Torwong, P. (2003). *Peer response techniques: A proposed model for EFL writing*. Doctoral dissertation, Suranaree University of Technology.
- Turton, N. D., and Heaton, J. B. (1996). *Longman dictionary of common errors*. Essex, England: Pearson Education.
- Weigle, S. C. (2002). *Assessing writing*. Cambridge University Press.

- Weir, C. J. (1990). *Communicative language testing*. NJ: Prentice Hall.
- West, M. (1953). *A general service list of English words*. London: Longman, Green.
- Woolard, G. (2000). Collocation – encouraging learner independence. In M. Lewis (Ed.), *Teaching collocation: Further development in the lexical approach* (pp. 28-46). Boston: Thomson Heinle.
- Xue, G., and Nation, I. S. P. (1984). A University Word List. *Language Learning and Communication*, 3(2), 215-229.
- Zhang, X. (1993). *English collocations and their effect on the writing of native and non-native college freshmen*. Doctoral dissertation, Indiana University of Pennsylvania.



ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



**APPENDICES**

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## Appendix A

### The Academic Word List (AWL)

The AWL consists of 10 sublists with 570 headwords and approximately 3,000 words altogether. In other words, there are 60 headwords in each sublist, except for Sublist 10, which has 30. Sublist 1 contains the most frequent words in the Academic Corpus. Sublist 2 contains the next most frequent words, and so on. All 389 verbs in the base form are italicized.

#### Sublist 1 of the AWL (53 verbs)

Headword	Word Families
<i>analyze</i>	analyzed, analyzer, analyzers, analyses, analyzing, analysis, analyst, analysts, analytic, analytical, analytically
<i>approach</i>	approachable, approached, approaches, approaching, unapproachable
area	areas
<i>assess</i>	assessable, assessed, assesses, assessing, assessment, assessments, <i>reassess</i> , reassessed, reassessing, reassessment, unassessed
<i>assume</i>	assumed, assumes, assuming, assumption, assumptions
authority	authoritative, authorities
available	availability, unavailable
<i>benefit</i>	beneficial, beneficiary, beneficiaries, benefited, benefiting, benefits
concept	conception, concepts, conceptual, conceptualization, <i>conceptualize</i> , conceptualized, conceptualizes, conceptualizing, conceptually
<i>consist</i>	consisted, consistency, consistent, consistently, consisting, consists, inconsistencies, inconsistency, inconsistent
<i>constitute</i>	constituencies, constituency, constituent, constituents, constituted, constitutes, constituting, constitution, constitutions, constitutional, constitutionally, constitutive, unconstitutional

**Sublist 1 (continued)**

Headword	Word Families
context	contexts, contextual, <i>contextualize</i> , contextualized, contextualizing, uncontextualized
<i>contract</i>	contracted, contracting, contractor, contractors, contracts
<i>create</i>	created, creates, creating, creation, creations, creative, creatively, creativity, creator, creators, <i>recreate</i> , recreated, recreates, recreating
data	
<i>define</i>	definable, defined, defines, defining, definition, definitions, <i>redefine</i> , redefined, redefines, redefining, undefined
<i>derive</i>	derivation, derivations, derivative, derivatives, derived, derives, deriving
<i>distribute</i>	distributed, distributing, distribution, distributional, distributions, distributive, distributor, distributors, <i>redistribute</i> , redistributed, redistributes, redistributing, redistribution
economy	economic, economical, economically, economics, economies, economist, economists, uneconomical
environment	environmental, environmentalist, environmentalists, environmentally, environments
<i>establish</i>	<i>disestablish</i> , disestablished, disestablishes, disestablishing, disestablishment, established, establishes, establishing, establishment, establishments
<i>estimate</i>	estimated, estimates, estimating, estimation, estimations, <i>overestimate</i> , overestimated, overestimates, overestimating, <i>underestimate</i> , underestimated, underestimates, underestimating
evident	evidenced, <i>evidence</i> , evidential, evidently
<i>export</i>	exported, exporter, exporters, exporting, exports
<i>factor</i>	factored, factoring, factors
<i>finance</i>	financed, finances, financial, financially, financier, financiers, financing



**Sublist 1 (continued)**

Headword	Word Families
formula	formulae, formulas, <i>formulate</i> , formulated, formulating, formulation, formulations, <i>reformulate</i> , reformulated, reformulating, reformulation, reformulations
<i>function</i>	functional, functionally, functioned, functioning, functions
<i>identify</i>	identifiable, identification, identified, identifies, identifying, identities, identity, unidentifiable
income	incomes
<i>indicate</i>	indicated, indicates, indicating, indication, indications, indicative, indicator, indicators
individual	individualized, individuality, individualism, individualist, individualists, individualistic, individually, individuals
<i>interpret</i>	interpretation, interpretations, interpretative, interpreted, interpreting, interpretive, interprets, <i>misinterpret</i> , misinterpretation, misinterpretations, misinterpreted, misinterpreting, misinterprets, <i>reinterpret</i> , reinterpreted, reinterprets, reinterpreting, reinterpretation, reinterpretations
<i>involve</i>	involved, involvement, involves, involving, uninvolved
<i>issue</i>	issued, issues, issuing
<i>labor</i>	labored, laboring, labors
legal	illegal, illegality, illegally, legality, legally
<i>legislate</i>	legislated, legislates, legislating, legislation, legislative, legislator, legislators, legislature
<i>major</i>	majorities, majority
method	methodical, methodological, methodologies, methodology, methods
<i>occur</i>	occurred, occurrence, occurrences, occurring, occurs, <i>reoccur</i> , reoccurred, reoccurring, reoccurs
percent	percentage, percentages
period	periodic, periodical, periodically, periodicals, periods
policy	policies

**Sublist 1 (continued)**

Headword	Word Families
principle	principled, principles, unprincipled
<i>proceed</i>	procedural, procedure, procedures, proceeded, proceeding, proceedings, proceeds
<i>process</i>	processed, processes, processing
<i>require</i>	required, requirement, requirements, requires, requiring
<i>research</i>	researched, researcher, researchers, researches, researching
<i>respond</i>	responded, respondent, respondents, responding, responds, response, responses, responsive, responsiveness, unresponsive
role	roles
<i>section</i>	sectioned, sectioning, sections
sector	sectors
significant	insignificant, insignificantly, significance, significantly, signified, signifies, <i>signify</i> , signifying
similar	dissimilar, similarities, similarity, similarly
<i>source</i>	sourced, sources, sourcing
specific	specifically, specification, specifications, specificity, specifics
<i>structure</i>	<i>restructure</i> , restructured, restructures, restructuring, structural, structurally, structured, structures, structuring, unstructured
theory	theoretical, theoretically, theories, theorist, theorists
<i>vary</i>	invariable, invariably, variability, variable, variables, variably, variance, variant, variants, variation, variations, varied, varies, varying

**Sublist 2 of the AWL (48 verbs)**

Headword	Word Families
<i>achieve</i>	achievable, achieved, achievement, achievements, achieves, achieving
<i>acquire</i>	acquired, acquires, acquiring, acquisition, acquisitions
<i>administrate</i>	administrates, administration, administrations, administrative, administratively, administrator, administrators
<i>affect</i>	affected, affecting, affective, affectively, affects, unaffected
appropriate	appropriacy, appropriately, appropriateness, inappropriacy, inappropriate, inappropriately
aspect	aspects
<i>assist</i>	assistance, assistant, assistants, assisted, assisting, assists, unassisted
category	categories, categorization, <i>categorize</i> , categorized, categorizes, categorizing, categorizing
chapter	chapters
<i>commission</i>	commissioned, commissioner, commissioners, commissioning, commissions
community	communities
complex	complexities, complexity
<i>compute</i>	computation, computational, computations, computable, computer, computed, computerized, computers, computing
<i>conclude</i>	concluded, concludes, concluding, conclusion, conclusions, conclusive, conclusively, inconclusive, inconclusively
<i>conduct</i>	conducted, conducting, conducts
consequent	consequence, consequences, consequently
<i>construct</i>	constructed, constructing, construction, constructions, constructive, constructs, <i>reconstruct</i> , reconstructed, reconstructing, reconstruction, reconstructs
<i>consume</i>	consumed, consumer, consumers, consumes, consuming, consumption

**Sublist 2 (continued)**

Headword	Word Families
<i>credit</i>	credited, crediting, creditor, creditors, credits
<i>culture</i>	cultural, culturally, cultured, cultures, uncultured
<i>design</i>	designed, designer, designers, designing, designs
distinct	distinction, distinctions, distinctive, distinctively, distinctly, indistinct, indistinctly
element	elements
<i>equate</i>	equated, equates, equating, equation, equations
<i>evaluate</i>	evaluated, evaluates, evaluating, evaluation, evaluations, evaluative, <i>re-evaluate</i> , re-evaluated, re-evaluates, re-evaluating, re-evaluation
<i>feature</i>	featured, features, featuring
final	<i>finalize</i> , finalized, finalizes, finalizing, finality, finally, finals
<i>focus</i>	focused, focuses, focusing, <i>refocus</i> , refocused, refocuses, refocusing
<i>impact</i>	impacted, impacting, impacts
<i>injure</i>	injured, injures, injuries, injuring, injury, uninjured
<i>institute</i>	instituted, institutes, instituting, institution, institutional, <i>institutionalize</i> , institutionalized, institutionalizes, institutionalizing, institutionally, institutions
<i>invest</i>	invested, investing, investment, investments, investor, investors, invests, <i>reinvest</i> , reinvested, reinvesting, reinvestment, reinvests
item	itemization, <i>itemize</i> , itemized, itemizes, itemizing, items
journal	journals
<i>maintain</i>	maintained, maintaining, maintains, maintenance
normal	abnormal, abnormally, normalization, <i>normalize</i> , normalized, normalizes, normalizing, normality, normally
<i>obtain</i>	obtainable, obtained, obtaining, obtains, unobtainable
<i>participate</i>	participant, participants, participated, participates, participating, participation, participatory
<i>perceive</i>	perceived, perceives, perceiving, perception, perceptions

**Sublist 2 (continued)**

Headword	Word Families
positive	positively
potential	potentially
previous	previously
primary	primarily
<i>purchase</i>	purchased, purchaser, purchasers, purchases, purchasing
<i>range</i>	ranged, ranges, ranging
region	regional, regionally, regions
<i>regulate</i>	deregulated, deregulates, deregulating, deregulation, regulated, regulates, regulating, regulation, regulations, regulator, regulators, regulatory, unregulated
relevant	irrelevance, irrelevant, relevance
<i>reside</i>	resided, residence, resident, residential, residents, resides, residing
<i>resource</i>	resourced, resourceful, resources, resourcing, unresourceful, under-resourced
<i>restrict</i>	restricted, restricting, restriction, restrictions, restrictive, restrictively, restricts, unrestricted, unrestrictive
<i>secure</i>	insecure, insecurities, insecurity, secured, securely, secures, securing, securities, security
<i>seek</i>	seeking, seeks, sought
<i>select</i>	selected, selecting, selection, selections, selective, selectively, selector, selectors, selects
<i>site</i>	sites
strategy	strategic, strategies, strategically, strategist, strategists
<i>survey</i>	surveyed, surveying, surveys
<i>text</i>	texts, textual
tradition	nontraditional, traditional, traditionalist, traditionally, traditions
<i>transfer</i>	transferable, transference, transferred, transferring, transfers

**Sublist 3 of the AWL (50 verbs)**

Headword	Word Families
alternative	alternatively, alternatives
circumstance	circumstances
<i>comment</i>	commentaries, commentary, commentator, commentators, commented, commenting, comments
<i>compensate</i>	compensated, compensates, compensating, compensation, compensations, compensatory
component	componentry, components
<i>consent</i>	consensus, consented, consenting, consents
considerable	considerably
constant	constancy, constantly, constants, inconstancy, inconstantly
<i>constrain</i>	constrained, constraining, constrains, constraint, constraints, unconstrained
<i>contribute</i>	contributed, contributes, contributing, contribution, contributions, contributor, contributors
<i>convene</i>	convention, convenes, convened, convening, conventional, conventionally, conventions, unconventional
<i>coordinate</i>	coordinated, coordinates, coordinating, coordination, coordinator, coordinators
<i>core</i>	cores, coring, cored
corporate	corporates, corporation, corporations
<i>correspond</i>	corresponded, correspondence, corresponding, correspondingly, corresponds
criteria	criterion
<i>deduce</i>	deduced, deduces, deducing, deduction, deductions
<i>demonstrate</i>	demonstrable, demonstrably, demonstrated, demonstrates, demonstrating, demonstration, demonstrations, demonstrative, demonstratively, demonstrator, demonstrators
<i>document</i>	documentation, documented, documenting, documents

**Sublist 3 (continued)**

Headword	Word Families
<i>dominate</i>	dominance, dominant, dominated, dominates, dominating, domination
emphasis	<i>emphasize</i> , emphasized, emphasizing, emphatic, emphatically
<i>ensure</i>	ensured, ensures, ensuring
<i>exclude</i>	excluded, excludes, excluding, exclusion, exclusionary, exclusionist, exclusions, exclusive, exclusively
framework	frameworks
<i>fund</i>	funded, funder, funders, funding, funds
<i>illustrate</i>	illustrated, illustrates, illustrating, illustration, illustrations, illustrative
<i>immigrate</i>	immigrant, immigrants, immigrated, immigrates, immigrating, immigration
<i>imply</i>	implied, implies, implying
<i>initial</i>	initially
<i>instance</i>	instances
<i>interact</i>	interacted, interacting, interaction, interactions, interactive, interactively, interacts
<i>justify</i>	justifiable, justifiably, justification, justifications, justified, justifies, justifying, unjustified
<i>layer</i>	layered, layering, layers
<i>link</i>	linkage, linkages, linked, linking, links
<i>locate</i>	located, locating, location, locations, <i>relocate</i> , relocated, relocates, relocating, relocation
<i>maximize</i>	<i>max</i> , maximized, maximizes, maximizing, maximization, maximum
<i>minor</i>	minorities, minority, minors
<i>negate</i>	negative, negated, negates, negating, negatively, negatives
outcome	outcomes
<i>partner</i>	partners, partnership, partnerships

**Sublist 3 (continued)**

Headword	Word Families
philosophy	philosopher, philosophers, philosophical, philosophically, philosophies, <i>philosophize</i> , philosophized, philosophizes, philosophizing
physical	physically
<i>proportion</i>	disproportion, disproportionate, disproportionately, proportional, proportionally, proportionate, proportionately, proportions
<i>publish</i>	published, publisher, publishers, publishes, publishing, unpublished
<i>react</i>	reacted, reacts, reacting, reaction, reactionaries, reactionary, reactions, reactive, <i>reactivate</i> , reactivation, reactor, reactors
<i>register</i>	<i>deregister</i> , deregistered, deregistering, deregisters, deregistration, registered, registering, registers, registration
<i>rely</i>	reliability, reliable, reliably, reliance, reliant, relied, relies, relying, unreliable
<i>remove</i>	removable, removal, removals, removed, removes, removing
<i>scheme</i>	schematic, schematically, schemed, schemes, scheming
<i>sequence</i>	sequenced, sequences, sequencing, sequential, sequentially
<i>sex</i>	sexes, sexism, sexual, sexuality, sexually
<i>shift</i>	shifted, shifting, shifts
<i>specify</i>	specifiable, specified, specifies, specifying, unspecified
sufficient	sufficiency, insufficient, insufficiently, sufficiently
<i>task</i>	tasks
technical	technically
technique	techniques
technology	technological, technologically
valid	<i>invalidate</i> , invalidity, <i>validate</i> , validated, validating, validation, validity, validly
volume	volumes, vol.



**Sublist 4 of the AWL (35 verbs)**

Headword	Word Families
<i>access</i>	accessed, accesses, accessibility, accessible, accessing, inaccessible
adequate	adequacy, adequately, inadequacies, inadequacy, inadequate, inadequately
annual	annually
apparent	apparently
<i>approximate</i>	approximated, approximately, approximates, approximating, approximation, approximations
attitude	attitudes
<i>attribute</i>	attributable, attributed, attributes, attributing, attribution
civil	
<i>code</i>	coded, codes, coding
<i>commit</i>	commitment, commitments, commits, committed, committing
<i>communicate</i>	communicable, communicated, communicates, communicating, communication, communications, communicative, communicatively, uncommunicative
<i>concentrate</i>	concentrated, concentrates, concentrating, concentration
<i>confer</i>	conference, conferences, conferred, conferring, confers
<i>contrast</i>	contrasted, contrasting, contrastive, contrasts
<i>cycle</i>	cycled, cycles, cyclic, cyclical, cycling
<i>debate</i>	debatable, debated, debates, debating
despite	
dimension	dimensional, dimensions, multidimensional
domestic	domestically, <i>domesticate</i> , domesticated, domesticating, domestics
<i>emerge</i>	emerged, emergence, emergent, emerges, emerging
error	erroneous, erroneously, errors
ethnic	ethnicity
goal	goals
<i>grant</i>	granted, granting, grants

**Sublist 4 (continued)**

Headword	Word Families
hence	
hypothesis	hypotheses, <i>hypothesize</i> , hypothesized, hypothesizes, hypothesizing, hypothetical, hypothetically
<i>implement</i>	implementation, implemented, implementing, implements
<i>implicate</i>	implicated, implicates, implicating, implication, implications
<i>impose</i>	imposed, imposes, imposing, imposition
<i>integrate</i>	integrated, integrates, integrating, integration
internal	<i>internalize</i> , internalized, internalizes, internalizing, internally
<i>investigate</i>	investigated, investigates, investigating, investigation, investigations, investigative, investigator, investigators
job	jobs
<i>label</i>	labeled, labeling, labels
mechanism	mechanisms
obvious	obviously
<i>occupy</i>	occupancy, occupant, occupants, occupation, occupational, occupations, occupied, occupier, occupiers, occupies, occupying
option	optional, options
<i>output</i>	outputs
overall	
<i>parallel</i>	paralleled, parallels, unparallelled
parameter	parameters
<i>phase</i>	phased, phases, phasing
<i>predict</i>	predictability, predictable, predictably, predicted, predicting, prediction, predictions, predicts, unpredictability, unpredictable
principal	principally
prior	
professional	professionally, professionals, professionalism
<i>project</i>	projected, projecting, projection, projections, projects

**Sublist 4 (continued)**

Headword	Word Families
<i>promote</i>	promoted, promoter, promoters, promotes, promoting, promotion, promotions
regime	regimes
<i>resolve</i>	resolution, resolved, resolves, resolving, unresolved
<i>retain</i>	retained, retaining, retainer, retainers, retains, retention, retentive
series	
statistic	statistician, statisticians, statistical, statistically, statistics
status	
<i>stress</i>	stressed, stresses, stressful, stressing, unstressed
subsequent	subsequently
<i>sum</i>	summation, summed, summing, sums
summary	summaries, <i>summarize</i> , summarized, summarizes, summarizing, summarization, summarizations
<i>undertake</i>	undertaken, undertakes, undertaking, undertook

**Sublist 5 of the AWL (43 verbs)**

Headword	Word Families
academy	academia, academic, academically, academics, academies
<i>adjust</i>	adjusted, adjusting, adjustment, adjustments, adjusts, <i>readjust</i> , readjusted, readjusting, readjustment, readjustments, readjusts
<i>alter</i>	alterable, alteration, alterations, altered, altering, <i>alternate</i> , alternating, alters, unalterable, unaltered
<i>amend</i>	amended, amending, amendment, amendments, amends
aware	awareness, unaware
capacity	capacities, <i>incapacitate</i> , incapacitated
<i>challenge</i>	challenged, challenger, challengers, challenges, challenging

**Sublist 5 (continued)**

Headword	Word Families
clause	clauses
<i>compound</i>	compounded, compounding, compounds
<i>conflict</i>	conflicted, conflicting, conflicts
<i>consult</i>	consultancy, consultant, consultants, consultation, consultations, consultative, consulted, consults, consulting
<i>contact</i>	contactable, contacted, contacting, contacts
<i>decline</i>	declined, declines, declining
discrete	discretely, discretion, discretionary, indiscrete, indiscretion
<i>draft</i>	drafted, drafting, drafts, <i>redraft</i> , redrafted, redrafting, redrafts
<i>enable</i>	enabled, enables, enabling
energy	energetic, energetically, energies
<i>enforce</i>	enforced, enforcement, enforces, enforcing
entity	entities
equivalent	equivalence
<i>evolve</i>	evolution, evolved, evolving, evolves, evolutionary, evolutionist, evolutionists
<i>expand</i>	expanded, expanding, expands, expansion, expansionism, expansive
<i>expose</i>	exposed, exposes, exposing, exposure, exposures
external	externalization, <i>externalize</i> , externalized, externalizes, externalizing, externality
<i>facilitate</i>	facilitated, facilitates, facilities, facilitating, facilitation, facilitator, facilitators, facility
fundamental	fundamentally
<i>generate</i>	generated, generates, generating
generation	generations
image	imagery, images

**Sublist 5 (continued)**

Headword	Word Families
liberal	<i>liberalize</i> , liberalism, liberalization, liberalized, liberalizes, liberalizing, liberalization, <i>liberate</i> , liberated, liberates, liberation, liberations, liberating, liberator, liberators, liberally, liberals
<i>license</i>	licenses, license, licensed, licensing, licenses, unlicensed
logic	illogical, illogically, logical, logically, logician, logicians
margin	marginal, marginally, margins
medical	medically
mental	mentality, mentally
<i>modify</i>	modification, modifications, modified, modifies, modifying, unmodified
<i>monitor</i>	monitored, monitoring, monitors, unmonitored
<i>network</i>	networked, networking, networks
notion	notions
objective	objectively, objectivity
<i>orient</i>	<i>orientate</i> , orientated, orientates, orientation, orientating, oriented, orienting, orients, <i>reorient</i> , reorientation
perspective	perspectives
precise	imprecise, precisely, precision
<i>prime</i>	primacy
psychology	psychological, psychologically, psychologist, psychologists
<i>pursue</i>	pursued, pursues, pursuing, pursuit, pursuits
ratio	ratios
<i>reject</i>	rejected, rejecting, rejection, rejects, rejections
revenue	revenues
<i>stable</i>	instability, stabilization, <i>stabilize</i> , stabilized, stabilizes, stabilizing, stability, unstable
<i>style</i>	styled, styles, styling, stylish, <i>stylize</i> , stylized, stylizes, stylizing
<i>substitute</i>	substituted, substitutes, substituting, substitution

**Sublist 5 (continued)**

Headword	Word Families
<i>sustain</i>	sustainable, sustainability, sustained, sustaining, sustains, sustenance, unsustainable
symbol	symbolic, symbolically, <i>symbolize</i> , symbolizes, symbolized, symbolizing, symbolism, symbols
<i>target</i>	targeted, targeting, targets
<i>transit</i>	transited, transiting, transition, transitional, transitions, transitory, transits
trend	trends
version	versions
welfare	
whereas	

**Sublist 6 of the AWL (42 verbs)**

Headword	Word Families
<i>abstract</i>	abstraction, abstractions, abstractly, abstracts
accurate	accuracy, accurately, inaccuracy, inaccuracies, inaccurate
<i>acknowledge</i>	acknowledged, acknowledges, acknowledging, acknowledgement, acknowledgements
<i>aggregate</i>	aggregated, aggregates, aggregating, aggregation
<i>allocate</i>	allocated, allocates, allocating, allocation, allocations
<i>assign</i>	assigned, assigning, assignment, assignments, assigns, <i>reassign</i> , reassigned, reassigning, reassigns, unassigned
<i>attach</i>	attached, attaches, attaching, attachment, attachments, unattached
<i>author</i>	authored, authoring, authors, authorship
<i>bond</i>	bonded, bonding, bonds
<i>brief</i>	brevity, briefed, briefing, briefly, briefs

**Sublist 6 (continued)**

Headword	Word Families
capable	capabilities, capability, incapable
<i>cite</i>	citation, citations, cited, citing, cites
<i>cooperate</i>	cooperated, cooperates, cooperating, cooperation, cooperative, cooperatively
<i>discriminate</i>	discriminated, discriminates, discriminating, discrimination
<i>display</i>	displayed, displaying, displays
diverse	diversely, diversification, diversified, diversifies, <i>diversify</i> , diversifying, diversity
domain	domains
<i>edit</i>	edited, editing, edition, editions, editor, editorial, editorials, editors, edits
<i>enhance</i>	enhanced, enhancement, enhances, enhancing
estate	estates
<i>exceed</i>	exceeded, exceeding, exceeds
expert	expertise, expertly, experts
explicit	explicitly
federal	federation, federations
fee	fees
flexible	flexibility, inflexible, inflexibility
furthermore	
gender	genders
ignorant	ignorance, <i>ignore</i> , ignored, ignores, ignoring
incentive	incentives
incidence	incident, incidentally, incidents
<i>incorporate</i>	incorporated, incorporates, incorporating, incorporation
<i>index</i>	indexed, indexes, indexing
<i>inhibit</i>	inhibited, inhibiting, inhibition, inhibitions, inhibits

## Sublist 6 (continued)

Headword	Word Families
<i>initiate</i>	initiated, initiates, initiating, initiation, initiations, initiative, initiatives, initiator, initiators
<i>input</i>	inputs
<i>instruct</i>	instruction, instructed, instructing, instructions, instructive, instructor, instructors, instructs
intelligent	intelligence, intelligently, unintelligent
interval	intervals
<i>lecture</i>	lectured, lecturer, lecturers, lectures, lecturing
<i>migrate</i>	migrant, migrants, migrated, migrates, migrating, migration, migrations, migratory
minimum	
ministry	ministered, ministering, ministerial, ministries
motive	<i>motivate</i> , motivated, motivates, motivating, motivation, motivations, motives, unmotivated
neutral	neutralization, <i>neutralize</i> , neutralized, neutralizes, neutralizing, neutrality
nevertheless	
overseas	
<i>precede</i>	preceded, precedence, precedent, precedes, preceding, unprecedented
<i>presume</i>	presumably, presumed, presumes, presuming, presumption, presumptions, presumptuous
rational	irrational, rationalization, rationalizations, <i>rationalize</i> , rationalized, rationalizes, rationalizing, rationalism, rationality, rationally
<i>recover</i>	recoverable, recovered, recovering, recovers, recovery
<i>reveal</i>	revealed, revealing, reveals, revelation, revelations
<i>scope</i>	
subsidy	subsidiary, subsidies, <i>subsidize</i> , subsidized, subsidizes, subsidizing
<i>tape</i>	taped, tapes, taping



**Sublist 6 (continued)**

Headword	Word Families
<i>trace</i>	traceable, traced, traces, tracing
<i>transform</i>	transformation, transformations, transformed, transforming, transforms
<i>transport</i>	transportation, transported, transporter, transporters, transporting, transports
<i>underlie</i>	underlay, underlies, underlying
<i>utilize</i>	utilization, utilized, utilizes, utilizing, utilizer, utilizers, utility, utilities

**Sublist 7 of the AWL (33 verbs)**

Headword	Word Families
<i>adapt</i>	adaptability, adaptable, adaptation, adaptations, adapted, adapting, adaptive, adapts
adult	adulthood, adults
<i>advocate</i>	advocacy, advocated, advocates, advocating
<i>aid</i>	aided, aiding, aids, unaided
<i>channel</i>	channeled, channeling, channels
chemical	chemically, chemicals
classic	classical, classics
comprehensive	comprehensively
<i>comprise</i>	comprised, comprises, comprising
<i>confirm</i>	confirmation, confirmed, confirming, confirms
contrary	contrarily
<i>convert</i>	conversion, conversions, converted, convertible, converting, converts
<i>couple</i>	coupled, coupling, couples
decade	decades

**Sublist 7 (continued)**

Headword	Word Families
definite	definitely, definitive, indefinite, indefinitely
<i>deny</i>	deniable, denial, denials, denied, denies, denying, undeniable
<i>differentiate</i>	differentiated, differentiates, differentiating, differentiation
<i>dispose</i>	disposable, disposal, disposed, disposes, disposing
dynamic	dynamically, dynamics
<i>eliminate</i>	eliminated, eliminates, eliminating, elimination
empirical	empirically, empiricism
<i>equip</i>	equipment, equipped, equipping, equips
<i>extract</i>	extracted, extracting, extraction, extracts
<i>file</i>	filed, files, filing
finite	infinite, infinitely
foundation	foundations
globe	global, globally, globalization, globalized
<i>grade</i>	graded, grades, grading
<i>guarantee</i>	guaranteed, guaranteeing, guarantees
hierarchy	hierarchical, hierarchies
identical	identically
ideology	ideological, ideologically, ideologies
<i>infer</i>	inference, inferences, inferred, inferring, infers
<i>innovate</i>	innovation, innovated, innovates, innovating, innovations, innovative, innovator, innovators
<i>insert</i>	inserted, inserting, insertion, inserts
<i>intervene</i>	intervened, intervenes, intervening, intervention, interventions
<i>isolate</i>	isolated, isolates, isolating, isolation, isolationism
media	
mode	modes
paradigm	paradigms
phenomenon	phenomena, phenomenal

**Sublist 7 (continued)**

Headword	Word Families
priority	priorities, prioritization, <i>prioritize</i> , prioritized, prioritizes, prioritizing
<i>prohibit</i>	prohibited, prohibiting, prohibition, prohibitions, prohibitive, prohibits
publication	publications
<i>quote</i>	quotation, quotations, quoted, quotes, quoting
<i>release</i>	released, releases, releasing
<i>reverse</i>	reversal, reversed, reverses, reversible, reversing, reversals, irreversible
<i>simulate</i>	simulated, simulates, simulating, simulation
<i>sole</i>	solely
somewhat	
<i>submit</i>	submission, submissions, submits, submitted, submitting
successor	succession, successions, successive, successively, successors
<i>survive</i>	survival, survived, survives, surviving, survivor, survivors
thesis	theses
topic	topical, topics
<i>transmit</i>	transmission, transmissions, transmitted, transmitting, transmits
ultimate	ultimately
unique	uniquely, uniqueness
visible	visibility, visibly, invisible, invisibility
voluntary	voluntarily, <i>volunteer</i> , volunteering, volunteered, volunteers

**Sublist 8 of the AWL (39 verbs)**

Headword	Word Families
<i>abandon</i>	abandoned, abandoning, abandonment, abandons
<i>accompany</i>	accompanied, accompanies, accompaniment, accompanying, unaccompanied
<i>accumulate</i>	accumulated, accumulating, accumulation, accumulates
ambiguous	ambiguities, ambiguity, unambiguous, unambiguously
<i>append</i>	appendix, appended, appends, appending, appendices, appendixes
<i>appreciate</i>	appreciable, appreciably, appreciated, appreciates, appreciating, appreciation, unappreciated
arbitrary	arbitrariness, arbitrarily
<i>automate</i>	automatic, automated, automates, automating, automatically, automation
<i>bias</i>	biased, biases, biasing, unbiased
<i>chart</i>	charted, charting, charts, uncharted
<i>clarify</i>	clarification, clarified, clarifies, clarifying, clarity
commodity	commodities
<i>complement</i>	complementary, complemented, complementing, complements
<i>conform</i>	conformable, conformability, conformance, conformation, conformed, conforming, conformist, conformists, conformity, conforms, nonconformist, nonconformists, nonconformity, non-conformist, non-conformists, non-conformity
contemporary	contemporaries
<i>contradict</i>	contradicted, contradicting, contradiction, contradictions, contradictory, contradicts
crucial	crucially
currency	currencies
<i>denote</i>	denotation, denotations, denoted, denotes, denoting
<i>detect</i>	detectable, detected, detecting, detection, detective, detectives, detector, detectors, detects
<i>deviate</i>	deviated, deviates, deviating, deviation, deviations

## Sublist 8 (continued)

Headword	Word Families
<i>displace</i>	displaced, displacement, displaces, displacing
drama	dramas, dramatic, dramatically, <i>dramatize</i> , dramatized, dramatizing, dramatizes, dramatization, dramatizations, dramatist, dramatists, dramatization, dramatizations, dramatizing
eventual	eventuality, eventually
<i>exhibit</i>	exhibited, exhibiting, exhibition, exhibitions, exhibits
<i>exploit</i>	exploitation, exploited, exploiting, exploits
<i>fluctuate</i>	fluctuated, fluctuates, fluctuating, fluctuation, fluctuations
guideline	guidelines
<i>highlight</i>	highlighted, highlighting, highlights
<i>implicate</i>	implicated, implicates, implicating, implication, implications
<i>induce</i>	induced, induces, inducing, induction
inevitable	inevitability, inevitably
infrastructure	infrastructures
<i>inspect</i>	inspected, inspecting, inspection, inspections, inspector, inspectors, inspects
intense	intensely, intenseness, intensification, intensified, intensifies, <i>intensify</i> , intensifying, intension, intensity, intensive, intensively
<i>manipulate</i>	manipulated, manipulates, manipulating, manipulation, manipulations, manipulative
<i>minimize</i>	minimized, minimizes, minimizing
nuclear	
<i>offset</i>	offsets, offsetting
<i>paragraph</i>	paragraphing, paragraphs
plus	pluses
practitioner	practitioners
predominant	predominance, predominantly, <i>predominate</i> , predominated, predominates, predominating

**Sublist 8 (continued)**

Headword	Word Families
<i>prospect</i>	prospective, prospects
radical	radically, radicals
random	randomly, randomness
<i>reinforce</i>	reinforced, reinforcement, reinforcements, reinforces, reinforcing
<i>restore</i>	restoration, restored, restores, restoring
<i>revise</i>	revised, revises, revising, revision, revisions
<i>schedule</i>	<i>reschedule</i> , rescheduled, reschedules, rescheduling, scheduled, schedules, scheduling, unscheduled
<i>tense</i>	tension, tensely, tenser, tensest, tensions
<i>terminate</i>	terminal, terminals, terminated, terminates, terminating, termination, terminations
theme	themes, thematic, thematically
thereby	
uniform	uniformity, uniformly
vehicle	vehicles
via	
virtual	virtually
visual	<i>visualize</i> , visualized, visualized, visualizing, visualization, visually
widespread	

**Sublist 9 of the AWL (33 verbs)**

Headword	Word Families
<i>accommodate</i>	accommodated, accommodates, accommodating, accommodation
analogy	analogies, analogous
<i>anticipate</i>	anticipated, anticipates, anticipating, anticipation, unanticipated
<i>assure</i>	assurance, assurances, assured, assuredly, assures, assuring

**Sublist 9 (continued)**

Headword	Word Families
<i>attain</i>	attainable, attained, attaining, attainment, attainments, attains, unattainable
behalf	
<i>bulk</i>	bulky
<i>cease</i>	ceased, ceaseless, ceases, ceasing
coherent	coherence, coherently, incoherent, incoherently
<i>coincide</i>	coincided, coincides, coinciding, coincidence, coincidences, coincident, coincidental
<i>commence</i>	commenced, commences, commencement, commencing, recommences, recommenced, recommencing
compatible	compatibility, incompatibility, incompatible
concurrent	concurrently
<i>confine</i>	confined, confines, confining, unconfined
controversy	controversies, controversial, controversially, uncontroversial
<i>converse</i>	conversely
device	devices
<i>devote</i>	devoted, devotedly, devotes, devoting, devotion, devotions
<i>diminish</i>	diminished, diminishes, diminishing, diminution, undiminished
<i>distort</i>	distorted, distorting, distortion, distortions, distorts
duration	
<i>erode</i>	eroded, erodes, eroding, erosion
ethic	ethical, ethically, ethics, unethical
<i>format</i>	formatted, formatting, formats
<i>found</i>	founded, founder, founders, founding, unfounded
inherent	inherently
insight	insightful, insights
integral	
intermediate	

**Sublist 9 (continued)**

Headword	Word Families
manual	manually, manuals
<i>mature</i>	immature, immaturity, maturation, maturational, matured, matures, maturing, maturity
<i>mediate</i>	mediated, mediates, mediating, mediation
medium	
military	
minimal	mineralization, <i>minimalize</i> , minimalizes, minimalized, minimalizing, minimalist, minimalists, minimalistic, minimally
mutual	mutually
norm	norms
<i>overlap</i>	overlapped, overlapping, overlaps
passive	passively, passivity
<i>portion</i>	portions
preliminary	preliminaries
protocol	protocols
qualitative	qualitatively
<i>refine</i>	refined, refinement, refinements, refines, refining
<i>relax</i>	relaxation, relaxed, relaxes, relaxing
<i>restrain</i>	restrained, restraining, restrains, restraint, restraints, unrestrained
revolution	revolutionary, revolutionaries, <i>revolutionize</i> , revolutionized, revolutionizes, revolutionizing, revolutionist, revolutionists, revolutions
rigid	rigidities, rigidity, rigidly
<i>route</i>	routed, routes, routing
scenario	scenarios
sphere	spheres, spherical, spherically
<i>subordinate</i>	subordinates, subordination
<i>supplement</i>	supplementary, supplemented, supplementing, supplements



**Sublist 9 (continued)**

Headword	Word Families
<i>suspend</i>	suspended, suspending, suspends, suspension
<i>team</i>	teamed, teaming, teams
temporary	temporarily
<i>trigger</i>	triggered, triggering, triggers
<i>unify</i>	unification, unified, unifies, unifying
<i>violate</i>	violated, violates, violating, violation, violations
vision	visions

**Sublist 10 of the AWL (13 verbs)**

Headword	Word Families
adjacent	
albeit	
<i>assemble</i>	assembled, assembles, assemblies, assembling, assembly
<i>collapse</i>	collapsed, collapses, collapsible, collapsing
colleague	colleagues
<i>compile</i>	compilation, compilations, compiled, compiles, compiling
<i>conceive</i>	conceivable, conceivably, conceived, conceives, conceiving, inconceivable, inconceivably
<i>convince</i>	convinced, convinces, convincing, convincingly, unconvinced
<i>depress</i>	depressed, depresses, depressing, depression
<i>encounter</i>	encountered, encountering, encounters
enormous	enormity, enormously
forthcoming	
<i>incline</i>	inclination, inclinations, inclined, inclines, inclining
integrity	
intrinsic	intrinsically

**Sublist 10 (continued)**

Headword	Word Families
<i>invoke</i>	invoked, invokes, invoking
<i>levy</i>	levies
likewise	
nonetheless	
notwithstanding	
odd	odds
ongoing	
panel	paneled, paneling, panels
<i>persist</i>	persisted, persistence, persistent, persistently, persisting, persists
<i>pose</i>	posed, poses, posing
reluctance	reluctant, reluctantly
so-called	
straightforward	
<i>undergo</i>	undergoes, undergoing, undergone, underwent
whereby	

*Source:*

Coxhead, A. (1998). *The Academic Word List*. [Online]. Available from:

<http://www.victoria.ac.nz/lals/staff/averil-coxhead/awl/download/awlsublists.pdf>

[2009, January 30]

## Appendix B

### List of Top 18 Most Frequent Academic Verbs

The followings are the top 18 most frequent verbs in written English based on frequency presented in Longman Dictionary of Contemporary English (LDOCE) (2009).

They are put in alphabetical order.

1. achieve
2. affect
3. assume
4. create
5. design
6. enable
7. ensure
8. establish
9. identify
10. indicate
11. involve
12. maintain
13. occur
14. publish
15. remove
16. require
17. reveal
18. seek

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## Appendix C

### Academic Verb Collocation Writing Ability Test

Date: \_\_\_\_\_

Room: \_\_\_\_\_

### Academic Verb Collocation Writing Ability Test

Name: _____	ID Number: _____
-------------	------------------

**Rules for test takers:**

1. This test paper consists of two parts, *Sentence Building* and *Writing Tasks*, with 12 pages. Should you have any questions, please ask the test proctor.
2. Read all questions carefully.
3. Do NOT take the test paper out of the room.

**For instructors' use only:**

Part	Task	Item(s)	Time (minutes)	Scores	Earned scores
I	Sentence Building	18	60	54	
II	Email	1	30	18	
	Storytelling	1	30	18	
	Essay	1	40	18	
<b>Total</b>		<b>21</b>	<b>160</b>	<b>108</b>	

1
---

### Section 1

#### Sentence Building (54 points)

This section of the test consists of 18 items. It is designed to measure your background knowledge of academic verb collocations of the 18 academic verbs.

**Time: 60 minutes (including the reading of the directions)**

**Directions:** Make a complete sentence with the given **VERBS** in the space provided.

You have to write every sentence; otherwise, three points will be deducted from the total scores for each incomplete item. (จงใช้คำกริยาดังต่อไปนี้ แต่งประโยคให้สมบูรณ์ลงในช่องว่างที่

กำหนดไว้ ขอให้นักศึกษาทำทุกข้อ มิฉะนั้นจะได้คะแนนติดลบในข้อที่นักศึกษาเว้นไว้)

Look at the following examples. (จงดูตัวอย่างดังต่อไปนี้)

#### Example I

- Conduct

**The researcher conducted the interview in English.**

**The interview was conducted in English.**

**May I conduct you to your table, or would you prefer to have a drink at the bar first?**

**Go on to the next page**



### Example II

- Deny

**He will not confirm or deny the allegations.**

**He denied himself all pleasures and luxuries.**

**She could deny her son nothing.**

**She could deny nothing to her son.**

**Jeff denies that he broke the window, but I'm sure he did.**

**Jeff denies breaking the window.**

1. Occur

---

2. Require


---

3. Achieve

---

4. Affect

---

**Go on to the next page** 



5. Assume

---

6. Create

---

7. Ensure

---

8. Establish

---

9. Identify

---

10. Involve

---

11. Maintain

---

12. Remove

---



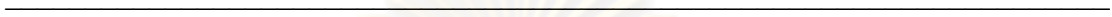
ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



13. Seek



14. Design



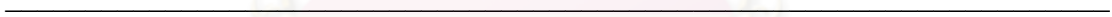
15. Enable



16. Indicate



17. Publish



18. Reveal



**This is the end of Section 1.**

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย





Name: \_\_\_\_\_ ID Number \_\_\_\_\_

**2****Section 2****Writing Tasks (72 points)**

This section of the test is designed to measure your English writing ability. It consists of three writing tasks: email, storytelling, and essay.

**Writing Task I: Email (18 points)**

**Time: 30 minutes (including the reading of the directions)**

**Directions:** You decide to enroll in the ENG-174 Writing Strategies course, but it is available only for 60 students and now it is full. The only way that you can register for this course is to contact the teacher via email. Write an email **containing 10-12 lines** to convince him/her that you really want to participate in this course. **Do NOT exceed** the

space provided. (คุณตัดสินใจที่จะลงทะเบียนในรายวิชา ENG-174 กลวิธีในการเขียน ซึ่งเปิดรับนักศึกษา

เพียง 60 คน และขณะนี้มีนักศึกษาลงทะเบียนเต็มจำนวนแล้ว มีเพียงวิธีเดียวที่คุณจะสามารถลงทะเบียนใน

รายวิชานี้เพิ่มได้ก็คือการติดต่ออาจารย์ผู้สอนผ่านทางอีเมลเท่านั้น จงเขียนอีเมลความยาวประมาณ 10-12

**บรรทัด** เพื่อให้อาจารย์ท่านนั้นเชื่อว่าคุณต้องการที่จะลงทะเบียนในรายวิชาดังกล่าวเป็นอย่างมาก ห้ามเขียน

เกินจำนวนบรรทัดที่กำหนดไว้)

**Go on to the next page**



2

2

2

2

2

2

2

2

2

2

### Writing Task II: Storytelling (18 points)

**Time: 30 minutes (including the reading of the directions)**

**Directions:** Look at these pictures and then tell the story containing 10-12 lines. Do

**NOT exceed** the space provided. (จงดูรูปภาพดังต่อไปนี้แล้วเขียนเล่าเรื่องความยาวประมาณ 10-12

บรรทัด ห้ามเขียนเกินจำนวนบรรทัดที่กำหนดไว้)



Hughes (2003: 92)

**Source:**

Hughes, A. (2003). *Testing for language teachers* (2nd ed.). Cambridge University Press.

Go on to the next page



2

2

2

2

2

2

2

2

2

2

### Writing Task III: Essay (36 points)

**Time: 40 minutes (including the reading of the directions)**

**Directions:** Write an essay containing 150-200 words on the following assigned topic.

**Do NOT exceed** the space provided. (จงเขียนเรียงความ ความยาวประมาณ 150-200 คำ ในหัวข้อที่กำหนดให้ ห้ามเขียนเกินจำนวนบรรทัดที่กำหนดไว้)

#### English is the Most Important Language in the World

(ภาษาอังกฤษเป็นภาษาที่สำคัญที่สุดในโลก)

Do you agree with this viewpoint? Use specific reasons and examples to support your ideas. (คุณเห็นด้วยกับความคิดนี้หรือไม่ จงบอกเหตุผลและยกตัวอย่างประกอบเพื่อสนับสนุนความคิดเห็นของคุณ)

ศูนย์วิทยทรัพยากร

จุฬาลงกรณ์มหาวิทยาลัย

Go on to the next page





## Appendix D

### Scoring Rubrics

The followings are the primary trait scoring rubric and analytic scoring rubric used in the study. The primary trait scoring rubric is used to evaluate students' collocations of the 18 academic verbs in the sentence building section, and the analytic scoring rubric is used to evaluate students' writing in the writing tasks section.

- *Primary trait scoring rubric developed from Jacobs et al. (1981) and O'Malley and Pierce (1996)*

Domain Score	Description
3	<ul style="list-style-type: none"> <li>• Use the main verb provided to create the sentence containing academic verb collocation correctly, without any errors.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Correct use of academic verb collocation of the main verb provided, but some errors with grammatical/mechanical usage are evident (e.g., verb-agreement, tense, number, word order, articles, pronouns, spelling, capitalization, punctuation).</li> </ul>



- *Primary trait scoring rubric* (continued)

Domain Score	Description
1	<p><i>Scenario 1:</i></p> <ul style="list-style-type: none"> <li>• Correct use of academic verb collocation of the main verb provided, but use <b>incomplete sentence</b>. Also, some errors with grammatical/mechanical usage are evident.</li> </ul> <p><i>Scenario 2:</i></p> <ul style="list-style-type: none"> <li>• Incorrect use of academic verb collocation of the main verb provided, and some errors with grammatical/mechanical usage are evident. However, <b>the meaning is still understandable</b>.</li> </ul>
0	<p><i>Scenario 1:</i></p> <ul style="list-style-type: none"> <li>• No sentence or academic verb collocation is presented.</li> </ul> <p><i>Scenario 2:</i></p> <ul style="list-style-type: none"> <li>• Incorrect use of academic verb collocation of the main verb provided, and some errors with grammatical/mechanical usage are evident. Also, <b>the meaning is confused or obscured</b>.</li> </ul>

- *Analytic scoring rubric adapted from Weir (1990)*

*A. Relevance and adequacy of content*

3. Relevant and adequate answer to the task set.
2. For the most part answers the tasks set, though there may be some gaps or redundant information.
1. Answer of limited relevance to the task set. Possibly major gaps in treatment of topic and/or pointless repetition.
0. The answer bears almost no relation to the task set. Totally inadequate answer.

*B. Compositional organization*

3. Overall shape and internal pattern clear. Organizational skills adequately controlled.
2. Some organizational skills in evidence, but not adequately controlled.
1. Very little organization of content. Underlying structure not sufficiently controlled.
0. No apparent organization of content.

*C. Cohesion*

3. Satisfactory use of cohesion resulting in effective communication.
2. For the most part satisfactory cohesion although occasional deficiencies may mean that certain parts of the communication are not always effective.
1. Unsatisfactory cohesion may cause difficulty in comprehension of most of the intended communication.
0. Cohesion almost totally absent. Writing so fragmentary that comprehension of the intended communication is virtually impossible.

- *Analytic scoring rubric* (continued)

*D. Adequacy of vocabulary for purpose*

3. Almost no inadequacies in vocabulary for the task. Only rare inappropriacies and/or circumlocution.
2. Some inadequacies in vocabulary for the task. Perhaps some lexical inappropriacies and/or circumlocution.
1. Frequent inadequacies in vocabulary for the task. Perhaps frequent lexical inappropriacies and/or repetition.
0. Vocabulary inadequate even for the most basic parts of the intended communication.

*E. Grammar*

3. Almost no grammatical inaccuracies.
2. Some grammatical inaccuracies.
1. Frequent grammatical inaccuracies.
0. Almost all grammatical patterns inaccurate.

*F. Mechanical accuracy (punctuation and spelling)*

3. Almost no inaccuracies in punctuation and spelling.
2. Some inaccuracies in punctuation and spelling.
1. Low standard of accuracy in punctuation and spelling.
0. Ignorance of conventions of punctuation and spelling.

## Appendix E

### List of Experts

#### *A. Experts validating the research instrument*

1. Dr. Jutarat Vibulphol  
(Lecturer in English at Faculty of Education, Chulalongkorn University)
2. Assistant Professor Dr. Anchalee Chayanuvat  
(Lecturer in English at School of Liberal Arts, Walailak University)
3. Mr. Wiroon Chayarak  
(Lecturer in English at School of Liberal Arts, Walailak University)

#### *B. Inter-rater*

1. Mr. David J. Weatherby  
(Lecturer in English at School of Liberal Arts, Walailak University)

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## Appendix F

### The Index of Congruency (IOC)

**Directions:** The IOC consists of two main parts: (1) checklist for validating the test items and (2) other comments/suggestions. To validate the content and organization of the academic verb collocation writing ability test used in this study, please put a tick (✓) in the box (*appropriate*, *not sure*, or *inappropriate*) that corresponds with your opinion about each item in the test. Also, please do not hesitate to give your suggestions or specific comments in the space provided.

#### Part I: Checklist for validating the test items

<b>Section I: Sentence building</b>				
<i>Objectives of the study:</i>				
<ul style="list-style-type: none"> <li>To explore the types and most frequent type, and the sources and most frequent source of academic verb collocation problems of undergraduate students majoring in English at Walailak University.</li> <li>To compare differences in the use of academic verb collocations among three groups of students: low, moderate, and high English language ability.</li> </ul>				
Items/Questions	Comments			Notes
	Appropriate	Not sure	Inappropriate	
1. Are the test items consistent with the objectives of the study?				

**Part I (continued)**

Items/Questions	Comments			Notes
	Appropriate	Not sure	Inappropriate	
2. Is the test format appropriate for the students' level of English proficiency?				
3. Are the directions clear?				
4. Is the time appropriate?				
5. Is the scoring appropriate?				
<b><i>Section II: Writing tasks</i></b>				
<i>Objective of the study:</i>				
<ul style="list-style-type: none"> <li>To examine the relationship between the use of academic verb collocations and writing ability among three groups of students.</li> </ul>				
<b><u>Writing Task I: Email</u></b>				
1. Is the test item consistent with the objective of the study?				
2. Is the writing task appropriate for the students' level of English proficiency?				
3. Are the directions clear?				
4. Is the time appropriate for this task?				
5. Is the scoring appropriate for this task?				

**Part I (continued)**

Items/Questions	Comments			Notes
	Appropriate	Not sure	Inappropriate	
<b><u>Writing Task II: Storytelling</u></b>				
1. Is the test item consistent with the objective of the study?				
2. Is the writing task appropriate for the students' level of English proficiency?				
3. Are the directions clear?				
4. Is the time appropriate for this task?				
5. Is the scoring appropriate for this task?				
<b><u>Writing Task III: Essay writing</u></b>				
1. Is the test item consistent with the objective of the study?				
2. Is the writing task appropriate for the students' level of English proficiency?				
3. Are the directions clear?				
4. Is the time appropriate for this task?				
5. Is the scoring appropriate for this task?				







## Appendix G

### Collocation Patterns of 18 Academic Verbs

The followings are collocation patterns of the 18 academic verbs based on the types of collocations proposed by Benson et al. (1986). They are used as guidelines for evaluating students' academic verb collocation knowledge. Examples of collocations are from dictionaries which are the BBI Combinatory Dictionary of English by Benson et al. (1986), Oxford Collocations Dictionary for Students of English by Dauter et al. (2002), and Longman Dictionary of Contemporary English by Adrian-Vallance et al. (2009). Words are put in alphabetical order.

#### 1. Achieve

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>Frances <i>achieved</i> very good exam <i>results</i>.</li> <li>It took her ten years to <i>achieve</i> her <i>ambition</i>.</li> </ul>
G8 (D)	Verb + preposition + object	<ul style="list-style-type: none"> <li>We want all our students to <i>achieve</i> <i>within their chosen profession</i>.</li> </ul>
G8 (Q)	Verb + wh-clause/wh-phrase	<ul style="list-style-type: none"> <li>We have <i>achieved</i> <i>what we set out to do</i>.</li> </ul>

## 2. Affect

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>It is known that poor housing significantly <i>affects</i> educational <i>achievement</i>.</li> </ul>
L7	Verb + adverb	<ul style="list-style-type: none"> <li><i>Affect adversely/deeply/badly/directly</i></li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>These difficulties will <i>affect the quality of her attention</i>.</li> </ul>
G8 (E)	Verb + to + infinitive	<ul style="list-style-type: none"> <li>He <i>affected not to hear</i>.</li> </ul>
G8 (Q)	Verb + wh-clause/wh-phrase	<ul style="list-style-type: none"> <li>Your attitude will <i>affect how successful you are</i>.</li> </ul>

## 3. Assume

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>She watched him <i>assume</i> the awkward <i>position</i>.</li> <li>Time with the family has started to <i>assume</i> greater <i>importance</i>.</li> </ul>

**Assume (continued)**

Type	Pattern	Examples
G8 (H)	Verb + object + to + infinitive	<ul style="list-style-type: none"> <li>This <i>score</i> is <i>assumed to represent</i> the achievement of an average 7-year old.</li> </ul>
G8 (L)	Verb + that-clause	<ul style="list-style-type: none"> <li>We <i>assumed that he was dead</i>.</li> <li>I didn't see your car, so I <i>assumed you'd gone out</i>.</li> </ul>
G8 (M)	Verb + object + to be + complement	<ul style="list-style-type: none"> <li>I have always <i>assumed her to be American</i>.</li> </ul>

**4. Create**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>Her behavior is <i>creating</i> a lot of <i>problems</i>.</li> <li>The new factory is expected to <i>create</i> more than 400 new <i>jobs</i>.</li> </ul>
G8 (N)	Verb + object + complement	<ul style="list-style-type: none"> <li>James I <i>created him Duke of Buckingham</i>.</li> </ul>

## 5. Design

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>The <i>tower</i> was <i>designed</i> by Gilbert Scott.</li> </ul>
G8 (C)	Verb + indirect object + for + direct object (= Verb + indirect object + direct object)	<ul style="list-style-type: none"> <li>He <i>designed</i> a <i>beautiful house</i> for us. (= He <i>designed</i> us a <i>beautiful house</i>.)</li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>The <i>course</i> is <i>designed</i> for <i>beginners</i>.</li> <li>The <i>book</i> is <i>designed</i> as a <i>reference manual</i>.</li> </ul>
G8 (H)	Verb + object + to + infinitive	<ul style="list-style-type: none"> <li>These <i>exercises</i> are <i>designed</i> to <i>strengthen muscles</i>.</li> </ul>

## 6. Enable

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>Enemy communications were destroyed, <i>enabling</i> a surprise <i>attack</i>.</li> </ul>

**Enable (continued)**

Type	Pattern	Examples
G8 (H)	Verb + object + to + infinitive	<ul style="list-style-type: none"> <li>The loan <i>enabled Jan to buy</i> the house.</li> <li>This will <i>enable users to conduct</i> live video conversations.</li> </ul>

**7. Ensure**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>The lifejacket had almost certainly <i>ensured her survival</i>.</li> </ul>
G8 (A)	Verb + indirect object + to + direct object (= Verb + indirect object + direct object)	<ul style="list-style-type: none"> <li>The present contract cannot <i>ensure you a job</i>.</li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>To <i>ensure workers against accidents</i>.</li> </ul>
G8 (K)	Verb + a possessive + verb in -ing	<ul style="list-style-type: none"> <li>I cannot <i>ensure his being</i> on time.</li> </ul>
G8 (L)	Verb + that-clause	<ul style="list-style-type: none"> <li>Our new research strategy <i>ensures that we get the best possible results</i>.</li> </ul>

**Ensure (continued)**

Type	Pattern	Examples
G8 (N)	Verb + object + complement	• She would <i>ensure him a place in society</i> .

**8. Establish**

Type	Pattern	Examples
L1	Verb + noun/pronoun	• The <i>company was established</i> in 1899.
L7	Verb + adverb	• <i>Establish firmly/securely</i>
G8 (D)	Verb + object + preposition + object	• He had three years in which to <i>establish himself as Prime Minister</i> .
G8 (L)	Verb + that-clause	• The police <i>established that she was innocent</i> .
G8 (Q)	Verb + wh-clause/wh-phrase	• I was never able to <i>establish whether she was telling the truth</i> .

## 9. Identify

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• He was too far away to be able to <i>identify faces</i>.</li> <li>• Scientists have <i>identified</i> the <i>gene</i> that causes abnormal growth.</li> </ul>
L7	Verb + adverb	<ul style="list-style-type: none"> <li>• <i>Identify clearly/easily/positively</i></li> </ul>
G8 (B)	Verb + indirect object + to + direct object (do not allow the dative movement transformation)	<ul style="list-style-type: none"> <li>• She <i>identified the intruder to the police</i>.</li> </ul>
G8 (D)	Verb + preposition + object Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• Humans can easily <i>identify with the emotional expressions of chimpanzees</i>.</li> <li>• He <i>identified himself as an old friend of the family</i>.</li> </ul>

## 10. Indicate

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• Each pin on the map <i>indicates</i> a district <i>office</i>.</li> </ul>



**Indicate (continued)**

Type	Pattern	Examples
L7	Verb + adverb	• <i>Indicate clearly</i>
G8 (B)	Verb + indirect object + to + direct object (do not allow the dative movement transformation)	• <i>They indicated her reasons to us.</i>
G8 (D)	Verb + object + prepositional phrase	• <i>He indicated the boss's office with a nod.</i>
G8 (L)	Verb + that-clause	• <i>Research indicates that over 81% of teachers are dissatisfied with their salary.</i>
G8 (Q)	Verb + wh-clause/wh-phrase	• <i>Test results will indicate whether the treatment was successful.</i>

**11. Involve**

Type	Pattern	Examples
L1	Verb + noun/pronoun	• <i>I didn't realize putting on a play involved so much work.</i>

**Involve (continued)**

Type	Pattern	Examples
L7	Verb + adverb	<ul style="list-style-type: none"> <li>• <i>Involve actively/deeply/directly/heavily</i></li> </ul>
G8 (D)	Verb + preposition + object Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• It's best not to <i>involve yourself in other people's private affairs.</i></li> <li>• We were <i>involved with the technical details.</i></li> </ul>
G8 (G)	Verb + verb in -ing	<ul style="list-style-type: none"> <li>• Running your own business usually <i>involves working</i> long hours.</li> </ul>
G8 (K)	Verb + a possessive + verb in -ing	<ul style="list-style-type: none"> <li>• That job would <i>involve my traveling</i> a great deal.</li> </ul>

**12. Maintain**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• The hotel prides itself on <i>maintaining</i> high <i>standards.</i></li> <li>• He has always <i>maintained</i> his <i>innocence.</i></li> </ul>
G8 (L)	Verb + that-clause	<ul style="list-style-type: none"> <li>• Critics <i>maintain that these reforms will lead to a decline in educational standards.</i></li> </ul>

**13. Occur**

Type	Pattern	Examples
L7	Verb + adverb	<ul style="list-style-type: none"> <li>• <i>Occur naturally</i></li> </ul>
G8 (D)	Verb + preposition + object	<ul style="list-style-type: none"> <li>• The thought of giving up never <i>occurred to me.</i></li> </ul>
G8 (P)	Verb + adverbial	<ul style="list-style-type: none"> <li>• The explosion <i>occurred at 5.30 a.m.</i></li> <li>• The accident <i>occurred while she was at school.</i></li> </ul>

**14. Publish**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• <i>The first edition was published in 1675.</i></li> </ul>
L7	Verb + adverb	<ul style="list-style-type: none"> <li>• <i>Publish recently</i></li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• <i>The results of the crime survey were published in June.</i></li> </ul>

## 15. Remove

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• <i>Remove</i> the old <i>wallpaper</i> and fill any holes in the walls.</li> <li>• She <i>removed</i> her <i>jacket</i> and hung it over the chair.</li> </ul>
G8 (D)	Verb + preposition + object Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• Some stains are difficult to <i>remove with ordinary washing powder</i>.</li> <li>• Medical crews <i>removed two people from the collapsed building</i>.</li> </ul>

## 16. Require

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• His broken leg will probably <i>require surgery</i>.</li> <li>• The cause of the accident is still unclear and <i>requires further investigation</i>.</li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>• She <i>requires a term paper of each student</i>.</li> </ul>

**Require (continued)**

Type	Pattern	Examples
G8 (G)	Verb + verb in -ing	<ul style="list-style-type: none"> <li>• The <i>house</i> requires <i>painting</i>.</li> <li>• Most <i>house plants</i> require regular <i>watering</i>.</li> </ul>
G8 (H)	Verb + object + to + infinitive	<ul style="list-style-type: none"> <li>• We <i>require all incoming students</i> to take <i>placement examinations</i>.</li> </ul>
G8 (K)	Verb + a possessive + verb in -ing	<ul style="list-style-type: none"> <li>• This position <i>requires your getting here</i> on time every day.</li> </ul>
G8 (L)	Verb + that-clause	<ul style="list-style-type: none"> <li>• Regulations <i>require that students attend at least 90% of the lectures</i>.</li> </ul>

**17. Reveal**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>• Doctors are not allowed to <i>reveal confidential information</i>.</li> </ul>
G8 (B)	Verb + indirect object + to + direct object (do not allow the dative movement transformation)	<ul style="list-style-type: none"> <li>• She <i>revealed the secret to us</i>.</li> </ul>

**Reveal (continued)**

Type	Pattern	Examples
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>The violinist <i>revealed himself as a talented interpreter of classical music.</i></li> </ul>
G8 (L)	Verb + that-clause	<ul style="list-style-type: none"> <li>He <i>revealed that he had been in prison twice before.</i></li> </ul>
G8 (M)	Verb + object + to be + compliment	<ul style="list-style-type: none"> <li>The document <i>revealed her to be a conscientious employee.</i></li> </ul>
G8 (Q)	Verb + wh-clause/wh-phrase	<ul style="list-style-type: none"> <li>Neither side <i>revealed what was discussed in the meeting.</i></li> </ul>

**18. Seek**

Type	Pattern	Examples
L1	Verb + noun/pronoun	<ul style="list-style-type: none"> <li>If the symptoms persist, <i>seek</i> medical advice.</li> <li>You must first <i>seek permission</i> before publishing their names.</li> </ul>
G8 (D)	Verb + object + preposition + object	<ul style="list-style-type: none"> <li>He <i>sought help from the police.</i></li> </ul>

**Seek (continued)**

Type	Pattern	Examples
G8 (E)	Verb + to + infinitive	<ul style="list-style-type: none"> <li>The law must <i>seek to protect</i> the democratic rights of citizens.</li> </ul>

*Sources:*

Adrian-Vallance, E., et al. (Eds.). (2009). *Longman dictionary of contemporary English* (5th ed.). Essex, England: Pearson Education.

Benson, M., Benson, E., and Ilson, R. (1986). *The BBI combinatory dictionary of English: A guide to word combinations*. Amsterdam: John Benjamins.

Dauter, M., Greenan, J., Noble., J., and Phillips, J (Eds.). (2002). *Oxford collocations dictionary for students of English*. Oxford University Press.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

## Appendix H

### List of Sources of Collocation Errors

The followings are the modification version of sources of collocation errors found in Liu's (1999b) study. It is used as a guideline for evaluating students' academic verb collocation knowledge in the sentence building section of the test.

#### 1. *False concept hypothesized*

False concept hypothesized refers to students' faulty comprehension of distinctions in the target language (Li, 2005). Some students might think that words such as *do*, *make*, and *take* were de-lexicalized verbs, so they can replace another one freely. For example, students would use *\*do plans* instead of *make plans*.

#### 2. *Ignorance of rule restrictions*

Ignorance of rule restrictions refers to “analogy and failure to observe the restrictions of existing structures” (Richards, 1973, as cited in Li, 2005: 25). For example, *\*to make Joyce surprise* (instead of *to make Joyce surprised*) was a false analogy of the construction of verb + object + infinitive.

#### 3. *Overgeneralization*

Students used overgeneralization when the item did not carry any obvious contrast to them. It was “the creation of one deviant structure in place of two regular structures on the basis of students' experience of the target language” (Li, 2005: 24). For instance, the students would use the collocation *\*am used to take* instead of *am used to taking*. They probably knew the combinations of *am used to something* and *used to do something*, but was unable to distinguish the two clearly.



#### 4. *Use of synonyms*

The use of synonyms is taken as “a straightforward application of the open choice principle” (Farghal and Obiedat, 1995, as cited in Li, 2005: 25). In other words, when students could not find a semantically correspondent collocation in Chinese, they would use a synonym to replace the target English collocation (Li, 2005). For instance, students might use *\*call at his parents* instead of *call on his parents*, and *\*receive other people’s opinion* instead of *accept other people’s opinions*.

#### 5. *Negative transfer*

Negative transfer, so-called L1 interference, means that students’ first language influences their production of collocations. The errors were normally caused by direct translation from L1 to L2. For example, the collocations like *\*listen his advice*, *\*arrive school*, and *\*wait your phone*, are understandable in Chinese, but they are not acceptable in English. Such words as *listen*, *arrive*, and *wait* are intransitive verbs, so they cannot be directly followed by a noun. However, this rule does not exist in Chinese.

#### 6. *Word coinage*

Word coinage means that students make up a new word in order to communicate the desire concept (Tarone, 1978). For example, students would use *\*to see sun-up* instead of *to see the sunrise*.

#### 7. *Approximation*

Approximation means that students use a vocabulary item or structure, which students knows that it is incorrect, but which shares enough semantic features in

common with the desired item to satisfy the speaker (Tarone, 1978). For example, the word *middle* in *\*middle exam* was used to mean mid-term in *midterm exam*.

In addition, Li (2005) stated that some errors possibly occurred from the similarity of spelling and pronunciation between words. For example, students would make collocation errors like *\*entrance the university* instead of *enter the university*, and *\*punished us seriously* instead of *punished us severely*.

8. *No or incomplete collocations presented*

No or incomplete collocations presented occurred when students tended not to write any collocations of the main academic verbs provided. Moreover, they attempted to write something in the test paper, but they were unable to continue because of language difficulties.

## Appendix I

### Evaluation Form

This evaluation form is designed to check the inter-rater reliability value of the scoring. It consists of two main parts: (1) checklist for grading the *sentence building* section of the test, and (2) checklist for grading the *writing tasks* section of the test.

#### Part I: Checklist for grading the sentence building section of the test

**Directions:** Please use the primary trait scoring rubric below to *circle* ○ the number that corresponds with your evaluation of each test item in the sentence building section. Besides, please give your comments in the space provided if possible.

#### *Primary trait scoring rubric*

Domain Score	Description
3	<ul style="list-style-type: none"> <li>• Use the main verb provided to create the sentence containing academic verb collocation correctly, without any errors.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Correct use of academic verb collocation of the main verb provided, but some errors with grammatical/mechanical usage are evident (e.g., verb-agreement, tense, number, word order, articles, pronouns, spelling, capitalization, punctuation).</li> </ul>
1	<p><i>Scenario 1:</i></p> <ul style="list-style-type: none"> <li>• Correct use of academic verb collocation of the main verb provided, but use <b>incomplete sentence</b>. Also, some errors with grammatical/mechanical usage are evident.</li> </ul>

*Primary trait scoring rubric (continued)*

Domain Score	Description
1	<p><i>Scenario 2:</i></p> <ul style="list-style-type: none"> <li>Incorrect use of academic verb collocation of the main verb provided, and some errors with grammatical/mechanical usage are evident. However, <b>the meaning is still understandable.</b></li> </ul>
0	<p><i>Scenario 1:</i></p> <ul style="list-style-type: none"> <li>No sentence or academic verb collocation is presented.</li> </ul> <p><i>Scenario 2:</i></p> <ul style="list-style-type: none"> <li>Incorrect use of academic verb collocation of the main verb provided, and some errors with grammatical/mechanical usage are evident. Also, <b>the meaning is confused or obscured.</b></li> </ul>

Items	Words	Rating Scales				Comments
		3	2	1	0	
1	occur	3	2	1	0	
2	require	3	2	1	0	
3	achieve	3	2	1	0	
4	affect	3	2	1	0	
5	assume	3	2	1	0	
6	create	3	2	1	0	
7	ensure	3	2	1	0	

**Part I (continued)**

Items	Words	Rating Scales				Comments
		3	2	1	0	
8	establish	3	2	1	0	
9	identify	3	2	1	0	
10	involve	3	2	1	0	
11	maintain	3	2	1	0	
12	remove	3	2	1	0	
13	seek	3	2	1	0	
14	design	3	2	1	0	
15	enable	3	2	1	0	
16	indicate	3	2	1	0	
17	publish	3	2	1	0	
18	reveal	3	2	1	0	
<b>Total</b>						

**Part II: Checklist for grading the writing tasks section of the test**

**Directions:** Please use the analytic scoring rubric below to *circle* ○ the number that corresponds with your evaluation of each writing task. In addition, please give your comments in the space provided if possible.

*Analytic scoring rubric**A. Relevance and adequacy of content*

3. Relevant and adequate answer to the task set.
2. For the most part answers the tasks set, though there may be some gaps or redundant information.
1. Answer of limited relevance to the task set. Possibly major gaps in treatment of topic and/or pointless repetition.
0. The answer bears almost no relation to the task set. Totally inadequate answer.

*B. Compositional organization*

3. Overall shape and internal pattern clear. Organizational skills adequately controlled.
2. Some organizational skills in evidence, but not adequately controlled.
1. Very little organization of content. Underlying structure not sufficiently controlled.
0. No apparent organization of content.

*C. Cohesion*

3. Satisfactory use of cohesion resulting in effective communication.
2. For the most part satisfactory cohesion although occasional deficiencies may mean that certain parts of the communication are not always effective.
1. Unsatisfactory cohesion may cause difficulty in comprehension of most of the intended communication.
0. Cohesion almost totally absent. Writing so fragmentary that comprehension of the intended communication is virtually impossible.

*Analytic scoring rubric (continued)*

*D. Adequacy of vocabulary for purpose*

3. Almost no inadequacies in vocabulary for the task. Only rare inappropriacies and/or circumlocution.
2. Some inadequacies in vocabulary for the task. Perhaps some lexical inappropriacies and/or circumlocution.
1. Frequent inadequacies in vocabulary for the task. Perhaps frequent lexical inappropriacies and/or repetition.
0. Vocabulary inadequate even for the most basic parts of the intended communication.

*E. Grammar*

3. Almost no grammatical inaccuracies.
2. Some grammatical inaccuracies.
1. Frequent grammatical inaccuracies.
0. Almost all grammatical patterns inaccurate.

*F. Mechanical accuracy (punctuation and spelling)*

3. Almost no inaccuracies in punctuation and spelling.
2. Some inaccuracies in punctuation and spelling.
1. Low standard of accuracy in punctuation and spelling.
0. Ignorance of conventions of punctuation and spelling.

<b><u>Writing Task I: Email</u></b>					
<b>Aspects</b>	<b>Rating Scales</b>				<b>Comments</b>
1. Relevance and adequacy of content	3	2	1	0	
2. Compositional organization	3	2	1	0	
3. Cohesion	3	2	1	0	
4. Adequacy of vocabulary for purpose	3	2	1	0	
5. Grammar	3	2	1	0	
6. Mechanical accuracy (punctuation & spelling)	3	2	1	0	
<b>Total</b>					

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



<b><u>Writing Task II: Storytelling</u></b>					
<b>Aspects</b>	<b>Rating Scales</b>				<b>Comments</b>
1. Relevance and adequacy of content	3	2	1	0	
2. Compositional organization	3	2	1	0	
3. Cohesion	3	2	1	0	
4. Adequacy of vocabulary for purpose	3	2	1	0	
5. Grammar	3	2	1	0	
6. Mechanical accuracy (punctuation & spelling)	3	2	1	0	
<b>Total</b>					

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

<b><u>Writing Task III: Essay</u></b>					
<b>Aspects</b>	<b>Rating Scales</b>				<b>Comments</b>
1. Relevance and adequacy of content	3	2	1	0	
2. Compositional organization	3	2	1	0	
3. Cohesion	3	2	1	0	
4. Adequacy of vocabulary for purpose	3	2	1	0	
5. Grammar	3	2	1	0	
6. Mechanical accuracy (punctuation & spelling)	3	2	1	0	
<b>Total</b>					

.....  
 ศูนย์วิทยทรัพยากร  
 (.....)  
 จุฬาลงกรณ์มหาวิทยาลัย  
**Date:** ..... / ..... / .....

Inter-rater

## BIOGRAPHY

Sira Bhumadhana was born on April 11<sup>th</sup>, 1984 at Hat Yai District, Songkhla Province. He obtained his bachelor's degree (1<sup>st</sup> class honor) majoring in English and minoring in Chinese from School of Liberal Arts, Walailak University. After graduation, he continued his master's degree in Teaching English as a Foreign Language, Faculty of Education, Chulalongkorn University.



ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย