การแปรทางวากยสัมพันธ์ของคำกริยาวิเศษณ์ภาษาอังกฤษ
ที่ปรากฏในภาษาในระหว่างของผู้เรียนไทย

นายรนนท์ รุ่งนภาเวทย์

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THE SYNTACTIC VARIATION OF ENGLISH ADVERBS
IN THE INTERLANGUAGE OF THAI LEARNERS

Mr. Rananda Rungnaphawet

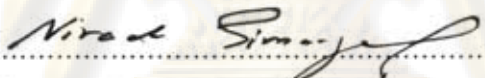|	
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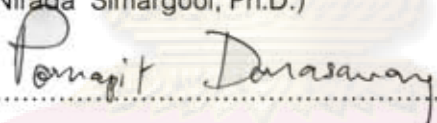
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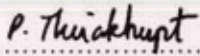
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รนนท์ รุ่งนภาเวทย์ : การแปรทางวากยสัมพันธ์ของคำกริยาวิเศษณ์ภาษาอังกฤษที่ปรากฏในภาษาในระหว่าง
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(THE SYNTACTIC VARIATION OF ENGLISH ADVERBS IN THE
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การวิจัยนี้ศึกษาการแปรทางวากยสัมพันธ์ของคำกริยาวิเศษณ์ภาษาอังกฤษที่ปรากฏในภาษาในระหว่างของผู้เรียนไทย
ในด้านตำแหน่งการเติมต่อ (positions of adjunction) และพัฒนาการด้านนี้เป็นระยะเวลา 2 ปี ซึ่งแบ่งออกเป็น 4 ช่วง โดย
ใช้กรอบทฤษฎี Principles and Parameters ตำแหน่งการเติมต่อ หมายถึง ตำแหน่งระดับประโยคที่คำกริยาวิเศษณ์ปรากฏ
การศึกษานี้แบ่งคำกริยาวิเศษณ์ตามตำแหน่งการเติมต่อ 12 ตำแหน่ง และตามความหมาย 37 ประเภท

ในด้านตำแหน่งการเติมต่อ ตัวแปรด้านความประชิด (the adjacency parameter) ได้ถูกนำมาประยุกต์ใช้ ตาม
ตัวแปรนี้ ภาษาอังกฤษเป็นภาษาที่มีลักษณะ [+/-strict adjacency] ในขณะที่ภาษาไทยเป็นภาษาแบบ [+strict
adjacency] ดังนั้น การเติมต่อกลางประโยคจึงเป็นไปได้ในภาษาอังกฤษเท่านั้น จากลักษณะดังกล่าว ไวยากรณ์ภาษาไทยจึง
เป็นเซตย่อยของไวยากรณ์ภาษาอังกฤษ ดังนั้น การที่ผู้เรียนไทยจะเรียนรู้ตำแหน่งการเติมต่อในภาษาอังกฤษ จะต้องมีการเปลี่ยน
ค่าจาก [+strict adjacency] เป็น [+/-strict adjacency] โดยอาศัย positive evidence ในด้านความประชิด (the
adjacency condition) พบว่ากลุ่มเจ้าของภาษาใช้คำกริยาวิเศษณ์เท่ากันในตำแหน่งต้นประโยคและกลางประโยค ในทาง
ตรงกันข้าม กลุ่มผู้เรียนใช้คำกริยาวิเศษณ์ในตำแหน่งต้นประโยคมากกว่ากลางประโยค ซึ่งแสดงให้เห็นแนวโน้มของการถ่าย
โอนค่า [+strict adjacency] ของภาษาไทย ถึงแม้จะเกิดการถ่ายโอนดังกล่าว กลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษาระดับสูงใช้
คำกริยาวิเศษณ์ในทั้ง 12 ตำแหน่งเช่นเดียวกับกลุ่มเจ้าของภาษา ส่วนกลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษาระดับกลางใช้คำกริยา
วิเศษณ์ใน 9 ตำแหน่ง พัฒนาการทั้งในด้านความประชิดและตำแหน่งการเติมต่อเกิดขึ้นอย่างช้า ๆ อย่างไรก็ดี ความผันผวนใน
ด้านความประชิดเกิดขึ้นมากกว่าในกลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษาระดับกลาง ในขณะที่กลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษา
ระดับสูงใช้คำกริยาวิเศษณ์ในตำแหน่งเติมต่อใหม่ ๆ มากกว่า

นอกจากตัวแปรด้านความประชิดแล้ว ตัวแปรด้านคำศัพท์ (the lexical parameter) ก็ถูกนำมาใช้ในการศึกษา
ด้วย ในด้านนี้ คำกริยาวิเศษณ์ภาษาอังกฤษในทุกกลุ่มความหมายสามารถปรากฏในตำแหน่งระดับประโยคได้หลายตำแหน่ง
ในทางตรงกันข้าม คำกริยาวิเศษณ์ภาษาไทยสามารถปรากฏได้เฉพาะในตำแหน่งต้นประโยคหรือท้ายประโยคเท่านั้น ขึ้นอยู่กับ
ประเภทความหมาย ดังนั้นข้อมูลด้านวากยสัมพันธ์ในคำกริยาวิเศษณ์ภาษาไทยจึงเป็นเซตย่อยของข้อมูลด้านวากยสัมพันธ์ใน
คำกริยาวิเศษณ์ภาษาอังกฤษ การรับภาษาในด้านตำแหน่งการเติมต่อจึงต้องอาศัยการเปลี่ยนค่าในระดับคำศัพท์ โดยอาศัยข้อมูล
ภาษาที่ 2 พบว่ากลุ่มเจ้าของภาษาใช้คำกริยาวิเศษณ์ส่วนใหญ่ในตำแหน่งที่หลากหลายกว่ากลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษา
ระดับสูง ซึ่งก็ใช้คำกริยาวิเศษณ์ในตำแหน่งที่หลากหลายกว่ากลุ่มผู้เรียนที่มีสมิทธิภาพทางภาษาระดับกลาง อย่างไรก็ตาม
ผู้เรียนทั้ง 2 กลุ่มสามารถใช้คำกริยาวิเศษณ์ในตำแหน่งที่ไม่ปรากฏในภาษาไทย ข้อมูลดังกล่าวแสดงถึงทั้งการถ่ายโอนของ
ภาษาไทยและการเปลี่ยนค่าคำศัพท์เพื่อให้สอดคล้องกับภาษาอังกฤษ

การวิเคราะห์การมีลักษณะต่างจากทั่วไปของตำแหน่งการเติมต่อต่าง ๆ แสดงให้เห็นว่าตำแหน่งที่มีลักษณะต่างน้อย
กว่าจะเกิดการรับภาษาก่อนตำแหน่งที่มีลักษณะต่างมากกว่า นอกจากนี้ ระดับความต่างและลำดับการรับภาษายังมีสอดคล้องกับ
ประมาณการเติมต่อในตำแหน่งเหล่านั้นที่พบในข้อมูลเจ้าของภาษา ซึ่งแสดงให้เห็นว่ามีความสัมพันธ์ระหว่างความถี่ข้อมูล
ภาษาและระดับการมีลักษณะต่างจากทั่วไป

ยิ่งไปกว่านั้น ปัจจัยด้านภาษาในระหว่างยังมีส่วนในการพัฒนาภาษาในระหว่างของผู้เรียนไทย ซึ่งได้แก่ การถ่ายโอน
ภาษา การถ่ายโอนการเรียนรู้ พฤติกรรมเลี่ยง และการใช้กฎผิดประเภท (overgeneralization) สามปัจจัยแรกมีผลต่อผู้เรียน
ที่มีสมิทธิภาพทางภาษาระดับกลางมากกว่าผู้เรียนที่มีสมิทธิภาพทางภาษาระดับสูง ส่วนปัจจัยที่สี่เป็นปัญหาสำคัญต่อผู้เรียนทั้ง
สองกลุ่ม

สาขาวิชา	ภาษาอังกฤษเป็นภาษานานาชาติ	ลายมือชื่อนิสิต	
ปีการศึกษา	2550	ลายมือชื่ออาจารย์ที่ปรึกษา	

4689698520   : MAJOR ENGLISH AS AN INTERNATIONAL LANGUAGE
KEYWORD: SYNTACTIC VARIATION/ENGLISH ADVERBS/INTERLANGUAGE/ THAI LEARNERS/POSITIONS OF ADJUNCTION/ L1 TRANSFER

RANANDA RUNGNAPHAWET: THE SYNTACTIC VARIATION OF ENGLISH ADVERBS IN THE INTERLANGUAGE OF THAI LEARNERS. THESIS ADVISOR: NIRADA SIMARGOOL, Ph.D., 248 pp.

This dissertation explores within the Principles and Parameters theory the syntactic variation of English adverbs in the interlanguage of Thai learners with respect to the range of positions of adjunction relative to the clause. It also investigates how this develops during a period of two years, divided into four stages. In this study, adverbs were categorised into twelve positions of adjunction and 37 semantic types. The subjects were five advanced and five intermediate Thai learners of English.

The adjacency parameter was first applied. According to the parameter, English is a [+/-strict adjacency] language, whereas Thai is a [+strict adjacency] language, and so clause-medial adjunction is permitted only in the former. That is, Thai grammar is a subset of that of English. Thus, in order for Thai learners to acquire the range of positions of adjunction in English, parameter resetting from the [+strict adjacency] value to the [+/-strict adjacency] value is needed, based on positive evidence. Regarding the adjacency condition, the native group placed adverbs quite equally between the clause-initial and the clause-medial positions. On the other hand, the learner groups put much more adverbs clause-initially. This indicates the likelihood that the [+strict adjacency] setting of Thai was being transferred and parameter resetting in this respect was partial. Despite this fact, the advanced group was on a par with the native group, placing adverbs in all the twelve positions being investigated, whereas the intermediate group put adverbs mostly in nine positions. The development in both regards was generally gradual for both groups, although the adjacency condition fluctuated more for the intermediate group, while the advanced group attempted more new positions of adjunction.

In addition to the adjacency parameter, the lexical parameter was adapted. According to this parameter, English adverbs, regardless of their semantic categories, are allowed to adjoin in many clausal positions, whereas those in Thai can generally adjoin only clause-initially *or* clause-finally, depending on their semantic types. That is, the syntactic specifications of Thai adverbs form a subset of those of English adverbs. Thus, the acquisition of the range of positions of adjunction again requires parameter resetting based on the L2 data, but this time at the lexical level. It was found that the natives placed adverbs in the majority of the 37 semantic classes in more positions than the advanced learners, whose range of positions of adjunction was broader than that of the intermediate learners. However, both groups of learners put adverbs in more positions than possible in their L1. This likely shows the effect of L1 transfer and partial resetting to accommodate the lexical parameter of the L2.

An analysis of the markedness of different positions of adjunction reveals that the less marked positions were acquired before the marked ones. Also, the degree of markedness and thus the acquisition order seemed to correspond with the degrees of adjunction in those positions identified in the native data, suggesting some correlation between frequency and the extent of markedness.

Finally, several interlanguage aspects might play a part in shaping the Thai learners' interlanguage, namely language transfer, transfer of training, avoidance behaviour, and overgeneralisation. The first three affected the intermediate learners to a greater extent than the advanced learners, whereas the last was a major difficulty confronting both groups of learners.

Field of Study English as an International Language Student's Signature...*Rananda R.*

Academic year   2007   Advisor's Signature...

ACKNOWLEDGEMENTS

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ศูนย์วิทยทรัพยากร
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List of Abbreviations

AC	Adverb class
ACC	Accusative
Adj	Adjective
AdjP	Adjective Phrase
Adv, A	Adverb
AdvP	Adverb Phrase
Agr	Agreement
AgrP	Agreement Phrase
Aux	Auxiliary
BNC	British National Corpus
Comp	Complement
COMP	Complementiser
CP	Complementiser Phrase
CU-TEP	Chulalongkorn University Test of English Proficiency
DECL	Declarative
D-structure	Deep structure, underlying structure
EIL	English as an international language
ESL	English as a second language
FSL	French as a second language
I	Inflection
IP	Inflection Phrase
L1	First language
L2	Second language
LF	Logical Form
Mod	Modal
ModP	Modal Phrase
N	Noun
Neg	Negation
NegP	Negation Phrase
NOM	Nominative
NP	Noun Phrase
O	Object
P	Preposition
P&P	Principles and Parameters
PF	Phonetic Form
PP	Prepositional Phrase
PROG	Progressive
PS	Phrase structure
PST	Past
PSV	Passive
QP	Question particle
S	Subject
SLA	Second language acquisition

Spec	Specifier
S-structure	Syntactic structure, surface structure
T	Tense
TOEFL	Test of English as a Foreign Language
TP	Tense Phrase
UG	Universal grammar
V	Verb
VP	Verb Phrase
X	Any type of constituent
X'	X-bar, single bar projection
XP	Maximal projection
θ	Theta

TRANSCRIPTION GUIDE

1. Consonants

	Labial	Alveolar	Palatal	Velar	Glottal
Stop, +voice −aspirated	b	d			?
Stop, −voice −aspirated	p	t	c	k	
Stop, −voice +aspirated	ph	th	ch	kh	
Fricative	f	s			h
Semivowel	w		j		
Nasal	m	n		ng	
Lateral		l			
Trill		r			

2. Vowels

	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
Close	i	ii	v	vv	u	uu
Mid	e	ee	q	qq	o	oo
Open	x	xx	a	aa	@	@@

Diphthongs: /ia/, /iia/, /va/, /vva/, /ua/, /uua/

3. Tones

Mid	=	0
Low	=	1
Falling	=	2
High	=	3
Rising	=	4

ศูนย์วิทยทรัพยากร

จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER I

INTRODUCTION

This dissertation deals with the syntactic variation of English adverbs in the interlanguage of Thai learners in terms of *positions of adjunction*, as shown in (1).

(1)

    a.   *Possibly*, they may have been sent to London.
    b.   They *possibly* may have been sent to London.
    c.   They may *possibly* have been sent to London.
    d.   They may have *possibly* been sent to London.
    e.   They may have been sent to London, *possibly*.
    (Adapted from Quirk *et al.*, 1985: 490f [1], cited in Hoye, 1997: p. 148)

All the examples given in (1) show some possible positions of adverbial adjunction in English: *possibly* adjoins in the clause-initial position in (1a), between the subject and the verbal construction in (1b), between a modal and an auxiliary in (1c), between two auxiliaries in (1d), and in the clause-final position in (1e).

1.1 Background of the study

A large number of theoretical works have described adverbs in terms of positions of adjunction (e.g. Aarts, 1997; Biber *et al.*, 1999; Ernst, 2002; Huddleston and Pullum, 2002; Jackendoff, 1972; Ouhalla, 1999; Radford, 1988; Roberts, 1997; Stowell, 1981). However, the issue has been explored from the SLA perspective in only a few articles. For example, Johansson and Dahl (1982) explored adjunction patterns among Norwegian learners of English L2. These learners were found to adjoin adverbs in the position between the verbal construction and the rest of the clause (e.g. *The solicitor glanced curiously at him* [p. 117]), the position preferred in

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[1] *The Comprehensive Grammar of the English Language (CGEL)*

Norwegian but, according to the native controls' responses, disfavoured in English. They also placed adverbs in the pre-verbal position (e.g. *He gently opened the door* [p. 116]) although their L1 does not demonstrate a possibility for adjunction there. In another study, White (1989a) examined whether French learners of English and English learners of French allowed adverbial adjunction in the position between the verb and the direct object (e.g. *He ate quickly the cookies*), which is grammatical in French but ungrammatical in English. It was found that adjunction in this position was accepted by the French learners to a larger degree than by the English controls, and that the English learners were more unlikely to accept post-verbal adjunction than the French controls. It is worth noting that White (1989a) is the only one who explained the relation between L1 transfer and positions of adjunction in terms of the adjacency condition (Further details are presented in 2.3.6 and 4.7.1).

In addition to this dearth of research is another problem concerning generalisability. The above studies report on only the learners whose L1 and L2 share certain morphological and syntactic similarities. Morphologically, Norwegian, French, and English are all inflectional languages. For example, Norwegian verbs are inflected for mood and tense (Strandskogen and Strandskogen, 1986), while French and English verbs are inflected for tense and number (Roberts, 1997). In addition, adverbs are morphologically marked in all these languages. Syntactically, they permit adjunction in many corresponding positions, i.e. clause-initial, clause-medial (e.g. between an auxiliary and a main verb or between two auxiliaries), and clause-final (e.g. Johansson and Dahl, 1982; White, 1991a, 1991b). These morphological and syntactic features are in contrast with those in Thai, in which verbs are not inflected, and categories are not morphologically marked. Additionally, the majority of adverbs are allowed only in the clause-initial *or* the clause-final position, whereas the clause-medial positions, like that between the

subject and the verb or that between an auxiliary and a main verb, are reserved for adverbs in a few semantic classes such as CONSEQUENTIAL or RESTRICTIVE adverbs (Further details on Thai are presented in 2.3.1 to 2.3.4). Thus, the results from the SLA studies mentioned above are difficult to generalise to Thai learners, whose L1 exhibits markedly different morphological and syntactic properties.

1.2 Research questions

The above discussion leads to the following research questions:

1. What is the range of positions of adjunction in the interlanguage of intermediate and advanced Thai learners, in comparison with that in the language of native speakers of English? What is/are the reason(s) for its occurrence?

2. How does Thai learners' interlanguage with respect to the range of positions of adjunction develop over a period of two years? What is the extent of L1 transfer in terms of the adjacency condition during this period?

1.3 Objectives of the study

The objectives of this study are as follows:

1. To compare the range of positions of adjunction in the interlanguage of intermediate and advanced Thai learners with that in the language of native speakers of English.

2. To explore how the interlanguage of Thai learners with regard to the range of positions develops over a period of two years.

3. To examine the degree of L1 transfer in terms of the adjacency condition during the period of investigation.

4. To discover the reasons behind Thai learners' acquisition of adverb placement in English.

1.4 Statement of hypotheses

1. The language of native speakers of English will show a wider range of positions of adjunction than the interlanguage of Thai learners.

2. The interlanguage of advanced Thai learners will exhibit a broader range of positions of adjunction than that of intermediate Thai learners.

3. The interlanguage of intermediate and advanced Thai learners will show a broader range of positions of adjunction over time.

4. At the end of the two-year period, the interlanguage of advanced Thai learners will approximate the language of native speakers of English to a larger degree than that of intermediate Thai learners.

1.5 Significance of the research

1. This study is one of the very few which focuses on how adverbs are acquired by L2 learners (Johansson and Dahl, 1982; Selinker, 1969; White, 1989a), whereas most research investigates the acquisition of an L2, exploring adverbs only in passing (e.g. Smyth, 1987; Ubol, 1981). When this issue is focused upon, it is often explored in terms of errors (e.g. Dissosway, 1984), but less from the acquisitional perspective.

2. Among the few studies on the subject, this research is the only long-term study. Thus, claims can be made about how the acquisition of adverbs develops as well as how such development forms into a pattern.

3. The present study can hopefully play a part in raising language teachers' awareness on the importance of adverbs and how they are used by native speakers of English. Additionally, the findings on native speakers can be applied in course and materials development.

1.6 Scope

The present study aims to investigate the syntactic variation of English adverbs in the interlanguage of Thai learners with respect to positions of adjunction and how this develops over a period of two years. Both cross-sectional and long-term investigations were conducted. Data were collected from *the writings of five intermediate Thai learners*, forming *the intermediate English corpus*, and *five advanced Thai learners of English*, forming *the advanced English corpus*. These were divided into four stages, i.e. four academic terms. Also, data were collected from *the writings of native (or near-native) users of English*, forming *the baseline corpus* with approximately the same size as that of the intermediate and the advanced English corpora. The baseline corpus was examined first to provide a basis for further comparisons. Then, at each of the four stages forming the two-year period, the intermediate and the advanced English corpora were analysed in relation to the baseline corpus and to one another. This procedure enables both intra-group and inter-group comparisons across the four stages.

1.6.1 The range of positions of adjunction

Only the range of positions of adjunction relative to the clause (e.g. *They will perhaps take Syntax 101*) was investigated. On the other hand, adjunction to *adjectival phrases (AdjP)* (e.g. *This poorly written paper is difficult to read*) or *adverbial phrases (AdvP)* (e.g. *The work proceeds relatively quickly*) was excluded. This is because AdjPs and AdvPs permit only left adjunction. The clause, in contrast, allows left adjunction in the clause-initial position or the clause-medial positions as well as right adjunction in the clause-final position[2], as shown in (1) above. Furthermore, AdjPs and AdvPs do not accommodate parenthetical adverbs or lexical-phrase adverbs (e.g. **a, cleverly, written paper* or **the as a consequence changing personality*), which are possible in the clause (e.g. *He has, cleverly, answered the question* or *She has as a consequence changed from a reserved child to a talkative woman*).

1.6.2 Parenthetical and integrated adverbs

Both parenthetical adverbs, i.e. those which are prosodically detached or typographically marked by commas, as in *He has, cleverly, answered the question*, and integrated adverbs, i.e. those which are not, as in *He has cleverly answered the question*, were examined. Although the two types have different semantico-pragmatic constraints and consequences[3], they will be included in the analysis due to the following reasons. First, their syntactic behaviours in terms of positions of adjunction are generally relatively similar (cf. Cobb, 2006b; Wyner, 1994, cited in

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[2] However, this generalisation does not apply to what Ernst (2002) calls *pure manner adverbs* (e.g. *tightly, partially*), i.e. strict VP-adverbs, which cannot adjoin clause-initially or clause-medially in the pre-verbal construction when the clause contains a modal or an auxiliary or both, e.g. *(*Tightly,) She (*tightly) might (tightly) hold the rope (tightly)*. Other adverbs with such a restriction include, for example, *badly, bitterly, carefully, completely, deftly, entirely, fully, intensely, softly,* and *terribly*. Further discussions on this issue can be found in Austin, Engelberg, and Rauh (2004), Cobb (2006a), Czaykowska-Higgins (1985), Ernst (2002, 2004), Radford (1988), and Shaer (2004).
[3] The semantics and pragmatics of adverbs are beyond the scope of this research, which addresses English adverbs the interlanguage of Thai learners in terms of syntax.

Cobb, 2006b). As exemplified in (2) and (3), the positions to the left of a main verb and to the right of VP are possible for both parenthetical and integrated adverbs. Only the clause-initial position or the position between the subject and the first auxiliary is more appropriate for parenthetical adverbs.

(2)
- a. Cleverly, Ross has hidden the biscuits.
- b. Ross, cleverly, has hidden the biscuits.
- c. Ross has, cleverly, hidden the biscuits.
- d. Ross has hidden the biscuits, cleverly.

(3)
- a. *Cleverly Ross has hidden the biscuits.
- b. *Ross cleverly has hidden the biscuits.
- c. Ross has cleverly hidden the biscuits.
- d. Ross has hidden the biscuits cleverly.

(Adapted from Cobb, 2006b: p. 14)

(2a) and (2b) together with (3a) and (3b) show that *cleverly*, a VP-RELATED adverb, can adjoin in the clause-initial position and between the subject and the auxiliary only when it is used parenthetically. In contrast, (2c) and (2d) together with (3c) and (3d) illustrate that the position between an auxiliary and a main verb as well as the clause-final position can take both parenthetical and integrated adverbs.

Secondly, if parenthetical adverbs had not been taken into account, a large number of adverbs would have been excluded, since there is great variation in the use of commas, "some authors putting in such commas far more often than others" (Huddleston and Pullum, 2002: p. 577). This is particularly the case for adverbs showing interclausal connections since they adjoin in the clause-initial position or in the position between the subject and the verbal construction, where detachment with commas is natural (Huddleston and Pullum, 2002). Furthermore, these adverbs, according to Biber *et al.* (1999), constitute the majority of those

used in academic prose. For these reasons, it was necessary to include both integrated and parenthetical adverbs in the present study.

1.6.3 Adverbs and lexical-phrase adverbs vs adverbials

This study analysed both adverbs and lexical-phrase adverbs, subsumed as adverbs. Although *adverbs* such as *quickly*, *enormously* are morphologically unified units, while *lexical-phrase adverbs* such as *as a consequence* are morphologically distinct, lexical-phrase adverbs are similar to adverbs in two important respects. First, lexical-phrase adverbs are treated as single 'lexico-grammatical' units since they allow a low degree of variability (cf. Nattinger and DeCarrico, 1992). That is, these adverbs have been so lexicalised and inventorised that they can no longer be accessed analytically (cf. Lehmann, 2002). For instance, *as a consequence* cannot be changed to **as the consequence*, or ungrammaticality arises.

Second, like morphologically unified adverbs, lexical-phrase adverbs can adjoin in various clausal positions, especially when used parenthetically, as in (4).

(4)
    a.   *As a consequence*, I do look a bit on the ragged side.
    b.   Such subjects, *as a consequence*, might not differ in their test performance from those who were explicitly trained to apply labels.
    c.   Most of them exercise, and a few have claimed, considerable personal power, *as a consequence*.
        (The British National Corpus; retrieved 20 January 2008)

Adverbs and lexical-phrase adverbs were distinguished from *adverbials* such as *in a day*, *at different times of the year*, which were discarded for these reasons. To begin with, in contrast with adverbs and lexical-phrase adverbs, adverbials entail free variability (cf. Nattinger and DeCarrico, 1992); that is, they are open to the analytic process (cf. Lehmann, 2002). For example, *in a day* can be changed to *in a week*, *in a year*, and so on, without its grammaticality

being lost. Furthermore, *adverbials*, despite the fact that the term is used mostly in relation to functions rather than types, cover an infinite number of structures serving similar purposes as adverbs and lexical-phrase adverbs, including *prepositional phrases, noun phrases, finite clauses*, and *non-finite clauses*. Non-finite clauses can be further classified into *to-infinitive clauses, bare infinitive clauses, -ing participle clauses, and -ed participle clauses* (Aarts, 1997; Greenbaum and Quirk, 1990; Hoye, 1997; Quirk and Greenbaum, 1973). These are exemplified in (5).

(5)

a.	They always drink sherry **before dinner**.
b.	He wants me to do it **this second**.
c.	Gay doesn't like Mark, **because he gives her the creeps**.
d.	Alex replaced the lock on the door **in order to make the house more secure**.
e.	Ray wants to travel by train **sooner than fly**.
f.	**Working on his essay late**, Tom was quickly becoming tired.
g.	She died in her car, **suffocated** by exhaust fumes.

(Aarts, 1997: pp. 75-78)

Thus, it would be impractical to include adverbials in the present study. Finally, adverbials can generally adjoin only in the clause-initial or the clause-final position, but not in the various clause-medial positions, thus making their syntactic characteristics very different from those of adverbs and lexical-phrase adverbs. It should be noted that adverbs and lexical-phrase adverbs appearing in adverbials were not excluded, but their positions of adjunction were identified after the adverbials containing them were reconstructed (section 3.4.2).

1.7 Definitions of terms

The major terms used in this study are defined as follows.

1.7.1 Syntactic variation

Syntactic variation refers to positions of adjunction, which involves the range of positions of adverbs relative to the clause such as the clause-initial position, the various positions within the verbal construction, and the clause-final position.

1.7.2 Adverbs

Adverbs refer to both parenthetical and integrated adverbs as well as both morphologically unified adverbs and lexical-phrase adverbs, but not adverbials (sections 1.6.3 and 1.6.4).

1.7.3 Interlanguage

Following Corder (1971, 1976, 1977), Nemser (1971), Selinker (1969, 1972, 1975, 1991), and Sharwood Smith and Truscott (2005), *interlanguage* refers to L2 learners' language features as a linguistic system, which is distinct from, and yet can partially be described in terms of both the L1 and the L2. Over time, this may become either increasingly or decreasingly complex. In addition, the term refers to the characteristics of L2 learners' language relative to those of native speakers of the L2.

1.7.4 Thai learners

The term *Thai learners* refers to intermediate and advanced Thai learners of English, classified according to their educational status as well as their performance on the *Test of English as a Foreign Language (TOEFL)* or its equivalent, the *Chulalongkorn University Test of English Proficiency (CU-TEP)*. The term *intermediate Thai learners of English* refers to MA students who have achieved TOEFL or CU-TEP scores of under 600. The term *advanced Thai learners of English* refers to PhD students who have achieved TOEFL or CU-TEP scores of over 600 (Further details are presented in 3.2).

1.7.5 L1 transfer

Following Odlin (1989, 2003), L1 transfer is defined as the influence which the L1 has on the acquisition of the L2 due to their similarities or differences.

1.8 Limitations of the study

The limitations of this dissertation are as follows.

1. The subjects are intermediate and advanced learners of English, and so the findings cannot be generalised to learners at other levels of proficiency.

2. The sample size is small and thus the results may not be generalisable to other learners at similar proficiency levels. Nevertheless, it should be noted that the use of a small number of subjects is often followed in long-term research (e.g. Eubank, 1994; Lardiere, 1998a, 1998b; Prévost and White, 2000; Sauter, 2002; Vainikka and Young-Scholten, 1996).

3. The analysis deals only with the syntax of adverbs, thus leaving semantic and pragmatic issues as interesting areas for further research.

CHAPTER II

LITERATURE REVIEW

This chapter is divided into five sections. The first section briefly introduces the

Principles and Parameters theory and its assumptions regarding the interactions between the L1,

UG, and SLA. In the second section, the theoretical background necessary for the understanding

of the analysis of adverbs is presented. The discussion covers the semantic classifications of

adverbs applied in the present study, X-bar theory and phrase structures, the levels of syntactic

representations, Theta theory, and Case theory. The third section analyses positions of adjunction

in English and Thai and discusses positions of adjunction in the interlanguage of L2 learners of

English from several language backgrounds. In the fourth section, markedness theory together

with its application in SLA is discussed. The last section addresses the aspects which are

believed to be closely related to interlanguage development.

2.1 Principles and Parameters, universal grammar, and SLA

The *Principles and Parameters (P&P) theory* (Chomsky, 1981a, 1986) is based on the

assumption that *universal grammar (UG)* consists of "a highly structured and restrictive system

of principles with certain open parameters, to be fixed by experience" (Chomsky, 1981a: p. 130).

That is, there are grammatical properties common to all human languages, which nevertheless

also vary within limited possibilities (Towell and R. Hawkins, 1994: p. 61). For example, all

languages have S, V, and O[1]. However, parameters are open as to how these are arranged. To

illustrate, English is an SVO language, whereas Japanese has SOV word order.

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[1] S = subject, V = verb, O = object

Acquiring an L2, then, amounts to parameter resetting, which will be impossible without the availability of UG (cf. Bley-Vroman (1989), Clahsen and Muysken (1986), Schachter (1988) for the opposite view that UG is no longer accessible). This motivation concerns *the logical problem of SLA* (Juffs, 1996; White, 1989a; White, 2003). The term has been discussed in various aspects, most often with reference to the parametric differences between the L1 and the L2 as well as the poverty of the L2 input. Juffs (1996) and White (1989b, 2003) argue that mastery of knowledge of the L2 parameters not directly retrievable from those in the L1 can serve as evidence that L2 learners have access to UG. Juffs (1996) and White (1989a) also agree that L1 and L2 parametric variations can provide an account of L1 transfer in SLA. As for the poverty of the L2 data, White (1989a, 1989b, 2003) asserts that L2 learners generally acquire a linguistic competence which goes beyond the input to which they have been exposed. The L2 data are said to be impoverished because they underdetermine the abstract and subtle properties of language. In addition, they are degenerate, containing both grammatical and ungrammatical sentences. Finally, they do not provide sufficient negative evidence regarding what is ungrammatical in the L2. White (1989b; also White, 2003) puts it succinctly that:

> "… Even if the L2 learners' grammar is not native-like, it can often be highly sophisticated and complex, revealing linguistic properties which could not have been induced directly from the input data … That is, knowledge is attained on the basis of impoverished input, and this requires an explanation" (p. 39).

Thus, the logical problem of SLA reflects the assumption that UG works in tandem with the L1 grammar (Eubank, Selinker, and Sharwood Smith, 1997) and the L2 data (White, 1989a, 1989b, 2003). Empirical evidence shows that L2 learners start off assigning the L1 parameters to the L2 input. In other words, their initial state of interlanguage is influenced by the L1 (Hilles, 1986; Phinney, 1987; Trahey, 1996; White, 1985, 1986, 1991a, 1991b). However, they will

eventually reset to the L2 parameters on the basis of UG interacting with the L2 input (White, 1989a, 1989b, 2003), albeit with the possibility of reverting to the L1 settings (Juffs, 1996). For instance, Trahey (1996) and White (1991a, 1991b) tested adverb placement among French beginner learners of English. French has the sentential order $SVAO$[2] but prohibits $SAVO$, whereas English has the opposite order, as in (1).

(1)

a.	Marie regarde *souvent* la télévision.
b.	*Mary watches *often* television[3].
c.	*Marie *souvent* regarde la télévision.
d.	Mary *often* watches television.

(Adapted from White, 1991b: p. 135)

White found that even before instruction, the French learners knew that SAVO was grammatical in English. After instruction, they realised the ungrammaticality of SVAO. That is, their interlanguage had been reset to the L2 parameters. This still took effect in the short-term but not in the long-term. Thus, the results from these studies suggest that although an interlanguage grammar may benefit from both UG and the L2 data, it can still be influenced by the L1 settings along the course of SLA.

2.2 Theoretical preliminaries

This section covers the theories and concepts adopted in the present study. In 2.2.1, the semantic classification of adverbs is presented to lay a foundation for the analysis of positions of adjunction. 2.2.2 outlines X-bar theory, which governs how phrase structures are built. The levels of syntactic representations are provided in 2.2.3. In 2.2.4 and 2.2.5, Theta theory and Case theory are described.

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[2] S = subject, V = verb, A = adverb, O = object
[3] The symbol * indicates ungrammaticality, while the script ? shows infelicity.

2.2.1 Semantic classification of adverbs

The semantics of adverbs has important consequences on their positions of adjunction and order within a clause (e.g. Cobb, 2006a; Beijer, 2001, 2005; Ernst, 2002; Jackendoff, 1972; Quirk, Greenbaum, Leech, and Svartvik, 1972). For example, the lexical entries of an adverb must match the syntactico-semantic properties associated with the position in which it adjoins (Cobb, 2006a; Ernst, 2002). In addition, adverbs in different semantic classes are ordered relatively to one another (Cobb, 2006a; Ernst, 2002; Jackendoff, 1972; Quirk *et al.*, 1972) (e.g. *Theo probably cleverly bought flowers* [Ernst, 2002: p. 19]). The semantic classification in the present study is based on Beijer (2005), mainly because it has been developed from his analysis of adverbs appearing in *the British National Corpus (BNC)*, suggesting the authenticity of these categories. Beijer's classification is given in Table 2.1.

Table 2.1   Semantic classification of adverbs

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Interclausal connection	CONCESSIVE	anyway nevertheless	To express that something is the case, in spite of the existence of some other state of affairs, expressed in the preceding context.
	CONSEQUENTIAL	accordingly consequently therefore thus	To indicate that the following proposition is a consequence of the preceding proposition.
	ADVERSATIVE	however	To signal a contrast between the following proposition and the preceding proposition, but not a concessive relation.
	CONCESSIVE: CONTINUATIVE	still	To indicate a concessive feature set-up as well as a continuative aspect.
	ADDITIVE: CONTRASTIVE	otherwise	To signal addition as well as imply a contrast between two propositions.
	ADDITIVE: SERIAL ORDER	also	To express addition.
	ADDITIVE: UNEXPECTED	even	To signal not only addition but also that the proposition is stronger or more surprising in comparison with the other proposition to which it is compared.

Table 2.1   Semantic classification of adverbs (continued)

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Epistemic modality	EPISTEMIC	certainly surely probably undoubtedly unquestionably	To signal various degrees of the writer/speaker's commitment to the truth of the proposition.
Non-epistemic modality	NECESSITY	inevitably necessarily	To express that something is inevitably or necessarily the case from an objective point of view.
	NON-EPISTEMIC: POSSIBILITY	perhaps possibly	To indicate that there is at least one possible world in which the proposition is true, not that the writer/speaker is only partially committed to the truth of the proposition.
Metalinguistic commentary	METALINGUISTIC	actually honestly	To comment on the act of uttering the message, i.e. that the message is communicated in an honest fashion or that the message corresponds with the true state of affairs.
	REINFORCING	indeed	To reinforce the strength of the proposition.
Evidentiality	EVIDENTIAL	apparently evidently manifestly obviously clearly	To signal that the writer/speaker has evidence for the statement he makes.
Reality and facts	FACTUAL	really	To stress that the proposition happens to correspond with known facts or reality.
Time	TEMPORAL: GENERAL	before now nowadays then	To give information related to time, which is either related to the time of speech or to a certain reference point.
	TEMPORAL 2	once	To provide reference to an unspecified past.
	CONTINUATIVE	still	To suggest that the state of affairs is not only true at the time of speech but has been true for some unspecified period of time.
	DURATIVE	long	To express that the state of affairs has had or will have a considerable extension in time.
	FINAL	finally	To indicate that something occurred or will occur at the end of some process or some sequence of events.
	SIMULTANEOUS	simultaneously	To signal that two states of affairs co-occurred or will co-occur.
	NON-FUTURE	hitherto	To signal that something has been the case and still is the case.
	FUTURE: PROXIMATE	immediately soon	To suggest that something will occur in the near future.
	FUTURE: NON-PROXIMATE	later	To suggest that something will occur in the future, but not in the near future.
	PRETERITE: RECENT	just	To refer to a past which is comparatively close to a certain reference point.
	ANTERIOR	already	To express that a state of affairs obtained or will obtain at a point in time which is earlier than a certain reference point.

Table 2.1   Semantic classification of adverbs (continued)

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Permanence, frequency, and reoccurrence	IRREGULAR	occasionally periodically sometimes	To point out that some state of affairs is obtained neither permanently nor frequently.
	FREQUENTATIVE	often	To signal a high frequency of occurrence.
	HABITUAL/GENERAL	mostly generally usually	To signal a relatively high frequency as well as habituality or prominence.
	REPETITIVE	again	To indicate that something is happening which has happened before.
	PERMANENT	always	To indicate that something is invariably the case.
(In)completeness and closeness	COMPLETIVE	completely entirely	To stress that something is not only partly, but also completely, the case.
	PARTIAL	partially partly	To signal that something is only partly the case.
	APPROXIMATE	almost nearly	To signal that something is close to being the case or to occurring.
Focus	RESTRICTIVE	just merely only	To exclude a number of other possible interpretations and thus restrict the number of possible worlds in which the statement holds true.
Evaluation	EVALUATIVE	oddly unfortunately	To express general, subjective evaluation of the propositional content.
VP-related adverbs	VP-RELATED	briefly clearly easily gradually honestly legitimately quickly regularly unexpectedly	To express VP-related notions such as manner, degree, etc.
	INSIGNIFICANT DEGREE	hardly	To express the insignificance of the proposition or state of affairs.

(Beijer, 2005: pp. 78-88)

2.2.2 X-bar theory and phrase structures

X-bar theory governs how phrase structures are built. The theory, Cook (1988) explains, replaces a large number of specific transformational rules in the previous versions of generative grammar by postulating general rules corresponding to UG. It is made up of two central tenets. First, the *Projection Principle* states that "representations at each syntactic level … are projected from the lexicon, in that they observe the subcategorisation properties of lexical items" (Chomsky, 1981b: p. 29). Second, the *Subcategorisation rule* dictates that "a given lexical item

can only be associated with a phrasal structure which is consistent with its *Subcategorisation requirements*" (Ouhalla, 1999: p. 45). For example, the verb *depend* subcategorises only for a PP, as in *The quality of a method depends <u>on its application</u>*. Interpreted in terms of linguistic competence, these rules imply that native speakers know the syntactic and semantic behaviours of words in their language (Cook, 1988).

Schematically, a *phase structure (PS)* is made up of phrasal categories like a *noun phrase (NP)*, a *verb phrase (VP)*, an *adjective phrase (AdjP)*, an *adverb phrase (AdvP)*, and a *prepositional phrase (PP)*, which are organised endocentrically (Cook, 1988: p. 94), as in (2).

(2)

a.	NP	→	... N ...
b.	VP	→	... V ...
c.	AdjP	→	... Adj ...
d.	AdvP	→	... Adv ...
e.	PP	→	... P ...

(Adapted from Cook, 1988: p. 94)

These phrasal categories are called the *maximal projection* or *XP*, where *X* is an obligatory constituent or a *head*, to be replaced by N, V, Adj, Adv, P. For example, N is the head of NP, V the head of VP, and so on. This is illustrated in (3), in which *Mary's solution* is the NP, and *solution* is the head N.

(3)

```
          NP
         /  \
       NP    N
       |     |
     Mary's solution
```
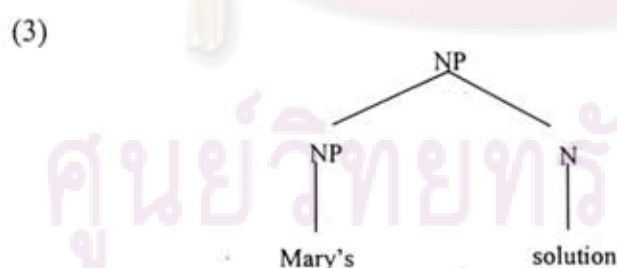
(Adapted from Ouhalla, 1999: p. 115)

Between the maximal projection XP and the head X is an additional level of representation called *X-bar (X')* or *single bar projection*. In (4) below, *Mary's solution to the problem* is the NP, and the head N *solution* and the PP *to the problem* form the N'.

(4)
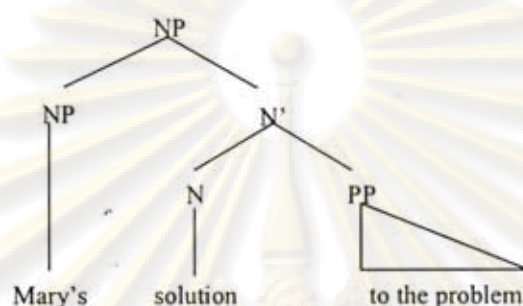
(Ouhalla, 1999: p. 115)

The N' projection above is needed to distinguish the different structural relations which the head N *solution* has with the NP *Mary's* and the PP *to the problem*. According to X-bar schema, the NP *Mary's* is the *Specifier (Spec)*, and the PP *to the problem* the *Complement (Comp)*.

Hierarchically, the Spec is a *daughter* of, i.e. dominated by, XP and the *sister* of, i.e. at the same level as, X'; Comp is a daughter of X' and the sister of X. That is, XP takes scope over Spec and X', while X' takes scope over X and Comp, as demonstrated in the tree diagram below.

(5)
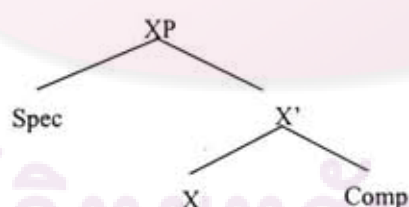
To put it another way, in (5), Comp is the complement of X. Together, they form X', which, in turn, is the complement of Spec. X' and Spec then form the maximal projection XP.

When applied to the structure of a clause, XP represents *inflection phrase (IP)*, headed by *inflection (I)*, which is a functional category covering *tense (T)* and *agreement (Agr)*, as in (6).

(6)

```
                        IP
                      /    \
                  Spec      I'
                           /  \
                          I    VP
                         / \
                        T   Agr
```
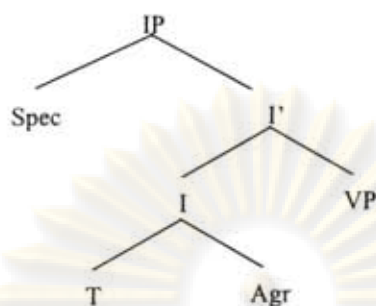
In (6), VP is the complement of I, together forming I'. I', in turn, is the complement of Spec. I'

and Spec then form the maximal projection IP.

2.2.3 Levels of representation

In generative grammar, there are two levels of syntactic representations: *deep structure*

(*D-structure* or *underlying structure*) and *syntactic structure* (*S-structure* or *surface structure*).

These representations and their properties are explained in Haegeman (1991: pp. 304-306) as

follows:

> D-structure
> This level encodes the lexical properties of the constituents of the sentence. It
> represents the basic argument relations in the sentence. External arguments are
> base-generated in the subject position relative to their predicate; internal
> arguments are governed by the predicate in their base position[4].

> S-structure
> The level reflects the more superficial properties of the sentence: the actual
> ordering of the elements in the surface string, and their case forms.

Take as an example the different sentential orders relative to adverbs in French and

English which are attributed to a parameter called *verb-raising*, referring to the movement of

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[4] The external arguments are outside the VP (i.e. independent of the verbs), whereas the internal arguments are inside the VP (i.e. dependent on the verbs). For example, the sentence *The boy kicked the ball* has *the boy* as the external argument of the verb *kicked* and *the ball* as the internal argument (Ouhalla, 1999: p. 157).

finite verbs from V to I[5] (Chomsky, 1991, 1993; Emonds, 1978; Pollock, 1989), as in (7) and

(8)[6].

(7)   D-structure
        a.   Marie *souvent*   regarde   la télévision.
        b.   Mary *often*   watches   television.

(8)   S-structure
        a.   Marie regarde   *souvent*   la télévision.
        b.   *Mary watches   *often*   television.
        c.   *Marie *souvent*   regarde   la télévision.
        d.   Mary often   watches   television.
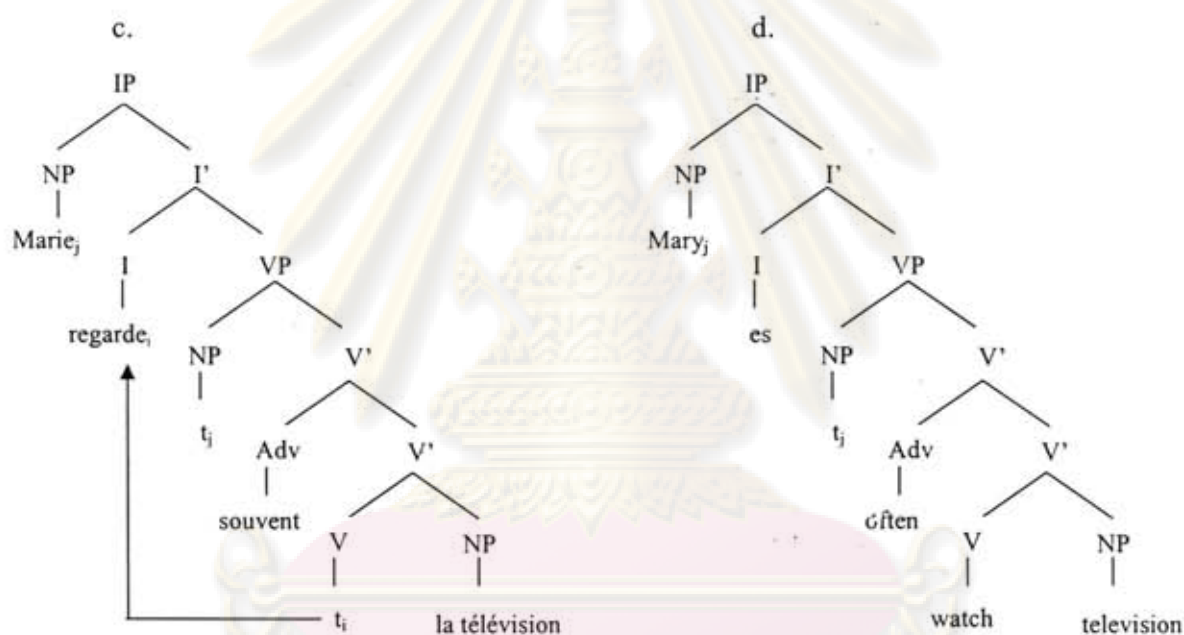
(Adapted from White, 1991b: p. 135)

[5] The subject NP also raises out of its base-generated position in the VP to Spec, IP to receive nominative case from I, I comprising Agr and T (cf. Fukui and Speas, 1986; Koopmann and Sportiche, 1991; Kuroda, 1988).
[6] The symbol *t* indicates a trace, while the scripts *i* and *j* show co-referentiality with different traces.

As shown in (7), French and English share the same D-structure, in which adverbs optionally adjoin to the left of the VP, and thus the order SAVO. In the S-structure, however, they become different. All finite verbs in French obligatorily raise from V past adverbs to I to join the inflection, thus explaining the grammaticality of (8a) and the ungrammaticality of (8c). On the other hand, finite verbs in English must stay inside the VP, thus accounting for the ungrammaticality of (8b) and the grammaticality of (8d). In other words, SVAO is grammatical in French but not in English. SAVO, in contrast, is grammatical in English but ungrammatical in French.

The output of the S-structure is further divided into two distinct forms: the *logical form (LF)* and the *phonetic form (PF)*, as in Figure 2.1.

Figure 2.1   D-structure, S-structure, LF, and PF
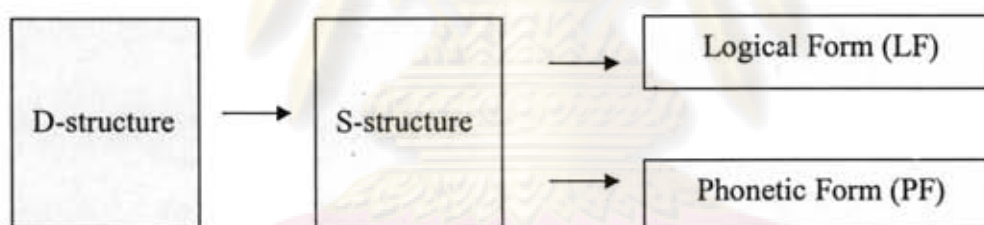
The PF specifies the phonetic representation of a sentence, while the LF specifies its semantic representation (Ouhalla, 1999: p. 68). The LF follows the *Principle of Full Interpretation*, which has been formulated in several versions. The two which will be adopted here follow Chomsky (1986) and Ernst (2002). Chomsky (1986) postulates that all elements must be assigned an appropriate interpretation in the derivation, i.e. must be interpreted in the sense desired by the writer/speaker. This is exemplified in (9)[7].

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[7] The Thai transcription follows the system developed by the *Linguistics Research Unit (LRU)*, the Faculty of Arts, Chulalongkorn University (Luksaneeyanawin, 1993).

(9)

   a.   dek1dek1   kam0lang0   phuut2   kan0   **ciiaw3caaw3**[8]

         children   PROG   speak   to one another **noisy/noisily**

         'The children are speaking to one another *noisily*.'

   b.   *dek1dek1   **ciiaw3caaw3** kam0lang0   phuut2   kan0

         children   **noisy/noisily** PROG   speak   to one another

         'The *noisy* children are speaking to one another.'

If the desired interpretation is that there is a group of children and the children in that group, not necessarily noisy in general, are speaking noisily to one another, then (9a) is grammatical because all the elements convey what the writer/speaker means. (9b), on the other hand, is ungrammatical because it deviates from the desired sense. Specifically, the modifier *ciiaw3caaw3* 'noisy/noisily' is assigned as the adjective of the subject NP *dek1dek1* 'children' instead of as the adverb of the VP *kam0lang0phuut2kan0* 'are speaking to one another'. As a result, *dek1dek1* 'children' is characterised as noisy, departing from what is originally intended.

Ernst (2002) specifically addresses adverbs, claiming that their scope requirements include some type of subcategorisation, and that a failure to fulfil such requirements leads to uninterpretability and thus ungrammaticality. An example is given in (10).

(10)

    a. Theo *probably cleverly* bought flowers.

    b. *Theo *cleverly probably* bought flowers.

                                 (Ernst, 2002: p. 19)

---

[8] Adverbs in Thai are shown in bold.

According to Ernst (2002), a VP-RELATED adverb like *cleverly* can subcategorise for an event, but not a proposition[9]. On the other hand, an EPISTEMIC adverb like *probably* can subcategorise for either an event or a proposition. Thus, (10a) is grammatical because *cleverly* subcategorises for the event *bought flowers*, forming the proposition *cleverly bought flowers*. Then, this proposition is subcategorised by *probably*, forming the matrix proposition *probably cleverly bought flowers*. (10b), in contrast, is ungrammatical because *cleverly* cannot subcategorise for the proposition *probably bought flowers*, formed from the adverb *probably* and the event *bought flowers*.

2.2.4 Theta theory

Theta theory (θ-theory) involves the subcategorisation and the θ-role assignment between lexical items such as verbs and their arguments, an argument referring to the participant(s) in an event. For example, *eat* subcategorises for two arguments, as in *I always eat apples*, in which *eat* assigns the θ-role agent to I, and the θ-role patient to *apples*. On the other hand, *yawn* subcategorises for only one argument, as in *She yawned often*, where *yawned* assigns the θ-role agent to *she*. According to the *θ-criterion*, "each argument must be assigned a θ-role" and "each θ-role must be assigned to an argument" (Ouhalla, 1999: p. 163). The θ-roles generally accepted in the literature are as follows.

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[9] The *Fact-Event-Object (FEO) calculus* is applied in Ernst's (2002) analysis, which is semantics-oriented. This will not be discussed further for it is beyond the scope of this paper. A more syntax-oriented explanation for the grammaticality of (10a) and the ungrammaticality of (10b) would be that the lexical entry of each adverb contains such information as its semantic type and syntactic status. For instance, *probably* is encoded as an EPISTEMIC and *sentence adverb (S-adverb)*, and *cleverly* as a manner and VP-adverb. Due to the fact that the scope of S-adverbs is wider than that of VP-adverbs, the former must always precede the latter when they are juxtaposed (Huddleston and Pullum, 2002). In other words, when a sentence has a VP-adverb, it can be subcategorised by an S-adverb, as in (10a). On the other hand, when a sentence has an S-adverb, it cannot be subcategorised by a VP-adverb, as in (10b); otherwise, the Principle of Full Interpretation is violated and thus ungrammaticality arises. Although this analysis still involves semantics to some degree, the focus is geared towards syntax. A similar, but more technical, account can be found in Cobb (2006a). Briefly, Cobb (2006a) classifies *probably* as an adjunct to I' and *cleverly* as an adjunct to V' or VP. Since I' is syntactically higher than V' or VP (cf. (7c) and (7d) above), *probably* always comes before *cleverly*.

(11)

 Theme (or *patient*) = Entity undergoing the effect of some action
 (e.g. *Mary* fell over)
 Agent (or *actor*) = Instigator of some action
 (e.g. *John* killed Harry)
 Experiencer = Entity experiencing some psychological state
 (e.g. *John* was happy)
 Benefactive = Entity benefiting from some action
 (e.g. John bought some flowers *for Mary*)
 Instrument = Means by which something comes about
 (e.g. John wounded Harry *with a knife*)
 Locative = Place in which something is situated or takes place
 (e.g. John hid the letter *under the bed*)
 Goal = Entity towards which something moves
 (e.g. John passed the book *to Mary*)
 Source = Entity from which something moves
 (e.g. John returned *from Paris*)

              (Radford, 1988: p. 373)

2.2.5 Case theory

Generative grammar pursues the idea from traditional grammar that all NPs must be case-marked for their grammatical functions within a sentence (Roberts, 1997): *nominative*, *accusative*, *genitive*, *vocative*, *dative*, and *ablative*. In structural terms, nominative is associated with the subject, accusative with the object, and genitive with possessive forms, for example. Some languages such as Latin, Greek, Russian, and Old English have morphological markings on all NPs to indicate each of these functions, and thus are said to have rich *morphological case*, as in the following examples from the Latin word *dominus* 'master'.

(12)

Nominative:	dominUS
Accusative:	dominUM
Genitive:	dominI
Vocative:	dominE
Dative:	dominO
Ablative:	domino

(Roberts, 1997: p. 55)

Cross-linguistically, there are variations in the degree to which morphological case is employed. For example, English has morphological case only for pronominal NPs to indicate the grammatical functions nominative (e.g. *he*), accusative (e.g. *him*), and genitive (e.g. *his*). This is totally absent in Thai since both NPs and pronominal NPs are not marked for their grammatical functions. For instance, the pronominal NP *khaw4 'he'* can be either nominative or accusative. Languages such as Thai and Mandarin/Cantonese Chinese are said to lack morphological case. Since morphological marking is not available, syntactic marking is resorted to. Thus, NPs have to be in designated structural positions in order to be assigned their respective grammatical functions (Roberts, 1997). That is, morphologically poor languages have to depend purely on *abstract case* in marking grammatical functions. According to the P&P theory, syntactic marking and abstract case are the universal principles of language. Whichever device, case marking is subject to the *Case Filter*, which states that "*NP if NP has phonetic content and has no Case" (Ouhalla, 1999: p. 186).

2.3 Positions of adjunction

In English, adverbs across different semantic classes are allowed to adjoin in any position which subcategorises for them in terms of syntactico-semantic requirements (e.g. Cobb, 2006a; Ernst, 2002; Jackendoff, 1972). For example, adjunction is permissible in the clause-initial

position, between the subject and an auxiliary, between an auxiliary and a main verb, and in the clause-final position[10], as in (13).

(13)

    a. *Wisely*, they had been hanging back whenever the pendulum swung near.
    b. They *wisely* had been hanging back whenever the pendulum swung near.
    c. They had been *wisely* hanging back whenever the pendulum swung near.
    d. They had been hanging back *wisely* whenever the pendulum swung near.

<div align="right">(Adapted from Ernst, 2002: p. 45)</div>

Thai, in contrast, generally allows adjunction only in two positions: clause-initial or clause-final. For example, the majority of adverbs showing interclausal connections and TEMPORAL: GENERAL adverbs adjoin to the left of the clause, whereas those in other semantic categories adjoin to the right of the clause. Some examples are given in (14)[11].

(14)

a.
dang0nan3	pra1den0	maj2chaj2	khxx2	rvvang2
thus	issue	not	only	matter
kh@@ng4	khwaam0suuaj4	txx1	kiiaw1	kap1
of	beauty	but	involve	with
khwaam0txxk1taang1	thaang0chaat2phan0			
difference	racial			

'*Thus*, the issue is not only a matter of beauty but also that of racial differences.'

b.
t@@n0nii3	raw0	thuuk1	kam0not1	haj2	t@@ng2
now	we	PSV	force	give	must
svv3	nam3taan0	naj0	raa0khaa0	13-14	baat1
buy	sugar	in	price	13-14	baht

'*Now*, we are forced to buy sugar at the price of 13-14 baht.'

c.
txx1	kh@@2thet3cing0	nan3	man0	mii0	kaan0tii0khwaam0
but	fact	that	it	have	interpretation
khaw2	maa0	kiiaw1kh@@ng2	**jaang1nxx2n@@n0**		
enter	come	involve	**certainly**		

'… but that fact *certainly* involves interpretations.'

---

[10] Adjunction in different positions entails different readings, which is beyond the scope of this study.
[11] Most of the Thai examples have been extracted from the academic corpus in the Thai Concordance (http://www.arts.chula.ac.th/%7Eling/ThaiConc/).

d.
nvva3kaj1	lx3	khaj1	ca1	t@@ng2	mii0
chicken	and	egg	will	must	have

raa0khaa0	suung4	khvn2	**jaang1liik1liiang2maj2daj2**
price	high	up	**inevitably**

'Chicken and eggs will *inevitably* become more expensive.'

In (14a), the CONSEQUENTIAL adverb *dang0nan3* 'thus' adjoins in the clause-initial position, whereas its English equivalent can also adjoin to the left of the VP (with a stress on *is*). This adjunction pattern also applies to the TEMPORAL: GENERAL adverb *t@@n0nii3* 'now' in (14b). In (14c) and (14d), the EPISTEMIC adverb *jaang1nxx2n@@n0* 'certainly' and the NECESSITY adverb *jaang1liik1liiang2maj2daj2* 'inevitably' adjoin in the clause-final position. This contrasts with English, in which the two adverbs adjoin to the left of the VP. Thus, it seems that clause-medial adjunction is permitted in English but not in Thai.

In the following sections, it will be shown that English and Thai differ as to the parameter they adopt for the adjacency condition. Since English is characterised as [+/-strict adjacency], clause-medial adjunction is possible in the language. Thai, in contrast, prohibits clause-medial adjunction because it is a [+strict adjacency] language. Evidence will be presented demonstrating that Thai requires strict adjacency because dependent categories are not morphologically marked. Thus, they cannot be assigned their grammatical properties if intervened by adjoining materials (sections 2.3.2 and 2.3.3). For example, nominative case assignment will fail if an adverb separates the subject and the verb (section 2.3.1). In addition, adverbs which are not morphologically marked share syntactic similarities with other lexical categories such as adjectives and verbs, while morphologically marked adverbs share syntactic similarities with the category adjectives (section 2.3.3). For this reason, clause-medial adjunction will result in misassignment and unassignment of grammatical properties, thus violating the Principle of Full Interpretation.

2.3.1 Nominative and accusative case assignment

The adjacency condition was initially proposed to operate on case assignment (Chomsky, 1981a, 1986; Stowell, 1981; White, 1989a). Nominative case is assigned by Agr via a Spec-head agreement relation (Chomsky, 1981a), i.e. the verb is inflected to agree with the subject, like in English[12]. This sort of relation does not exist in Thai since the verb does not inflect to agree with the subject. To illustrate, the agreement paradigms of English and Thai are given in (15).

(15)

	English	Thai
1st person singular	eatØ	kin0 'eat'
1st person plural	eatØ	kin0 'eat'
2nd person singular	eatØ	kin0 'eat'
2nd person plural	eatØ	kin0 'eat'
3rd person singular	eats	kin0 'eat'
3rd person plural	eatØ	kin0 'eat'

For this reason, English allows clause-medial adjunction between the subject and the verb because nominative case can always be assigned as long as they are in a proper agreement relation. As a result, adjacency between the two need not be observed. In Thai, on the other hand, almost no materials are allowed to intervene between the subject and the verb; otherwise, the verb will fail to assign nominative case to the subject. Thus, adjacency is strictly required, as in (16).

(16)

a.	khaw4	?aan1	nang4svv4	**sa1mqq4**
	he	read	book	**always**

b.	*khaw4	**sa1mqq4**	?aan1	nang4svv4
	he	**always**	read	book

'He *always* reads books.'

---

[12] This does not hold in the strictest sense, however, since agreement is only marked for the third-person singular subject by the bound inflectional morpheme –s, while the null morpheme –Ø is used across the board for the first- and second-person subject, be it singular or plural, and for the third-person plural subject. Despite this weak agreement feature, distinction needs to be made between the absence of morphemes and null morphemes. "… Null morphemes have corresponding positions or features in a syntactic representation … In contrast, there are cases where something is simply not realised at all; the syntactic representation lacks a particular category or feature" (Lardiere, 2000, cited in White, 2003, p. 181).

Later, it has also been proposed that nominative case is assigned by T (Chomsky, 1995; Vainikka, 1994). According to Allen (1966, cited in Noochoochai, 1978), verbs in English can be classified as signalling two kinds of time: non-past and past. The non-past time is indicated by $-\emptyset$ for the non-third-person singular subject and by $-s$ for the third-person singular subject, whereas the past time is generally indicated by $-ed$. Thai differs from English in that it does not have formal morphological distinctions between the non-past time and the past time (Noochoochai, 1978)[13]. The tense paradigms of English and Thai are shown in (17).

(17)

	English	Thai
Non-past; non-3rd person singular	kill$\emptyset$	khaa2 'kill'
Non-past; 3rd person singular	kills	khaa2 'kill'
Past	killed	khaa2 'kill'

This being the case, English allows the subject to be separated from the verb despite the need for nominative case assignment since the verb is inflected to indicate T. Thai, in contrast, requires strict adjacency in order for the subject to be assigned nominative case since T is not explicitly marked (Noochoochai, 1978). Thus, clause-medial adjunction is not permitted, as in (18).

(18)

a.

khaw4	kin0	?aa0haan4jen0kh@@ng0		khaw4	**jaang1ruuat2rew0**
he	eat	dinner	of	he	**quickly**

b.

*khaw4	**jaang1ruuat2rew0**	kin0	?aa0haan4jen0kh@@ng0		khaw4
he	**quickly**	eat	dinner	of	he

'He *quickly* ate his dinner.'

---

[13] In contrast with traditional belief, it has been argued that Thai is a tense language (Noochoochai, 1978; Scovel, 1970, cited in Noochoochai, 1978; Sookgasem, 1990). Nevertheless, tense is not morphologically manifested (Noochoochai, 1978).

Despite their differences in terms of nominative case assignment, English and Thai share the similarity that accusative case is assigned structurally. Thus, in order for accusative case to be assigned properly, the direct object must be adjacent to its governing verb (Stowell, 1981). In other words, nothing can intervene between the verb and the direct object; otherwise, accusative case assignment is not fulfilled, and ungrammaticality arises, as in (19) and (20).

(19)
    a. Mario reads books *often*.
    b. *Mario reads *often* books.
    c. Mario read a book *attentively*.
    d. *Mario read *attentively* a book.

                              (Adapted from Stowell, 1981: p. 114)

(20)

a.	khaw4	?aan1	nang4svv4	**b@j1**
	he	read	book	**often**
b.	*khaw4	?aan1	**b@j1**	nang4svv4
	he	read	**often**	book

'He reads books *often*.'

c.	khaw4	?aan1	nang4svv4	**jaang1tang2caj0**
	he	read	book	**attentively**
d.	*khaw4	?aan1	**jaang1tang2caj0**	nang4svv4
	He	read	**attentively**	books

'He reads books *attentively*.'

The order in (19b), (19d), (20b), and (20d) is SVAO[14], in which the adverbs come between V and O, thus giving rise to ungrammaticality.

In this regard, however, there is one remarkable difference between English and Thai. English allows *heavy NP shift*, i.e. the movement of a heavy NP object past an adverb to the position on the right, when the former is comparatively heavier than the latter (cf. Weight theory in Ernst, 2002; J. A. Hawkins, 1994, 1999, 2001, 2004). In this case, the moved NP object leaves behind a trace which is assigned accusative case in place of its co-referential NP (J. A. Hawkins,

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[14] It should be noted that there are two different explanations for the ungrammatical order SVAO in English. Whereas Stowell (1981) approaches it in terms of the adjacency condition on accusative case assignment, Pollock (1989) and Chomsky (1991, 1993) analyse it in terms of verb-raising (section 2.2.3). This conflict will not be addressed further.

2001, 2004), as in (21b). The consequence of this is that the adverb appears superficially

between the verb and the object, as in (21c). This kind of movement is not allowed in Thai. Thus,

adverbs are never found in such a position, as in (22).

(21)

    a. Tom ate [the dinner that his mom had cooked] quickly.
    b. Tom ate t_i quickly [the dinner that his mom had cooked]$_i$.
    c. Tom ate quickly the dinner that his mom had cooked.

(22)

a.	th@m0kin0	?aa0haan4jen0	thii2	mxx2 kh@@ng4	khaw4
	Tom eat	dinner	COMP[15]	mom of	he
	tham0 **jaang1ruuat2rew0**				
	cook **quickly**				
b.	*th@m0	kin0	**jaang1ruuat2rew0**	?aa0haan4jen0	
	Tom	eat	**quickly**	dinner	
	thii2	mxx2 kh@@ng4	khaw4 tham0		
	COMP	mom of	he cook		

    'Tom ate *quickly* the dinner that his mom had cooked.'

In (21a), the NP object *the dinner that his mom had cooked* is much heavier than the

corresponding adverb *quickly*. Thus, it is moved rightward and leaves a trace in the original

position to receive accusative case from the verb *ate*, as shown in (21b), resulting in the

S-structure in (21c). This mechanism is not available in Thai, and thus (22b) is ungrammatical.

2.3.2 Assignment of grammatical properties

Recently, J. A. Hawkins (2001, 2004) has proposed that there are fundamental relations

between formal linguistic forms (e.g. morphemes) and the assignment of relevant syntactic and

semantic properties. Specifically, when these are signalled by formal markings, whether

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[15] *COMP* stands for Complementiser, e.g. *that, which*. It has the function of introducing the clausal complement of a
verb, as in *He said that he had to do it*, or a noun, as in *Tom ate the dinner which his mom had cooked*. It should be
remembered that COMP differs from Comp, which refers to Complement (section 2.2.2), and so different
typographies are used to distinguish the two.

morphologically or lexically, less is dependent on syntax. In inflectional languages[16], then,

grammatical relations between two categories need not be signalled via adjacency. The absence

of formal markings, on the other hand, entails more syntactic dependency because "one category

depends on another for the assignment of a particular property" (J. A. Hawkins, 2004: p. 20). In

other words, "tight adjacency and linear ordering" (p. 19) must be observed, as is the case in

isolating languages. The conditions regarding dependency relations and adjacency are given

below.

Dependency
Two categories α and β are in a dependency relation iff β requires access to α for
the assignment of syntactic and semantic properties to β, with respect to which β
is zero-specified or ambiguously or *polysemously* specified.

Adjacency
Given a structure $\{\alpha, X, \beta\}$, X a variable for a phrase or phrases intervening
between α and β, then the more relations of dependency that link β to α, the
smaller will be the size and complexity of X.

(Adapted from J. A. Hawkins, 2004: pp. 22, 37; emphasis added)

Thus, English permits adjunction in positions other than that between the subject and the

verb, i.e. in the various positions within the complex verbal construction, since all the categories

must agree with one other. For example, in the verbally complex sentence *Somchai may have*

been sent to London, have agrees in form with *may, been* with *have*, and *sent* with *been*. In other

words, the syntactic and semantic properties of the verbal elements are unambiguous and thus

are not bound by dependency relations. In contrast, Thai does not conjugate the elements of the

verbal construction for agreement. For example, in the sentence *som4chaaj0naa2ca1thuuk1-*

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[16] Morphologically, languages can be classified into different types such as analytic or synthetic according to their
degree of affixation. For example, analytic languages do not combine semantic concepts into single words, whereas
in synthetic languages, single words represent several concepts (Schwegler, 1990). By this criterion, both English
and Thai will be similarly classified as being analytic. However, as Sapir argues, this notion is relative, and thus "a
language may be analytic from one standpoint, synthetic from another" (Sapir, 1921: p. 135, cited in Schwegler,
1990: p. 14). In this sense, English is relatively more synthetic than Thai. For example, the past time is
morphologically realised by the bound inflectional morpheme *–ed* in English but manifested by time adverbials in
Thai (Noochoochai, 1978).

song1paj0l@@n0d@@n0lxxw3 'Somchai may have been sent to London', the passive verb *song1* 'send' is similar in form to the active verb *song1* 'send' in *som4chaaj0kam0lang0ca1 song1cot1maaj4* 'Somchai is going to send a letter'. Because of this zero specification, the verbal elements must be in strict dependency. As a result, adjunction is prohibited to maintain a proper assignment of syntactic and semantic properties.

2.3.3 Specification of adverbs, misassignment and unassignment, and the Principle of Full Interpretation

From the above, it seems that J. A. Hawkins considers the dependency between α and β as one-way since the relation is from β to α, but not vice versa. However, the Thai sentence *som4chaaj0naa2ca1thuuk1song1paj0l@@n0d@@n0lxxw3* 'Somchai may have been sent to London' shows that the relation is also from α and β. That is, the polysemously specified α *thuuk1* requires the β *song1* 'send' to indicate that it is a passive marker. On the other hand, in the sentence *khaw4thuuk1l@t3tqq0rii2* 'He won the lottery', the β *l@t3tqq0rii2* 'lottery' indicates that the α *thuuk1* is a verb meaning 'win'.

Furthermore, J. A. Hawkins addresses the intervening category X only in terms of size and complexity, but not with regard to the formality of its specification. This has an important consequence on the adjacency condition, however. The examples in (23) below illustrate that for a zero-specified, i.e. no formal markings, pair of α and β, an unambiguously specified X is allowed, and thus adjacency requirement is relaxed.

(23)
      a. ?I realised [with sadness in my heart] Ø he had done it.
                              (J. A. Hawkins, 2001: p. 13)
      b. I realised [relatively quickly] he had done it.

(23a) is infelicitous because the α *realised* and its subcategorised β *he had done it* are intervened by the complex and zero-specified X *with sadness in my heart*. (23b), however, is perfectly grammatical because the intervening category X is morphologically marked and so does not block the assignment of the syntactic and semantic relations between α and β.

From the above example, it is thus proposed that there is a three-way relation between α, β and X. To account for this, J. A. Hawkins' formulation can be revised as follows.

Dependency
Two categories α and β are in a dependency relation iff β requires access to α for the assignment of syntactic and semantic properties to β, with respect to which β is zero-specified or ambiguously or polysemously specified, and *vice versa*.

Adjacency
Given a structure $\{\alpha, X, \beta\}$, X a variable for a phrase or phrases intervening between α and β, then the more relations of dependency that link β to α, the smaller will be the size and complexity of X, or *the more formal and unambiguous will be the specification of X*.
(Adapted from J. A. Hawkins, 2004: pp. 22, 37; emphasis added)

Nevertheless, J. A. Hawkins rightly points out that a failure to satisfy these conditions leads to two consequences, unassignment and misassignment, which also violate the Principle of Full Interpretation. Unassignment refers to situations when words or phrases temporarily fail to be assigned their syntactic and semantic properties, whereas misassignment refers to situations when words or phrases are temporarily assigned incorrect syntactic and semantic properties, as in (24).

(24)
      a. I realised that he had done it [with sadness in my heart].
      b. I realised [with sadness in my heart] that he had done it.
      c. I realised Ø he had done it [with sadness in my heart].
      d. ?I realised [with sadness in my heart] Ø he had done it.
(Adapted from J. A. Hawkins, 2001: p. 13)

(24a) is grammatical because the verb *realised* subcategorises for the adjacent embedded clause object *he had done it*, which is marked by the COMP *that*. (24b) is still grammatical although the verb and its subcategorised embedded clause do not appear adjacently, i.e. they are intervened by the manner adverbial *with sadness in my heart*, because their relation is formally specified by the COMP *that*. (24c) is also grammatical because the verb and its zero-specified subcategorised embedded clause appear adjacently. (24d), however, is infelicitous because the verb and its zero-specified subcategorised embedded clause are separated by the manner adverbial. More precisely, the verb *realised* can only subcategorise for an NP object, as in *I realised the fact*, or an embedded clause object, as in *I realised he had done it* above, but not for an adverbial like *with sadness in my heart*. Thus, in (24d), the verb temporarily fails to assign the relevant syntactic properties, and so unassignment arises. Furthermore, the zero-marked embedded clause *he had done it* may be temporarily interpreted as modifying the closest NP, *my heart*, in the PP *in my heart*, instead of as a subcategorised Comp of the verb *realised*; thus, misassignment arises.

Returning now to the category in question, since adverbs in English, representing X, are generally unambiguously marked by the derivational suffix *-ly*, they are allowed to adjoin in any of the clause-medial positions. Adverbs in Thai, on the other hand, are syntactically ambiguous and thus ruled out from adjoining in these positions. With regard to this, Ritthaporn (1969) has shown that zero-specified adverbs in Thai can also function as adjectives and intransitive verbs, referring to them as adjective-adverbs and intransitive-verb-adverbs, respectively. This corresponds with Anchaleenukoon (2003), who points out that modifiers in Thai are mostly borrowed from words in the other parts of speech such as verbs and are not inflected to show their grammatical functions. Also, Iwasaki and Ingkaphirom (2005) state that a large number of

Thai words, including adverbs, are listed in two or more categories. Thus, adjunction in the clause-medial positions, e.g. to the left of the VP, leads to misassignment or unassignment of various sorts.

For example, if a subject NP subcategorises for an adjective-adverb adjoining to the left of the VP, the adjective-adverb will be misassigned as an adjective of the subject NP, rather than as an adverb, as in (25b) below. On the other hand, if a subject NP does not subcategorise for an adjective-adverb adjoining pre-verbally, the syntactic property of the adjective-adverb will be left unassigned, as in (26b).

(25)

    a.
dek1	khuuan0	phuut2	kap0	ph@@2mxx2
children	should	speak	to	parent

          su1phaap2
          polite/politely

          'Children should speak to their parents *politely*.'

    b.
*dek1	**su1phaap2**	khuuan0	phuut2	kap0
children	**polite/politely**	should	speak	to

          ph@@2mxx2
          parent

          '*Polite* children should speak to their parents.'

(26)

    a.
dek1	riian0ruu3	phaa0saa4	daj2	**rew0**
children	learn	language	can	**quick/quickly**

          'Children can learn a language *quickly*.'

    b.
*dek1	**rew0**	riian0ruu3	phaa0saa4	daj2
children	**quick/quickly**	learn	language	can

          '*Quick* children can learn a language.'

Similarly, the subcategorisation between a subject NP and a transitive-verb-adverb adjoining in the pre-verbal position can result in the transitive-verb-adverb being misassigned as a verb of the subject NP, rather than as an adverb, as in (27b) and (28b).

(27)

a. jaang1 naj0   mvvang0thaj0 raw0 hen4 **chat3ceen0**   waa2
    as   in   Thailand   we   see   **clear/clearly** COMP
    'As in the case of Thailand, we see *clearly* that …'

b. *jaang1   naj0   mvvang0thaj0 raw0 **chat3ceen0**   hen4 waa2
    as   in   Thailand   we   **clear/clearly** see   COMP
    'As in the case of Thailand, we *clearly* see that …'

(28)

a. kh@@2muun0   nii3   sa2dxxng0haj2hen4 **chat3ceen0**   waa2
    data   these show   **clear/clearly** COMP
    'These data show *clearly* that …'

b. *kh@@2muun0   nii3   **chat3ceen0**   sa2dxxng0haj2hen4 waa2
    data   these **clear/clearly** show   COMP
    'These data *clearly* show that …'

It is worth noting that misassignment and unassignment do not occur only with zero-marked adverbs adjoining to the left of the VP. In Thai, many adverbs are formally marked by *jaang1* (Iwasaki and Ingkaphirom, 2005; Smyth, 2004), as in *jaang1ruuat2rew0* 'quickly'. Even when an adverb is formally specified, it can be misassigned as an adjective of a subject NP if the two subcategorise for each other, as in (29b) below. On the other hand, if a subject NP does not subcategorise for a formally-marked adverb adjoining pre-verbally, the syntactic property of the adverb will be left unassigned, as in (30b), in which subcategorisation is not possible between the subject NP *pra1theet2thaj0* 'Thailand' and the adverb *jaang1ruuat2rew0* 'quick/quickly'.

(29)

a. kwaam0pliian1plxxng0   kh@@ng4   sang4khom0
    change   of   society
    dam0nqqn0paj0   **jaang1ruuat2rew0**
    proceed   **quick/quickly**
    'Societal change proceeds *quickly*.'

b. *kwaam0pliian1plxxng0   kh@@ng4   sang4khom0
    change   of   society
    jaang1ruuat2rew0   dam0nqqn0paj0
    quick/quickly   proceed
    '*Quick* societal change proceeds.'

(30)

    a.   pra1theet2thaj0   daj2   phat3tha3naa0 pra1theet2   taam0

        Thailand   past   develop   country   within

        bxxp1phxxn4   ta1wan0tok1   **jaang1ruuat2rew0**

        framework   west   **quick/quickly**

        'Thailand had *quickly* developed within the Western framework.'

    b.   *pra1theet2thaj0   **jaang1ruuat2rew0**   daj2   phat3tha3naa0

        Thailand   **quick/quickly**   past   develop

        pra1theet2   taam0 bxxp1phxxn4   ta1wan0tok1

        country   within framework   west

        '*Quickly,* Thailand had developed within the Western framework.'

All the examples in (25) to (30) also illustrate the violation of the Principle of Full Interpretation. In other words, when adverbs adjoin in the position between the subject and the verb, they are not interpreted in the desired sense.

2.3.4 Positions of adjunction in Thai revisited

From the above discussion, adjunction in Thai is possible only in the clause-initial or the clause-final position because the adjacency condition must be observed. This generalisation is, however, subject to one exception. Permitted in the pre-verbal position are a few adverbs in the CONSEQUENTIAL (*cvng0* 'thus, therefore'), CONCESSIVE: CONTINUATIVE (*jang0, jang0khong0* 'still'), ADDITIVE: UNEXPECTED (*thvng4kha1naat1* 'even'), PRETERITE: RECENT (*phvng2, phvng2ca1* 'just'), APPROXIMATE (*kvvap1, kvvap1ca1, cuuan0, cuuan0ca1* 'almost, nearly'), or RESTRICTIVE (*khxx2* 'just, merely, only') classes[17], as shown respectively in (31).

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[17] Similarly, English adverbs in these classes, except CONSEQUENTIAL adverbs, generally cannot adjoin in the positions other than in the immediate left of the categories which they modify. Ernst (2002) suggests that they are [+Lite] adverbs, which do not have as many adjunction positions as [-Lite] adverbs.

(31)

a. raw0   **cvng0**   khaw2paj0phuua0phan0   kap1
    we   **thus/therefore**   involve   in/with
    kaan0kra1tham0   ?an0run0rxxng0   taang1taang1
    action   violent   several
    'We are *thus* involved in several violent actions.'

b. kwaam0thuk3th@@0ra3maan0   **jang0khong0**   khuk3khaam0
    Suffer   **still**   threaten
    chii0wit3   pra1chaa0chon0 kh@@ng4   khaw4
    life   people   of   he
    juu1   thuk3wan0
    PROG   every day
    'Suffer is *still* threatening the lives of his people every day.'

c. Irving Crystal **thvng4kha1naat1**   khqqj0 khiian4   cot1maaj4
    Irving Crystal **even**   ever   write   letter
    r@@ng3riian0   kra1suuang0ka1laa0hoom4   waa2
    complain   Ministry of Defense   COMP
    'Irving Crystal *even* ever wrote a letter complaining the Ministry of
    Defense that …'

d. thang3mot1   laaw1nii3   **phvng2**   kqqt1khvn2   naj0
    all   these   **just**   happen   in
    kh@@0s@@4   1822
    A.D.   1822
    'All these *just* happened in 1822.'

e. sang4khom0   lx3   wat3tha1na4tham0   **kvvap1ca1**   klaaj0maa0
    society   and   culture   **nearly**   become
    pen0   lak3sa1na1   wat3thu1ni3jom0   jaang1som4buun0
    be   characteristic materialistic   completely
    'Society and culture have *nearly* become completely materialistic.'

f. khaw4   **khxx2**   jok3   tuua0jaang1
    he   **just**   give   example
    'He *just* gave examples.'

2.3.5 Summary

In English, adjacency can be relaxed because nominative case is assigned under the Spec-head agreement relation (section 2.3.1), grammatically dependent categories are generally inflected to agree with one another (section 2.3.2), and adverbs do not share syntactic similarities with the other word classes (section 2.3.3). Thus, clause-medial adjunction does not lead to failure in nominative case assignment as well as misassignment and/or unassignment of grammatical properties. Thai, in contrast, requires strict adjacency for nominative case assignment (section 2.3.1). Strict adjacency is also required because dependent categories such as the elements of the verbal construction do not inflect for grammatical agreement (section 2.3.2). Finally, adjunction in the clause-medial positions can result in misassignment and/or unassignment of syntactic and semantic properties, thus violating the Principle of Full Interpretation (section 2.3.3). The only area in which English and Thai are similar is that of the verb having to be adjacent to the object for accusative case assignment. However, English can still relax the adjacency condition in this regard if an object NP is heavier than its corresponding adverb. This possibility does not exist in Thai.

2.3.6 Positions of adjunction in SLA

In the SLA literature, there are only three studies investigating the syntax of adverbs in terms of positions of adjunction. Among these, just one addresses the issue of adjacency within the P&P framework and will be discussed first. The other two will nevertheless also be presented since they involve both positions of adjunction and L1 transfer, which are relevant to the present study. White (1989a) examined the adjacency condition and adverb placement in the interlanguage of French learners of English (the *ESL group*) and English learners of French (the

FSL group) in terms of adjacency parameter. English is a configurational language in which the direct object is placed closest to the verb so that accusative case assignment can be fulfilled. In other words, strict adjacency must be observed, i.e. [+strict adjacency][18]. Thus, adjunction is not possible in the position between the verb and the direct object, as in (32).

(32)
    a. Mary ate her dinner *quickly*.
    b. *Mary ate *quickly* her dinner.

                     (White, 1989a: p. 136)

French is also a configurational language. However, it allows the verb-direct object sequence to be interrupted. In other words, the adjacency condition on accusative case assignment can be relaxed, i.e. [+/-strict adjacency]. Thus, adjunction is allowed both in the position between the verb and the object and the clause-final position, as in (33).

(33)

a.	Marie	a mangé	*rapidement*	le dîner.
b.	*Mary	ate	*quickly*	her dinner.
c.	Marie	a mangé	le dîner	*rapidement*.
d.	Mary	ate	her dinner	*quickly*.

                     (White, 1989a: p. 137)

Therefore, in order to master the L2, the ESL group would have to reset from the more flexible grammar to the more conservative grammar, and vice versa for the FSL group.

The ESL group consisted of 43 adult learners, reported by their teachers to be at the intermediate level of proficiency, and 52 adolescent learners, who were at the beginning level. These subjects had little exposure to English outside the classroom. 14 adult native speakers of English served as controls. The FSL group consisted of 155 learners in grade five or six, and aged around 12. These subjects were from three types of programmes varying from the least to the most exposure to French: partial immersion, early total immersion, and submersion. The

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[18] Relative to French, English is a [+strict adjacency] language. However, it can be characterised as [+/- strict adjacency] when compared with Thai.

partial immersion group had started receiving instruction in French in grade four; the early total immersion group had started receiving instruction in French since kindergarten; the submersion group were attending French schools, with all the instruction being made in French. 31 native speakers of French in grade five or six served as controls. All the subjects were first administered a cloze test to indicate their levels of proficiency. As can be expected, the adult ESL subjects were much more proficient than the adolescent ESL subjects, and the early immersion and the submersion groups were relatively more proficient than the partial immersion group. Then, both the ESL and the FSL groups took a paced judgment task, a multiple-choice judgment task, and a comparison task, all involving sentences with the [+strict adjacency] or the [-strict adjacency] parameter.

The findings show that the ESL subjects were inaccurate in their judgment of the ungrammatical [-strict adjacency] sentences. That is, these sentences were judged as grammatical by the ESL group, but not by the control group. This could be attributed to negative L1 transfer since French allows [+/-strict adjacency]. Thus, the ESL learners treated English more flexibly than it actually is. As regards the FSL group, the subjects were relatively accurate in their judgment of both [+strict adjacency] and [-strict adjacency] sentences. However, for the latter type of sentences, the FSL subjects, like their ESL counterparts, seemed to be negatively influenced by their L1 as they were more reserved about adjacency violation than they should have been. Interestingly, the results indicate that the more advanced learners did not make better judgments than the less advanced ones. For example, the adult ESL group scored more or less the same as the adolescent group on most of the [-strict adjacency] sentences. Furthermore, the FSL learners with more exposure even made less correct judgments. That is, the FSL submersion

group accepted the [-strict adjacency] sentences much less than the FSL partial immersion group, contrary to expectation.

White (1989a) explains this phenomenon in terms of the *Subset Principle*, i.e. the relations between the *subset* and the *superset* grammars. To recall, English, a [+strict adjacency] language, is more specific than French, a [+/-strict adjacency] language. Thus, the former represents a subset grammar of the latter, which characterises a superset grammar, as shown in (34).

(34)
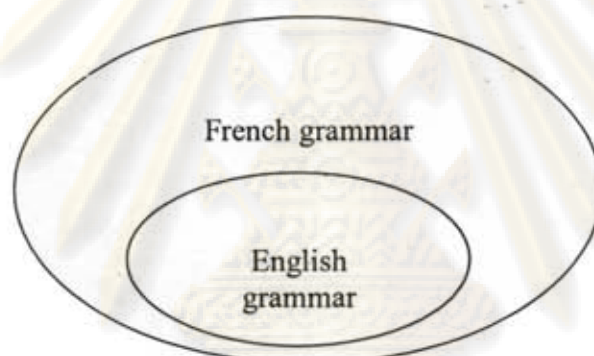
(Adapted from White, 1989b: pp. 142, 166)

According to White (1989a), the Subset Principle assumes that L2 learners will apply the subset grammar first despite the fact that the L1 has the superset or subset grammar, with the possibility of parameter resetting to take in the superset grammar if the L2 data warrant it. However, White's research results suggest that the ESL learners were not governed by the Subset Principle. The situation was different for the FSL learners, who were able to reset their interlanguage to accommodate the superset grammar when faced with positive data confirming the

grammaticality of [-strict adjacency], like in *Marie a mangé rapidement le diner* 'Mary ate quickly her dinner'.

The second study is reported in Johansson and Dahl (1982), who explored adverb placement among Norwegian learners. Although a detailed linguistic analysis was not given in their work, it can be inferred from their research results that Norwegian and English have different adjunction possibilities. In Norwegian, the subject and the verb must be adjacent to each other. As a result, the sequence cannot be interrupted by adverbs. English, in contrast, allows adverbs in the position between the two.

There were three groups of subjects. The first group was 31 second-year high school Norwegian learners, who took the Norwegian test (the *NN group*). The second group was 19 third-year high school Norwegian learners, who took the English test (the *EN group*). They had received English instruction for around eight years. The last group was 37 fourth- and sixth-graders in London who were native speakers of English, who took the English test (the *EE group*). In these tests, the subjects were required to insert adverbs into the positions they thought appropriate.

As mentioned above, the pre-order position, i.e. SAV, is of particular interest. Almost all types of adverbs were adjoined in this position by a large percentage of the EE group. In sharp contrast, none in the NN group placed adverbs in this position. This suggests that the pre-order position may not be available for adjunction in Norwegian. The EN subjects' response clearly demonstrates their intermediate state of SLA and the influence of L1 transfer. This is because a respectable percentage of the subjects adjoined adverbs in the pre-order position, which does not seem to be allowed in the L1. However, the degree to which this position was selected was not as high as that exhibited by the EE group.

In the last study, Selinker (1969) investigated the interlanguage of Hebrew learners of English in terms of placement of adverbs and adverbials. The sentential order of Hebrew is SVAO, whereas that of English is SVOA, A representing both adverbs and adverbials[19]. In other words, Hebrew allows adjunction in the position between the verb and the object, whereas English prohibits it, as in (35).

(35)

    a.   ani   *ohev*   *meod*   xatulim
        I like   *very*   *much*   cat
        'I like cats *very much*.'

    b.   kaniti   *bair*   et hagluya
        I bought   *downtown*   the postcard
        'I bought the postcard *downtown*.'

                (Adapted from Selinker, 1969: pp. 8-9)

Thus, Selinker (1969) hypothesised that due to L1 transfer, his subjects would adjoin adverbs and adverbials in this position. Two groups of subjects participated in his study. The first group comprised 132 Hebrew learners in Israel. The majority of these subjects were in grade eight and had received three years of English instruction. The second group was 31 child native speakers of English in the U.S., serving as controls. The Hebrew subjects were interviewed in Hebrew and English, whereas the native controls were interviewed only in English.

The results in Selinker's (1969) study indicate that the Hebrew subjects' interlanguage was undoubtedly influenced by their L1 since a larger number of adverbs were adjoined in the position between the verb and the object. However, the intermediate state of SLA was also revealed since the subjects also placed adverbs to the right of the VP. Surprisingly, in both the Hebrew and the English interviews, the Hebrew subjects adjoined place adverbials to the right of the VP to a larger extent than to the position in their L1, i.e. between the verb and the object.

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[19] Elsewhere, A represents only adverbs.

This might illustrate an instance of substratum transfer, i.e. the influence of the L2 on the L1 (Odlin, 1989).

2.3.7 Markedness theory, principles and parameters, and SLA

Markedness theory has its origin in the language universals developed by Greenberg (1966). Two of his foci, according to Croft (1990, cited in Ellis, 1994), are on the frequency of categories and the absence or presence of linguistic features. That is, the categories with greater frequency are considered unmarked, and those with less frequency marked. The categories for which certain features are not required are unmarked, whereas those for which these certain features are required are marked. For instance, singular nouns such as *boy* are unmarked because they do not involve the addition of the plural morpheme –s. Plural nouns such as *girls*, on the other hand, are marked since –s must be present. Greenberg (1996), from his analysis of several linguistic items, postulated a number of unmarked and marked values associated with them. To illustrate further, Latin singular pronouns are unmarked, and plural pronouns marked since the former outnumbered the latter, whether in the first, the second, or the third persons. Another example is that the unmarked cases in Sanskrit, Latin, and Russian are direct cases (e.g. *nominative, accusative)*, while the marked one is oblique. This is due to the fact that the frequency of direct cases is much greater than that of oblique. In addition, direct cases often involve zero expression, but oblique needs overt marking.

The conception of linguistic typologies such as the above has later been applied in the P&P framework, which divides the properties of language into *core grammar* and *peripheral grammar* (Chomsky, 1981b). White (1989b) further explains that core grammar is unmarked, consisting of the built-in principles and parameters, i.e. those which make up the L1 acquirers'

initial state of language acquisition. Thus, it can be acquired with "minimal evidence" (White, 1989b: p. 118). In contrast, peripheral grammar is made up of idiosyncratic linguistic phenomena outside of core grammar and thus considered marked. For this reason, specific positive evidence is needed for acquisition to take place. The parameters of core grammar are further distinguished into *unmarked (U)* and *marked (M)* values. In terms of acquisition, the unmarked setting requires only minimal effort, whereas the marked one needs specific positive evidence. This is shown in the following diagram.

(36)
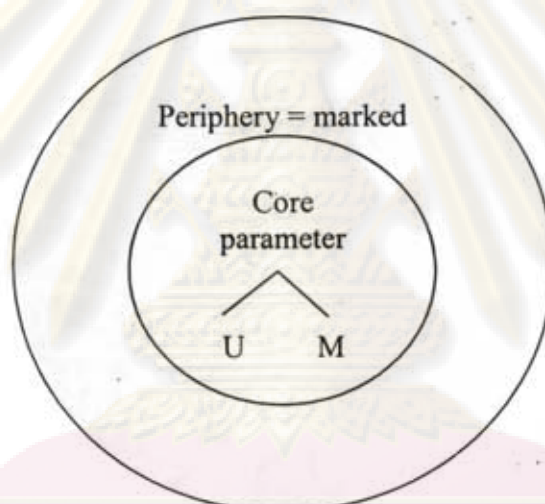
From this linguistic characterisation, at least two proposals with regard to SLA have been put forward. One is that unmarked L1 values are more likely to be transferred than marked ones due to L2 learners' realisation that marked values are not readily transferable (Eckman, 1977; Kellerman, 1979, 1983, cited in White, 1989b). The other is that the values of the L2 which are marked are more difficult to acquire than unmarked values (Eckman, 1977) because specific positive evidence is needed (White, 1989b). To put it another way, unmarked values are acquired

before their marked counterparts. Some major studies conducted to test these hypotheses are
reviewed below.

Regarding L1 transfer, Liceras (1985, 1986, cited in White, 1989b) investigated
piedpiping (e.g. *To whom did you give the gift?*) and *preposition stranding* (e.g. *Whom did you
give the gift to?*) in the acquisition of Spanish by English learners. Piedpiping is thought of as
unmarked, and preposition stranding marked. English allows both the unmarked and marked
structures, whereas Spanish permits only the unmarked ones. The situation here is thus that
marked forms, i.e. preposition stranding, should not be transferred into the learners'
interlanguage, due to the reason mentioned above. The results show that prepositions were
stranded by the Spanish learners, suggesting that marked L1 structures are transferred, rejecting
Liceras's hypothesis. In another study, Liceras explored English learners' acquisition of Spanish
in terms of *empty complementiser* (e.g. *The teacher Ø I studied with last year* ... as opposed to
The teacher who I studied with last year ...), which is marked and permitted only in English. She
found the same result that transfer occurs with marked L1 values.

However, opposite findings were obtained in the work of Adjémian and Liceras (1984,
cited in White, 1989b), in which the acquisition of empty complementisers by English learners of
French was tested. French is similar to Spanish in that the structure in question is disallowed.
Adjémian and Liceras found that the marked value of English did not transfer into French. The
relative non-transferability of marked L1 values is also mentioned in Kellerman (1989, cited in
Ellis, 1994). Kellerman studied how Dutch learners acquired conditionals in English (e.g. *If it
rained, they would cancel the concert in Damrosch Park*). According to him, the verb *rained* in
the subordinate clause can have two forms, the grammatical *rained* and the ungrammatical *would
rain*. The latter is more semantically transparent owing to its being explicitly marked for future

time and thus is considered unmarked[20]. Kellerman found that the ungrammatical form was often produced by advanced Dutch learners of English despite the fact that in Dutch conditionals, verb forms in the main and subordinate clauses equivalent to English are used. This brought him to the conclusion that unmarked structures are more likely to be transferred than marked ones.

With respect to the order of difficulty, Mazurkewich (1988) explored infinitive and gerund complements (e.g. *Philip likes to buy Inuit prints* vs *Philip likes buying Inuit prints* [p. 127]) in the interlanguage of English learners whose L1 is Inuktitut[21]. In this language, infinitives and gerunds are attached to verb stems. In addition, the language has no distinction between infinitive and gerund constructions found in English. Thus, the question of L1 transfer could be singled out. Mazurkewich hypothesised that infinitives should be acquired before gerunds because the former are unmarked, and the latter marked. The findings in her study reveal that acquisition proceeds from the unmarked form to the marked one. However, some linguists argue against this view, with the claim that a linguistically marked feature which is abundant in the L2 input may be easier to acquire than an unmarked feature which is not readily available (Gass, 1984, cited in Ellis, 1994). That is, the difficulty associated with a marked feature can be overcome on the basis of its frequency in the L2 data (Ellis, 1994).

It follows from the above that no conclusive results can be drawn from research carried out along the lines of markedness theories, as is also the case for most other SLA theories. Nevertheless, if White's (1989a) study (section 2.3.6) is re-analysed from the markedness perspective, it can be inferred that the marked value of the adjacency parameter was transferred and acquisition progressed in the unmarked-to-marked direction. To recall, French allows [+/-

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[20] This contrasts with Greenberg's (1966) claim that explicit markings represent marked values. This contradiction will not be addressed further.
[21] Inuktitut is a variety of Inuit, one of the languages spoken in north Canada (http://en.wikipedia.org/wiki/Inuktitut; Retrieved 9 May 2008).

strict adjacency], whereas English permits only [+strict adjacency], as far as adjunction between the verb and the direct object is concerned. Thus, the [+strict adjacency] setting can be considered unmarked, and the [-strict adjacency] marked. From the results in her study, the French learners of English accepted the [-strict adjacency] sentences to a much greater extent than the native control group, implying transfer of the French marked value. In addition, although the English learners of French were as accurate as the native control group in their judgment of the [+strict adjacency] sentences, they did not as readily accept the grammaticality of the [-strict adjacency] sentences. This suggests that the unmarked value may be acquired before the marked one.

2.3.8 Interlanguage aspects

Selinker (1972) proposed five central processes and strategies which he believes shape L2 learners' interlanguage: language transfer, transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralisation of L2 linguistic materials (p. 28). However, just as they can assist in interlanguage development, these processes may also result in *fossilisation*, referring to the ceasing of further linguistic development. For example, L2 learners may depend permanently on some or all of these and stop learning altogether because they think that is enough for them to survive in communicating with native speakers of the language.

According to Selinker (1972), *language transfer* involves the influence of the L1, which has been well documented in the long history of SLA research. It occurs at various, if not all, linguistic levels, namely lexical, syntactic, semantic, pragmatic, and phonetic and phonological

(Odlin, 1989)[22]. *Transfer of training* refers to the impact of training procedures on L2 development. To elaborate on this, Selinker raised an example of Serbo-Croatian[23] learners, who produced only *he* in their interlanguage English. Such a problem is not likely to be caused by L1 transfer since Serbo-Croatian is similar to English in that both languages have the *he/she* distinction. One cause of this difficulty, Selinker proposed, might be transfer of training because the drills in textbooks these learners had been exposed to never contained *she*. *Strategies of second language learning* concerns the approach L2 learners take in dealing with the task of language acquisition. Finding that they lack linguistic competence in some aspects, learners may, for example, simplify the L2 to their present level of knowledge. This is what happened among Indian learners of English, who, Selinker explained, were found to mark the progressive form –*ing* on verbs which do not take it (e.g. ... *I'm hearing him* [p. 31]). *Strategies of second language communication* may be manifested in a number of ways, one of which is *avoidance strategy*, the tendency that L2 learners might avoid grammatical structures with which they do not feel comfortable, i.e. those which they find difficult and think they have not yet mastered. Avoidance behaviour was mentioned in Schachter (1974) and Kleinmann (1977). For instance, Schachter found that Chinese and Japanese learners produced fewer English relative clauses than did Arabic and Persian learners. She attributed this to the fact that Chinese and Japanese are languages in which relative clauses appear to the left of head nouns. Arabic and Persian, on the other hand, are similar to English in that they are all languages in which relative clauses are on the right. It should be noted, however, that strategies of second language learning and

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[22] See, for example, Ard and Homburg (1992), Bartelt (1992), Broselow (1992), Gundel and Tarone (1992), and the other papers in Gass and Selinker (1992) for detailed discussions on L1 transfer at each of these levels. Also, see the works in Flynn and O'Neil (1988) and Gass and Schachter (1989) for related topics.

[23] Serbo-Croatian is a cover term for dialects spoken in Serbia, Croatia, Montenegro, Bosnia and Herzegovina and was one of the official languages of Yugoslavia from 1918 to 1991 (http://en.wikipedia.org/wiki/Serbo-Croatian_language; Retrieved 9 May 2008).

communication are not necessarily conscious processes, meaning that L2 learners tend, but do *not* intend, to simplify or avoid complex L2 structures. In addition, despite its significance in interlanguage development, the notion strategy, Selinker admits, is not much understood and further research in this area is thus called for. The last aspect, *overgeneralisation*, involves extending an L2 rule to the context in which it does not apply (e.g. *What did he intended to say?*, *After thinking little I decided to start on the bicycle as slowly as I could as it was not possible to drive fast* [Selinker, 1972: p. 30]).
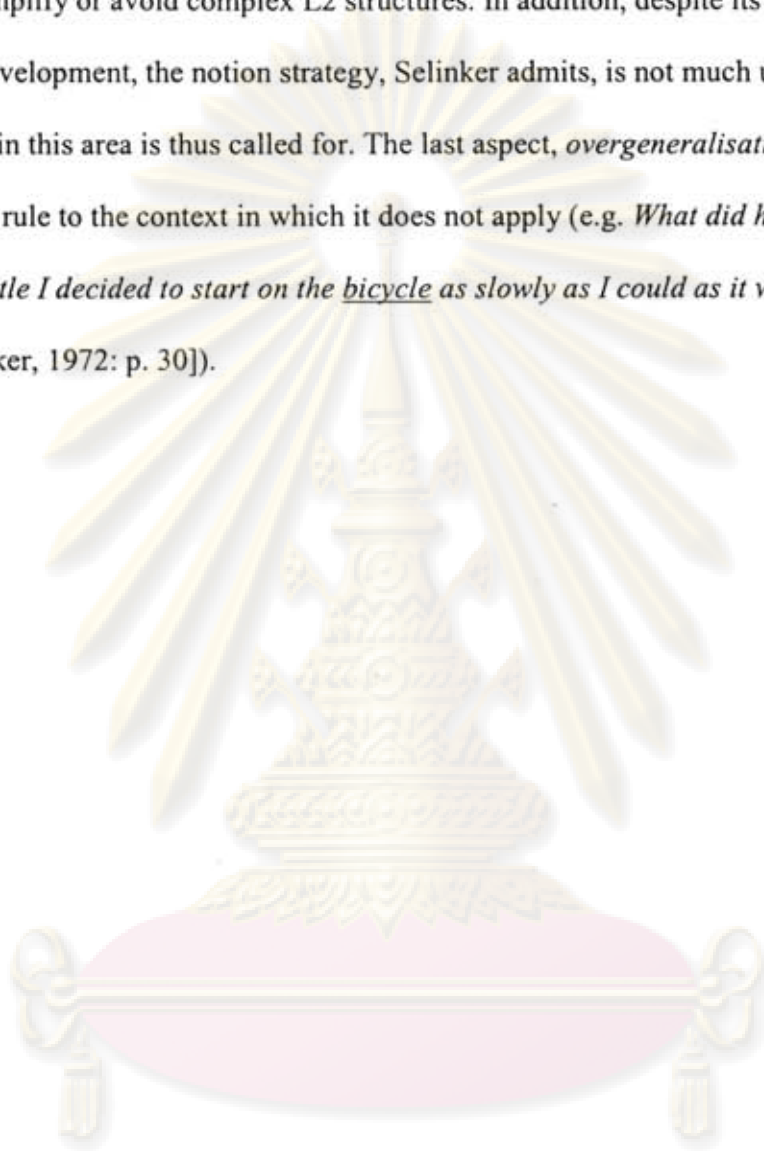
CHAPTER III

RESEARCH METHODOLOGY

This study explores the syntactic variation of English adverbs in the interlanguage of Thai learners with respect to the range of positions of adjunction. The analysis was conducted on both cross-sectional and long-term bases. This chapter presents the research methodology in more detail.

3.1 Rationale for the use of production data

Although elicited grammaticality judgment data have been preferred to production data in generative research (cf. White, 1989b, 2003), the latter were used in the present study for the following reasons. First, this type of data "can be assumed to be a reflection of unconscious knowledge of language; that is, it is one potential 'window' through which one may indirectly observe competence" (Juffs, 1996: p. 179). Such a belief is manifested by the fact that many generative SLA studies have employed either oral data (e.g. Clahsen and Muysken, 1986; Hilles, 1986) or written data (e.g. Phinney, 1987; Zobl, 1989). Furthermore, long-term research conducted within this framework often tends to draw on production data (e.g. Lardiere, 1998a, 1998b; Prévost and White, 2000; Rohrbacher and Vainikka, 1994, cited in Vainikka and Young-Scholten, 1996; Sauter, 2002; Vainikka and Young-Scholten, 1996; Wijnen, 1994, cited in Vainikka and Young-Scholten, 1996). Moreover, it would be impractical to develop a grammaticality test which could adequately elicit L2 learners' judgment on adverbs in the (approximately) thirty semantic categories of concern (sections 2.2.1 and 3.4.2d) and the possible positions in which these adverbs can adjoin. This is particularly the case for the present research,

which aims to investigate L2 learners' interlanguage development, and so three or four sets of test would be needed. Finally, studies on the acquisition of adverbs have shown that a grammaticality judgment test could include only a few adverbs focusing only on certain semantic types such as FREQUENTATIVE and MANNER adverbs (e.g. Ayoun, 2005; Eubank *et al.*, 1997; Ionin and Wexler, 2001; White, 1989a; White, 1991a, 1991b; Yuan, 2001). On the other hand, the use of production data, especially from a sizeable corpus, allows an investigation on a larger number of adverbs across much more semantic categories (e.g. Lardiere, 1998b).

3.2 Subjects

The subjects were five MA students and five PhD students, selected from those in the *English as an International Language (EIL)* programme, Chulalongkorn University. The MA students were referred to as *intermediate Thai learners of English*, and the PhD students as *advanced Thai learners of English*. These two groups of subjects were selected because research evidence suggests that adverbs do not become productive at earlier stages of acquisition (Dissosway, 1984; Eubank, 1994; Sauter, 2002). Additionally, numerous works classify proficiency levels according to educational status or the number of years learning an L2 (e.g. Ayoun, 2005; Beck, 1998; Chu and Schwartz, 2005; R. Hawkins, Towell, and Bazergui, 1993; Selinker, 1969; Ubol, 1981; White, 1989a). Also, since these two groups of subjects were from different academic levels, they were initially divided because the admission into the programme requires different proficiency scores for each group: for the former, 500 or above on the *Chulalongkorn University Test of English Proficiency (CU-TEP)*, an equivalent of the *Test of English as a Foreign Language (TOEFL)*[1]; for the latter, 550 or above on the CU-TEP.

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[1] Cf. Pongsurapipat, Chinnawongs, and Kannasoot (2000) for further discussions on the concurrent validity of the two tests.

Nevertheless, most of the subjects achieved scores which were higher than the admission requirements: many MA students got scores of around 580, and many PhD students scores of around 600. Thus, it was decided that the cut-off scores be at 600. The subjects' CU-TEP scores are reported in Table 3.1.

Table 3.1   The subjects' CU-TEP scores

	Advanced group	Intermediate group
Learner 1	608	575
Learner 2	608	575
Learner 3	658	582
Learner 4	625	582
Learner 5	628	585
Average scores	**625.4**	**579.8**

As shown in the table, the advanced group's scores averaged 45.6 points higher than those of the intermediate group, suggesting that the former was generally at a higher proficiency level than the latter. Nevertheless, it should be noted that some exceptional cases arose. That is, intermediate learner 5 had the scores of 585, only 24 points behind advanced learners 1 and 2. In addition, intermediate learners 3 and 4 both achieved scores of 582, again only 26 points behind advanced learners 1 and 2. Thus, intermediate learners 3 to 5 being taken into consideration, it might be more appropriate to take the subjects' proficiency levels as forming a continuum, with their scores ranging from 575 to 658. However, a distinction between the advanced and the intermediate groups could be drawn on the whole since, according to Poonsawad (2006), CU-TEP test takers with scores of above and below 600 are at different levels of proficiency, as shown below.

> 700	=	Expert user
650-699	=	Very good user
600-649	=	Good user
550-599	=	Very competent user
500-549	=	Competent user
450-499	=	Moderate user
400-449	=	Marginal user
< 400	=	Very limited user

(Poonsawad, 2006: p. 6)

3.3 Data collection

Data were collected from the term papers written by each group of subjects over a two-year period, when they were studying in the EIL programme. The data were divided into four stages, i.e. four academic terms. Only the term papers were included, while the other types of written works such as classroom assignments and examination papers were excluded. The reason for this is that the writing of term projects, compared to that in examinations, allowed data processing and analysis as well as self-editing, with less imposition of time constraints. Furthermore, term paper writing enabled focuses on both content and linguistic forms, whereas examination paper writing required a focus on the former rather than the latter (cf. Kroll, 1990).

The subjects were asked to sign a consent form before their participation in this research. In addition, prior to the actual data collection, two further requirements were in order. The first was that the subjects had to have been born and raised mainly in Thailand. Those who had spent longer than three consecutive years having been actively involved in academic activities in a country where English is spoken as an L1 were excluded. The second requirement was that native speakers of English must not have been edited the subjects' writings. Again, the subjects whose works did not meet this criterion were discarded. Substitution was made to replace these subjects until five intermediate and five advanced learners were obtained. Then, their writings

were collected. The writings of the former group constituted the *intermediate English corpus*, and those of the latter group constituted the *advanced English corpus*.

In each term, the subjects generally took three courses, which was an enrolment requirement, and would thus write three papers (i.e. one paper for each course). Since five intermediate and five advanced learners participated in this study, an average of 30 academic papers would be collected in each term, around fifteen from the intermediate learners and around fifteen from the advanced learners. Thus, over the two-year period or four terms, a total of 120 texts would be collected – 60 from the intermediate learners and 60 from the advanced learners. Each term paper was approximately 4,000-5,000 words long. Thus, the corpus size would be approximately 240,000-300,000 words for each group of subjects, or a total of 480,000-600,000 words for both groups. However, some subjects had not registered for the exact required number of courses, i.e. more or less than three, leading to the number of texts in each term deviating from what was expected. For these cases, no effort was made to spread the number of texts over the research period. This was to ensure that the texts were representative of the subjects' interlanguage in each term. For example, if a subject took four courses in the first term and thus wrote four term papers, all these papers would represent the data for that term, with less papers representing the data in the next term. The data in each term were then analysed to determine the range of positions of adjunction for each group of subjects.

As predicted, the majority of the subjects, except for one, finished their coursework in three terms. Thus, the data had to be divided into three stages for the most part. It should also be noted that some of the texts written by each subject were missing, the consequence of which was that the actual learner corpora were slightly smaller than initially planned. This is illustrated in Tables 3.2a and 3.2b.

Table 3.2a   The advanced English corpus

Learner	Stage 1	Stage 2	Stage 3	Stage 4	Total
Learner 1	16,293	11,532	5,296	n/a	33,121
Learner 2	11,572	19,327	14,432	n/a	45,331
Learner 3	12,581	11,478	15,241	n/a	39,300
Learner 4	20,809	5,450	4,128	23,871	54,258
Learner 5	11,765	8,890	1,721	n/a	22,376
Total	73,020	56,677	40,818	23,871	194,386

Table 3.2a shows that the size of the advanced English corpus was 194,386 words. The data could be divided into four stages only for Learner 4 since the other learners completed their coursework requirements in three terms.

Table 3.2b   The intermediate English corpus

Learner	Stage 1	Stage 2	Stage 3	Stage 4	Total
Learner 1	11,187	6,794	9,345	n/a	27,326
Learner 2	9,490	8,905	13,626	n/a	32,021
Learner 3	10,132	10,188	8,254	n/a	28,574
Learner 4	9,350	12,874	n/a	n/a	22,224
Learner 5	14,160	12,870	8,572	n/a	35,602
Total	54,319	51,631	39,797	n/a	145,747

As shown in Table 3.2b, the intermediate English corpus was 145,747 words in size. All the learners finished their coursework in three terms, and so the data could be divided into three stages only. Furthermore, for intermediate learner 4, the texts in stage 3 were missing.

The list of courses from which the data had been collected is given in Tables 3.2c and 3.2d below. It suggests that the results and discussion in the next chapters are not very likely to be attributable to the differences in the contents or types of the papers since the courses taken by the subjects were quite similar, especially for stages 1 and 2. In addition, the tasks or assignments for each course were more or less the same in which they had to cite the relevant literature and write in an argumentative style, although the focus of their work might differ, oriented towards the theoretical or the practical side of a topic. To conceal their identity, the titles of the papers are not provided.

Table 3.2c   Courses taken by the advanced group

Advanced Learner	Stage	Course[2]
1	1	Foundation of Language Acquisition
		Linguistic Foundation of English
		English Lexicology
	2	Research in English Applied Linguistics
		English Semantics and Pragmatics
		English Syntax and Usage
	3	English Discourse Analysis
		English Phonology
2	1	Foundation of Language Acquisition
		Foundation of Language Teaching
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
		Translation Principle and Practicum
	3	Material Development for Teaching English as an International Language
		Research in English Language Instruction
		World Englishes
3	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
		English Phonology
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
		English Syntax and Usage
	3	English Lexicology
		Interlanguage Study

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[2] The courses are listed alphabetically according to course type, i.e. required or elective.

Table 3.2c   Courses taken by the advanced group (continued)

Advanced Learner	Stage	Course
4	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		Socio-cultural Foundation of English
	3	English Lexicology
	4	English Semantics and Pragmatics
		Individual Study in English Linguistics
		World Englishes
5	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		English Curriculum Development
		Research in English Applied Linguistics
	3	Bilingual and Multilingualism

Table 3.2d   Courses taken by the intermediate group

Intermediate Learner	Stage	Course
1	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
	3	Cultural Impact of Teaching English as an International Language
		Individual Study in English Language Instruction
2	1	Foundation of Language Acquisition
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
	3	English Lexicology
		Individual Study in English Linguistics
3	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
	3	Material Development for Teaching English as an International Language
		Research in English Language Instruction

Table 3.2d   Courses taken by the intermediate group (continued)

Intermediate Learner	Stage	Course
4	1	Foundation of Language Acquisition
		Linguistic Foundation of English
		English Lexicology
	2	Foundation of Language Assessment and Evaluation
		Research in English Applied Linguistics
5	1	Foundation of Language Acquisition
		Foundation of Language Teaching
		Linguistic Foundation of English
	2	Foundation of Language Assessment and Evaluation
		English Syntax and Usage
		Individual Study in English Linguistics
	3	Master's Thesis

In addition to the texts collected from the Thai learners, data were gathered from native or near-native speakers of English, forming the *native* or *baseline corpus*. The source of data was a leading journal, *Applied Linguistics*, which publishes quarterly research and academic articles related to language and language acquisition. As specified in the *2004 Institute for Scientific Information (ISI) Journal Citation Reports*, the journal has an *impact factor* of 0.829, whereby impact factor refers to a measure of the importance of scientific journals calculated each year by the Institute for Scientific Information (http://www.starrepublic.org). The reason for using articles in the *Applied Linguistics* journal is that the data gathered from this source and from the subjects were in the similar field of applied linguistics (cf. Jordan, 1998; Kroll, 1990; Swales, 1990). Besides, the baseline data can be justified as reflecting the language standard to which the subjects seek to aspire.

Three criteria had been established for forming the baseline corpus. First, only critical review articles were included because they were more similar in style and presentation to the majority of the texts in the intermediate and the advanced English corpora than research-oriented articles. Second, because length has an impact on grammatical choices (Jordan, 1998), an article to be selected had to be approximately 5,000 words, so that it paralleled the length of the

majority of the texts in the learner corpora. Finally, data were collected only from articles published after 2000 since the learner corpora consisted of term papers written during this period. The texts satisfying these criteria were selected until a corpus of approximately 200,000 words was obtained. Before the analysis, the abstract was discarded since it provided a summary of the main section of a text, making its inclusion redundant. Also, the texts in the learner corpora did not contain abstracts.

The baseline corpus was then divided into the main corpus and the sub-corpus. The sub-corpus was formed from texts randomly selected from those in the main corpus. The sub-corpus was applied when the longitudinal data of each learner and the cross-sectional data of the five learners in each group were being explored since the former was more compatible in size with the latter than the main corpus. The symbol * indicates that the sub-corpus was used for comparison.

Table 3.2e   The baseline corpora

Main corpus	242,894
Sub-corpus	50,562

Table 3.2e demonstrates that the main corpus was 242,894 words in size, while the size of the sub-corpus was 50,562 words.

3.4 Data analysis

The analysis concerned only the range of positions of adjunction relative to the clause, not adjunction to *adjectival phrases (AdjP)*, e.g. *This poorly written paper is difficult to read*, or *adverbial phrases (AdvP)*, e.g. *The work proceeds relatively quickly*, (section 1.6.1). Both parenthetical, e.g. *He has, cleverly, answered the question*, and integrated adverbs, e.g. *He has cleverly answered the question*, were analysed (section 1.6.2). Both adverbs, e.g. *quickly, enormously*, and lexical-phrase adverbs, e.g. *as a consequence*, were included and subsumed as adverbs, whereas adverbials were discarded (section 1.6.3).

The data analysis was undertaken following the procedures below:

3.4.1 Data storage

a. All the texts were categorised according to their respective corpus (intermediate, advanced, and baseline) and their authors. The texts in the intermediate and the advanced English corpora were also categorised according to the time in which they had been written (stage 1, 2, 3, or 4).

b. Each text in each corpus was searched manually for instances of adverbs.

c. An adverb which was found in the portion of a text directly quoted from another writer was discarded because it was not truly representative of its respective author. On the other hand, an adverb in a paraphrased portion was kept because it had been rewritten and put in context.

d. An adverb adjoined in a clausal position was included, while that adjoined to an AdjP or an AdvP was discarded (section 1.6.1). Since AdjPs are related to the passives, an adjectival passive, e.g. *The author was interested in this work*, had to be distinguished from a verbal passive, e.g. *The data were kept in another file*. However, doing this is difficult (cf. Levin and

Rappaport Hovav, 1995, cited in Beijer, 2005; Ouhalla, 1999) and beyond the scope of the present study. Thus, a standard dictionary was consulted. Accordingly, *interested* was categorised as an adjectival passive, whereas *kept* was classified as a verbal passive, because they are listed as such in the dictionary. Adjunction to adjectival passives was not counted, whereas adjunction to verbal passives was taken into account.

e. Each sentence containing an adverb which met the selection criteria was stored in an MsExcel file. This was accompanied by syntactic information, including adverb type (parenthetical, integrated); clause type (main, subordinate); subject type (nominal NP, pronominal NP); sentence pattern (declarative, interrogative, imperative); voice (active, passive); structure of verbal construction (only main verb, auxiliary verb + main verb (e.g. *has conducted*), modal + auxiliary verb + main verb (e.g. *will have finished*), modal + auxiliary verb + tensed auxiliary verb + main verb (e.g. *will have been sent*).

f. For the intermediate and the advanced English corpora, the total number of adverbs in each stage was also counted.

3.4.2 Classification

a. Classification was made manually before the information was transferred to *the Statistical Package for the Social Sciences (SPSS) 11.5*.

b. Parenthetical adverbs and integrated adverbs were treated separately.

c. Following 3.4.1e, coding included information such as adverb type (parenthetical, integrated); clause type (main, subordinate); subject type (nominal NP, pronominal NP); sentence pattern (declarative, interrogative, imperative); voice (active, passive); structure of verbal construction (only main verb, auxiliary verb + main verb (e.g. *has conducted*), modal +

auxiliary verb + main verb (e.g. *will have finished*), modal + auxiliary verb + tensed auxiliary

verb + main verb (e.g. *will have been sent*).

d. Adverbs were classified and coded according to their semantic type, based on Beijer

(2005: pp. 78-88), as shown in Table 3.3, reproduced from that in 2.2.1.

Table 3.3 **Semantic classification of adverbs**

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Interclausal connection	CONCESSIVE	anyway nevertheless	To express that something is the case, in spite of the existence of some other state of affairs, expressed in the preceding context.
	CONSEQUENTIAL	accordingly consequently therefore thus	To indicate that the following proposition is a consequence of the preceding proposition.
	ADVERSATIVE	however	To signal a contrast between the following proposition and the preceding proposition, but not a concessive relation.
	CONCESSIVE: CONTINUATIVE	still	To indicate a concessive feature set-up as well as a continuative aspect.
	ADDITIVE: CONTRASTIVE	otherwise	To signal addition as well as imply a contrast between two propositions.
	ADDITIVE: SERIAL ORDER	also	To express addition.
	ADDITIVE: UNEXPECTED	even	To signal not only addition but also that the proposition is stronger or more surprising in comparison with the other proposition to which it is compared.
Epistemic modality	EPISTEMIC	certainly surely probably undoubtedly unquestionably	To signal various degrees of the writer/speaker's commitment to the truth of the proposition.
Non-epistemic modality	NECESSITY	inevitably necessarily	To express that something is inevitably or necessarily the case from an objective point of view.
	NON-EPISTEMIC: POSSIBILITY	perhaps possibly	To indicate that there is at least one possible world in which the proposition is true, not that the writer/speaker is only partially committed to the truth of the proposition.
Metalinguistic commentary	METALINGUISTIC	actually honestly	To comment on the act of uttering the message, i.e. that the message is communicated in an honest fashion or that the message corresponds with the true state of affairs.
	REINFORCING	indeed	To reinforce the strength of the proposition.

Table 3.3   Semantic classification of adverbs (continued)

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Evidentiality	EVIDENTIAL	apparently evidently manifestly obviously clearly	To signal that the writer/speaker has evidence for the statement he makes.
Reality and facts	FACTUAL	really	To stress that the proposition happens to correspond with known facts or reality.
Time	TEMPORAL: GENERAL	before now nowadays then	To give information related to time, which is either related to the time of speech or to a certain reference point.
	TEMPORAL 2	once	To provide reference to an unspecified past.
	CONTINUATIVE	still	To suggest that the state of affairs is not only true at the time of speech but has been true for some unspecified period of time.
	DURATIVE	long	To express that the state of affairs has had or will have a considerable extension in time.
	FINAL	finally	To indicate that something occurred or will occur at the end of some process or some sequence of events.
	SIMULTANEOUS	simultaneously	To signal that two states of affairs co-occurred or will co-occur.
	NON-FUTURE	hitherto	To signal that something has been the case and still is the case.
	FUTURE: PROXIMATE	immediately soon	To suggest that something will occur in the near future.
	FUTURE: NON-PROXIMATE	later	To suggest that something will occur in the future, but not in the near future.
	PRETERITE: RECENT	just	To refer to a past which is comparatively close to a certain reference point.
	ANTERIOR	already	To express that a state of affairs is obtained or will be obtained at a point in time which is earlier than a certain reference point.
Permanence, frequency, and reoccurrence	IRREGULAR	occasionally periodically sometimes	To point out that some state of affairs is obtained neither permanently nor frequently.
	FREQUENTATIVE	often	To signal a high frequency of occurrence.
	HABITUAL/GENERAL	mostly generally usually	To signal a relatively high frequency as well as habituality or prominence.
	REPETITIVE	again	To indicate that something happens which has happened before.
	PERMANENT	always	To indicate that something is invariably the case.
(In)complete-ness and closeness	COMPLETIVE	completely entirely	To stress that something is not only partly, but also completely, the case.
	PARTIAL	partially partly	To signal that something is only partly the case.
	APPROXIMATE	almost nearly	To signal that something is close to being the case or to occurring.

Table 3.3   Semantic classification of adverbs (continued)

Classification	SUB-CLASSIFICATION	Sample token	Function(s)
Focus	RESTRICTIVE	just merely only	To exclude a number of other possible interpretations and thus restrict the number of possible worlds in which the statement holds true.
Evaluation	EVALUATIVE	oddly unfortunately	To express general, subjective evaluation of the propositional content.
VP-related adverbs	VP-RELATED	briefly clearly easily gradually honestly legitimately quickly regularly unexpectedly	To express VP-related notions such as manner, degree, etc.
	INSIGNIFICANT DEGREE	hardly	To express the insignificance of the proposition or state of affairs.

(Beijer, 2005: pp. 78-88)

e. Adverbs were also classified and coded according to their positions of adjunction relative to the clause, as exemplified in (1).

(1)

    a.   *Possibly*, they may have been sent to London.
    b.   They *possibly* may have been sent to London.
    c.   They may *possibly* have been sent to London.
    d.   They may have *possibly* been sent to London.
    e.   They may have been *possibly* sent to London.
    f.   They may have been sent, *possibly*, to London.
    g.   They may have been sent to London, *possibly*.
    (Adapted from Quirk, *et al*., 1985: 490f, cited in Hoye, 1997: p. 148)

Thus, (1a) was categorised as adjoining in the clause-initial position, (1b) in the position between the subject and a modal auxiliary, (1c) in the position between a modal auxiliary and an auxiliary, (1d) in the position between an auxiliary and a tensed auxiliary, (1e) in the position between a tensed auxiliary and a finite main verb, (1f) in the position to the right of VP and before the rest of the clause, and (1g) in the clause-final position.

It should be noted that although adverbials were excluded (section 1.6.3), adverbs used within these contexts were taken into account. In these cases, reconstructions were made. Consider the following examples.

(2)
    a.   *Working on his essay late*, Tom was quickly becoming tired.
    b.   She died in her car, *seriously suffocated by exhaust fumes*.
                  (Adapted from Aarts, 1997: pp. 75-78)

The -ing participle clause in (2a) was reconstructed as *Tom worked on his essay late*. The adverb *late* was thus classified as adjunction in the clause-final position. The -ed participle clause in (2b) was reconstructed as *She was seriously suffocated by exhaust fumes*. The adverb *seriously* was thus classified as adjunction between an auxiliary and a finite main verb.

3.4.3 Summation and comparison

a. The total number of adverbs in each position of adjunction irrespective of their semantic type was counted for each corpus and for each of the four stages. Then, intra-group and inter-group comparisons were made.

b. The total number of adverbs in each position of adjunction classified by semantic type was counted for each corpus and for each of the four stages. Then, intra-group and inter-group comparisons were made.

c. Comparisons between individual learners were also made. This is motivated on the grounds that although learners at a particular level of proficiency tend to converge in terms of their knowledge of an L2 (e.g. Corder, 1974, 1976; Selinker, 1972, 1975; Tarone, 1988), empirical research (e.g. Ayoun, 2005; Eubank *et al.*, 1997) as well as theoretical postulates (e.g. Richards and Sampson, 1974; Tarone, 1988) have indicated that individual variations are

inherent in the language of L2 learners and native speakers alike. Moreover, the results from many SLA studies have shown that taking learners as a group often conceals how they perform individually (e.g. Choi, 2005; Eubank *et al.*, 1997). Thus, a lot would be missed out on L2 learners' interlanguage should their individual differences not be taken into consideration.

CHAPTER IV

RESULTS

4.1 Introduction

The present research investigates the syntactic variation of English adverbs in the interlanguage of Thai learners with regard to positions of adjunction. The organisation of this chapter is as follows. In 4.2, comparisons are made with respect to the frequency of adverbs in the main baseline corpus, the baseline sub-corpus, the advanced English corpus, and the intermediate English corpus. 4.3 demonstrates the adjacency condition and the range of positions of adjunction in the interlanguage of intermediate and advanced Thai learners in relation to the language of native speakers and to one another. The group results are provided in 4.3.3, and the individual results in 4.3.4. Then, the learners' development in terms of the adjacency condition and the range of positions is exhibited in 4.4. The group results and the individual results are given in 4.4.1 and 4.4.2, respectively. In 4.5, the distribution of adverbs in each semantic category is reported. In 4.5.1, the three groups of subjects are compared, followed by the individual results in 4.5.2. All the findings are summarised in 4.6.

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4.2 Frequency of adverbs

Tables 4.1a to 4.1c show the frequency of adverbs in each of the four corpora: the main baseline corpus, the baseline sub-corpus, the advanced English corpus, and the intermediate English corpus. In each cell, the italicised figure above the parenthesis represents the frequency of adverbs per 1,000 words[1]. The first figure in the parenthesis exhibits the total number of adverbs in the corpus, and the second figure in the parenthesis the corpus size. To illustrate, the figures *15.82 (3,842/242,894)* in the upper right cell of Table 4.1a mean that in the main baseline corpus, adverbs occurred approximately 16 times per 1,000 words, the total number of adverbs was 3,842, and the corpus size was 242,894 words.

Table 4.1a   The frequency of adverbs in the native baseline corpora

Main corpus	*15.82* (3,842/242,894)
Sub-corpus[2]	*12.95* (655/50,562)

• *Frequency reported per 1,000 words*

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[1] The reason for this is as follows. Since the four corpora were not equal in size, the frequency of adverbs corresponding to each corpus could not be compared directly but had to be adjusted first. One way to do this could be to divide the corpus size by the total number of adverbs, which gives the information as to how often *one* adverb occurs in a corpus. As an illustration, the frequency of adverbs in the main baseline corpus could be derived by dividing 242,894 by 3,842, yielding 63.22. In other words, one adverb appeared every 66.32 words, i.e. 1/66.32. For the baseline sub-corpus, the frequency was 1/77.19 (655 divided by 50,562), meaning that one adverb occurred every 77.19 words. However, this approach has rarely been applied in the literature because the numerator, i.e. 1 in the example, is always the same, whereas the denominator, i.e. 66.32 and 77.19 in the examples, changes, making inter-group comparisons difficult. In order to keep the denominator constant, thus, the total number of adverbs was first divided by corpus size and then multiplied by 1,000. For example, the frequency of adverbs in the main baseline corpus was calculated by first dividing 3,842 with 242,894, yielding 0.015817. The figure was then multiplied by 1,000, giving 15.82. This means that 15.82 adverbs occurred every 1,000 words, i.e. 15.82/1,000. Calculated this way, the denominator is always 1,000, enabling straightforward comparisons of how frequently adverbs appeared in the four corpora. Reporting the frequency of a category per 1,000 words has been followed in lexical frequency analysis (e.g. Jarvis, Grant, Bikowski, and Ferris, 2003; Mollering, 2001; Laufer and Nation, 1995).

[2] The sub-corpus, indicated by the symbol •, was used for comparison with the long-term data of each learner and the cross-sectional data of the five learners in each group (section 3.3).

Table 4.1b   The frequency of adverbs in the advanced English corpus

Advanced English corpus	Stage 1	Stage 2	Stage 3	Stage 4	Average
Learner 1	11.23 (183/16,293)	12.83 (148/11,532)	11.52 (61/5,296)	n/a	11.84 (392/33,121)
Learner 2	15.54 (180/11,572)	9.37 (181/19,327)	14.76 (213/14,432)	n/a	12.66 (574/45,331)
Learner 3	11.05 (139/12,581)	20.04 (230/11,478)	13.25 (202/15,241)	n/a	14.53 (571/39,300)
Learner 4	11.97 (249/20,809)	11.93 (65/5,450)	15.50 (64/4,128)	13.40 (320/23,871)	12.80 (698/54,258)
Learner 5	9.18 (108/11,765)	7.65 (68/8,890)	17.43 (30/1,721)	n/a	9.20 (206/22,376)
Average	11.76 (859/73,020)	12.21 (692/56,677)	13.96 (570/40,818)	13.40 (320/23,871)	12.56 (2,441/194,386)

• Frequency reported per 1,000 words

Table 4.1c   The frequency of adverbs in the intermediate English corpus

Intermediate English corpus	Stage 1	Stage 2	Stage 3	Stage 4	Total
Learner 1	6.44 (72/11,187)	11.33 (77/6,794)	8.67 (81/9,345)	n/a	8.45 (230/27,326)
Learner 2	9.38 (89/9,490)	11.11 (99/8,905)	7.56 (103/13,626)	n/a	9.09 (291/32,021)
Learner 3	6.81 (69/10,132)	7.66 (78/10,188)	4.60 (38/8,254)	n/a	6.47 (185/28,574)
Learner 4	6.74 (63/9,350)	8.23 (106/12,874)	n/a	n/a	7.00 (169/22,224)
Learner 5	6.64 (94/14,160)	7.07 (91/12,870)	12.60 (108/8,572)	n/a	8.23 (293/35,602)
Average	7.12 (387/54,319)	8.74 (451/51,631)	8.30 (330/39,797)	n/a	8.01 (1,168/145,747)

• Frequency reported per 1,000 words

The tables show that adverbs were used most frequently in the native corpus and the native sub-corpus, 15.82 and 12.95 adverbs per 1,000 words, respectively[3]. The advanced learners were on a par with the native group, using 12.56 adverbs every 1,000 words, although this fluctuated considerably from one stage to another, especially for advanced learners 2 and 3[4]. On the other hand, adverbs were used much less frequently by the intermediate learners, 8.01 per

[3] Nevertheless, since the study explores only adverbs in the clausal positions (sections 1.4.1.1, 3.4, and 3.4.1), the actual frequency may be different if those in other structures such as AdjPs or AdvPs are taken into account.
[4] Not much can be said about advanced learner 5 as the corpus size is severely small for the last stage.

1,000 words. In comparison with that found for the advanced learners, the extent to which the intermediate group used adverbs varied even more greatly. For example, intermediate learner 1 used only 6.44 adverbs in stage 1. The number increased sharply to 11.33 in stage 2 but dropped to 8.67 in stage 3. This spiral movement applies to all the intermediate learners, except for intermediate learner 5, whose proportion of use illustrated a consistent upward movement.

4.3 The adjacency condition and the range of positions

This section starts with an introduction to the classification of positions of adjunction followed in this study (section 4.3.1). Then, the discussion moves on to the proportions of adverbs in different semantic categories used by the native, the advanced, and the intermediate groups (section 4.3.2). After that, the degree to which adverbs were placed in different positions, and thus how adjacency was observed, as well as the range of positions of adjunction used by each group are presented (section 4.3.3). The focus was on adjunction in the clause-initial and the clause-medial positions. This is due to the fact that these two positions, according to Biber *et al.* (1999) and Huddleston and Pullum (2002), are closely associated with adverbs showing interclausal connections such as CONSEQUENTIAL adverbs (e.g. *thus, therefore*) and ADDITIVE: SERIAL ORDER adverbs (e.g. *also, first, second*), which occurred most frequently in the data. Finally, individual variations are illustrated (section 4.3.4).

4.3.1 Range of positions of adjunction

As discussed in 1.6, the native corpus was examined first to provide a baseline for comparisons. From this, it was found that adverbs were used in three broad types of position relative to the clause: clause-initial, clause-medial, and clause-final.

The *clause-initial positions* include the position before all the other clausal elements, e.g. *...and conceptually, they function through English*, and the position between any type of constituents and the subject, e.g. *To be successful, however, it had to be aligned with....* These two positions serve a "theme-setting role" (Hoye, 1997: p. 149; also see, for example, Beijer, 2005; Halliday, 1985). In other words, they are filled by topicalised or focalised elements, one type of which is adverbs (Rizzi, 1997, cited in Shaer, 2004). Additionally, these positions can be occupied by a wide range of adverbs, frequently parenthetical adverbs showing interclausal connections such as CONSEQUENTIAL and ADVERSATIVE adverbs (e.g. *thus, however*) (Huddleston and Pullum, 2002), which are predominant in academic prose (Biber et al., 1999).

The *clause-medial positions* can be classified into seven positions. The first is the position between the subject and an auxiliary, e.g. *...the love of role play indeed may be re-exposed....* The second is the position between the subject and the main verb, e.g. *Mellow carefully distinguishes the various forms of items....* The third is the position between two auxiliaries, e.g. *They may, however, be used creatively,....* The fourth is the position between an auxiliary and the main verb, e.g. *Humour... is clearly appreciated by the participants....* The fifth is the position between the subject and the main verb in which two adverbs co-occur, e.g. *It hence typically focuses on the problems of design,....* The sixth is the position between an auxiliary and the main verb in which two adverbs co-occur, e.g. *...Krashen's monitor model was*

often rightly criticized…. The seventh is the position between *to* and an infinitive verb, e.g. *LHRs advocates need to consistently bear in mind the distinction*….

The clause-medial positions accommodate several types of adverbs and serve various purposes. They normally take integrated VP-RELATED adverbs, which "denote modifications of the details of the predicate" (Huddleston and Pullum, 2002: p. 576), e.g. *Mellow carefully distinguishes the various forms of items*…. However, when the clause-medial positions are occupied by parenthetical adverbs, which usually adjoin in the clause-initial positions (Huddleston and Pullum, 2002), interpolation is in effect, i.e. the focus is restricted, but is not confined, to the verbal construction, e.g. *They may, however, be used creatively*, …(Hoye, 1997). The clause-medial positions which are especially interesting here are two adverbs co-occurring between the subject and the main verb, e.g. *It hence typically focuses on the problems of design*,…, and between an auxiliary and the main verb, e.g. …*Krashen's monitor model was often rightly criticized*…, as these positions should be very difficult to acquire. This is due to the fact that stacked adverbs must follow a fixed order (e.g. Cinque, 1999; Cobb, 2006a; Ernst, 2002; Jackendoff, 1972). For example, CONSEQUENTIAL adverbs (e.g. *thus*), by virtue of being an interclausal adverb, always precede VP-RELATED adverbs (e.g. *quickly*), as in *He thus quickly hid in the closet*. Moreover, instances such as this are very rare in the L2 data, occurring less than 100 times in such a large corpus as the BNC (cf. Beijer, 2005). Another clause-medial position which is intriguing is adjunction between *to* and an infinitive verb, e.g. *LHRs advocates need to consistently bear in mind the distinction*…, since it has been stigmatised in prescriptive grammar, being called a *split infinitive*, but is however used by the most scholarly writers as well as in both speech and writing (Huddleston and Pullum, 2002)[5].

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[5] Cf. Huddleston and Pullum (2002) for the origin of the term.

M2 = S + Adv + V
e.g. *Mellow <u>carefully</u> distinguishes the various forms of items ...*

M3 = S + Aux1 + Adv + Aux2 + V
e.g. *They may, <u>however,</u> be used creatively, ...*

M4 = S + Aux + Adv + V
e.g. *Humour ... is <u>clearly</u> appreciated by the participants ...*

M5 = S + Adv + Adv + V
e.g. *It <u>hence</u> <u>typically</u> focuses on the problems of design, ...*

M6 = S + Aux + Adv + Adv + V
e.g. *... Krashen's monitor model was <u>often</u> <u>rightly</u> criticized ...*

M7 = to + Adv + V
e.g. *LHRs advocates need to <u>consistently</u> bear in mind the distinction ...*

F1 = S + V (+ O) + Adv + XX
e.g. *... emergentist thinking should be applied <u>consistently</u> to all areas ...*

F2 = S + V (+ O + XX) + Adv
e.g. *...; otherwise, they would have been used more <u>frequently.</u>*

F3 = S + V + Adv + heavy NP O
e.g. *An advertising slogan cannot state <u>explicitly</u> a distinction between ...*

4.3.2 Proportion of adverbs in different semantic classes

The proportion of adverbs in different semantic groups used by each group of subject is illustrated in Tables 4.2 and 4.3 below. To begin with, it might be argued that the inter-group differences in terms of the degree of adjunction and the range of positions were in fact a manifestation of the use of different semantic types of adverbs. In other words, such differences could be due to the fact that each group used certain types of adverbs but not the others. For instance, the intermediate group made the most use of ADDITIVE: SERIAL ORDER adverbs such as *also, first, second* (28.8%), the usual position of which is I1 (Biber *et al.*, 1999), explaining why adjunction in this position was predominant and the range of positions was the narrowest for this group.

Such an argument would have been true if it had not been the case that the advanced learners also used a comparable proportion of ADDITIVE: SERIAL ORDER adverbs (25.9%) (Table 4.2). However, the overall extent of adjunction in I1 was still much lower than that of their intermediate counterparts (Table 4.3). Additionally, although among the three groups, the natives used ADDITIVE: SERIAL ORDER adverbs least frequently (13.6%) (Table 4.2), the extents of adjunction of these adverbs in I1, M2, and M4 were quite similar (Table 4.3). Actually, they put ADDITIVE: SERIAL ORDER adverbs in almost as many positions as the advanced group despite their markedly lower use of these adverbs. Moreover, except for ADDITIVE: SERIAL ORDER adverbs, the other types were used relatively equally by each group (Table 4.2). Even when drastic differences were found for particular adverbs, the associated percentages were so low that they would hardly have any significant effect. Finally, all the three groups similarly used adverbs in almost all the semantic categories, with only NECESSITY adverbs (e.g. *necessarily*) and REINFORCING adverbs (*indeed*) being used by the native and the advanced groups, but not by the

intermediate group (Table 4.2). Nevertheless, the minute proportions of these adverbs made them

negligible. All these strongly suggest that the degree of adverb placement in particular positions

and the range of positions of adjunction would correlate only partially with semantic types.

Table 4.2   Proportion of adverbs of different semantic types by subject group

Semantic category	Native*	Advanced	Intermediate
Concessive (e.g. *nevertheless*)	0.8	2.4	1.0
Consequential (e.g. *accordingly, thus, therefore*)	8.8	12.7	15.0
Adversative (*however*)	12.8	10.1	15.4
Concessive: continuative (*still*)	1.6	1.5	1.5
Additive: contrastive (*otherwise*)	0.2	0.2	0.3
Additive: serial order (e.g. *also, first, second*)	13.6	25.9	28.8
Additive: unexpected (*even*)	0.5	0.6	0.9
Epistemic (e.g. *certainly, probably*)	3.1	1.4	0.7
Necessity (e.g. *inevitably, necessarily*)	1.2	0.2	-
Non-epistemic (*perhaps, possibly*)	1.0	0.5	0.6
Metalinguistic (*actually, honestly*)	2.5	2.4	2.5
Reinforcing (*indeed*)	1.9	0.1	-
Evidential (e.g. *apparently, evidently*)	1.4	1.6	0.5
Factual (*really*)	0.2	0.6	0.2
Temporal: general (e.g. *now, nowadays*)	4.1	2.0	0.4
Temporal 2 (e.g. *once*)	0.7	1.2	0.5
Durative (*long*)	0.1	-	0.1
Summation/final (e.g. *finally*)	2.0	2.0	2.2
Simultaneous (e.g. *meanwhile, simultaneously*)	1.1	1.0	1.0
Future: proximate (e.g. *immediately, soon*)	1.2	0.2	0.1
Future: non-proximate (e.g. *later, later on*)	1.2	1.0	0.9
Preterite: recent (e.g. *just, recently*)	0.9	0.2	0.3
Anterior (*already*)	0.2	1.2	1.5
Irregular (e.g. *occasionally, sometimes*)	0.8	1.8	1.2
Frequentative (e.g. *often, frequently*)	4.2	2.9	1.7
Habitual/general (e.g. *generally, usually*)	3.7	5.0	2.1
Repetitive (*again*)	1.4	0.9	0.5
Permanent (*always*)	1.3	0.7	0.5
Completive (e.g. *completely, entirely*)	0.5	0.5	0.4
Partial (*partially, partly*)	0.2	-	0.1
Restrictive (e.g. *merely, only*)	2.2	1.9	0.4
Evaluative (e.g. *oddly, unfortunately*)	1.2	0.4	0.2
VP-related (e.g. *easily, gradually, quickly*)	22.4	16.3	17.3
Insignificant degree (e.g. *hardly*)	1.0	0.7	0.9

Figures reported in percentage for each group of subjects

Table 4.3   The adjacency condition and the range of positions of adjunction (CONSEQUENTIAL, ADVERSATIVE, ADDITIVE: SERIAL ORDER, HABITUAL/GENERAL, and VP-RELATED adverbs)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Consequential e.g. accordingly, thus, therefore	Native	50.0	2.7	2.7	26.3	2.4	8.0	1.5	1.5	-	2.1	3.0	-	10
	Advanced	79.7	-	4.1	12.0	0.3	1.7	0.3	-	-	-	1.7	-	7
	Intermediate	96.6	-	1.1	1.1	-	1.1	-	-	-	-	-	-	4
Adversative however	Native	57.5	12.0	5.5	15.7	-	1.6	-	-	-	4.9	2.8	-	7
	Advanced	90.9	0.4	2.6	4.3	-	-	-	-	-	-	1.7	-	5
	Intermediate	90.6	1.1	2.8	5.0	-	-	-	-	-	-	0.6	-	5
Additive: serial order e.g. also, first, second	Native	28.7	-	-	33.5	6.9	23.2	1.3	1.9	-	1.9	1.7	0.8	9
	Advanced	53.6	-	0.7	23.6	3.5	11.9	0.5	0.7	0.2	0.2	5.3	-	10
	Intermediate	69.0	-	0.3	17.3	0.3	6.0	-	-	-	0.6	6.5	-	7
Habitual/ General e.g. generally, usually	Native	12.6	-	1.4	30.8	4.9	39.9	2.1	2.1	-	3.5	2.8	-	9
	Advanced	7.6	-	0.8	34.7	2.5	50.8	-	0.8	1.7	0.8	-	-	8
	Intermediate	28.0	-	-	32.0	-	32.0	-	-	-	4.0	4.0	-	5
VP-related e.g. easily, gradually, quickly	Native	4.1	-	0.6	13.5	1.7	34.5	0.6	1.4	2.9	20.1	18.4	2.2	11
	Advanced	2.9	-	-	11.9	-	31.4	0.4	0.7	5.4	19.9	27.1	0.4	10
	Intermediate	3.6	-	-	14.5	0.6	28.5	-	-	1.2	12.7	38.8	-	7

Figures reported in percentage for each semantic category

4.3.3 The adjacency condition and the range of positions: group results

In this section, the adjunction pattern and the range of positions associated with each group are compared. The findings indicate that the natives placed adverbs relatively equally in the clause-initial and the clause-medial positions. In contrast, the advanced group most frequently adjoined adverbs in the clause-initial position. This tendency was stronger for the intermediate learners, who, among the three groups of subjects, put adverbs clause-initially to the largest extent. This suggests that the [+strict adjacency] setting of Thai (sections 2.3.1 to 2.3.4) was being transferred. Moreover, adverbs were adjoined in more positions by the native group as well as the advanced group than by the intermediate group.

Table 4.4   **Comparison of the adjacency condition and the range of positions between groups**

Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native	28.8	1.9	1.9	21.6	3.8	25.4	0.7	1.2	1.0	7.1	5.9	0.6	12
Native*	29.5	1.4	2.0	20.2	3.5	27.3	1.4	1.1	0.8	7.5	4.6	0.9	12
Advanced	45.4	0.2	1.8	17.7	2.0	19.3	0.4	0.5	0.9	4.5	7.0	0.2	12
Intermediate	58.6	0.3	1.2	11.6	0.5	13.1	0.7	0.1	0.3	2.9	10.6	-	11

Figures reported in percentage

Table 4.4 illustrates the degree of adjunction in each position as well as the range of positions across groups[8]. In terms of the adjacency condition, the advanced and the intermediate groups treated English as if it were a [+strict adjacency] language (sections 2.3 and 2.3.5). Where the native group was concerned, adverbs were distributed quite equally in the clause-initial and the clause-medial positions. Almost 30% of adverbs were placed in I1, while slightly more than 20% and a little lower than 30% were adjoined in M2 and M4, respectively. In contrast, the advanced learners most often placed adverbs in I1 (around 45%). The extent to which they adjoined adverbs in M2 and M4 was lower (almost 20% for both positions). A similar trend, but with a stronger degree, was found for the intermediate group. That is, the intermediate learners put almost 60% of adverbs in I1, but only slightly above 10% in both M2 and M4. It should be mentioned that comparisons between the native corpus and the native sub-corpus also show that corpus size did not correlate directly with the degree of adjunction or the range of positions. However, it would be too extreme to claim that they bore no relations at all since, for example, if the corpus being examined is small, less positions will be identified.

With regard to the range of positions, the advanced group adjoined adverbs to as many positions as did the native group. The intermediate learners exhibited a similar pattern, putting adverbs mostly in nine positions, namely I1, I2, M1, M2, M4, M5, M7, F1 and F2. However,

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[8] The semantic categories of adverbs appearing in these positions together with their frequencies are given in the Appendix.

M3, M6, and F3 were used almost exclusively by the native and the advanced groups, although a caveat is in order since the data for adjunction in these positions were limited. Examples are provided in (1) to (3)[9].

Native group
(1)

    a.   ... and *conceptually*, they function through English. (I1)

    b.   To be successful, *however*, it had to be aligned with ... (I2)

    c.   ... the love of role play *indeed* may be re-exposed ... (M1)

    d.   Mellow *carefully* distinguishes the various forms of items ... (M2)

    e.   They may, *however*, be used creatively, ... (M3)

    f.   Humour ... is *clearly* appreciated by the participants ... (M4)

    g.   It *hence typically* focuses on the problems of design, ... (M5)

    h.   ... Krashen's monitor model was *often rightly* criticized ... (M6)

    i.   LHRs advocates need to *consistently* bear in mind the distinction ... (M7)

    j.   ... emergentist thinking should be applied *consistently* to all areas ... (F1)

    k.   ...; otherwise, they would have been used more *frequently*. (F2)

    l.   Consider *first* Paul Meara's use of neural networks to explore ... (F3)

Advanced group
(2)

    a.   *Actually*, we can see that lexical knowledge ... (I1)

    b.   However, *sometimes*, errors can occur as a result of ... (I2)

    c.   ... which *certainly* cannot be taken for granted ... (M1)

    d.   ... teachers *often* perceive these students as exceptional ... (M2)

    e.   ... lexical knowledge can *best* be represented as a continuum ... (M3)

    f.   ... the number of times a word is encountered may *also* affect ... (M4)

    g.   Hung (2004) *therefore further* explains that ... (M5)

    h.   ... but the focus was *later gradually* shifted to include written data. (M6)

    i.   ... extending their learning styles to *better* fit in their future ... (M7)

    j.   Second language lexical acquisition differs *considerably* from ... (F1)

    k.   That is, they will learn more *effectively*. (F2)

    l.   An advertising slogan cannot state *explicitly* a distinction between ... (F3)

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[9] Typos or errors in the learners' data were not corrected in order to maintain the original features of their language.

Intermediate group

(3)
a. *However*, some of cultural content is largely irrelevant … (I1)
b. More importantly, *nonetheless*, the test items should be redesigned … (I2)
c. …, the teachers *probably* have to think of the computers … (M1)
d. … because the authors *already* identified the characteristics of … (M2)
e. …, phrase structure tree … will *frequently* be used. (M3)
f. …, it should be *critically* examined … (M4)
g. We *still largely* depend on the mainstream standards. (M5)
h. … the role of the critical period in SLA is *still much* debated. (M6)
i. The given test seems to *completely* fulfil only criterion 1-2. (M7)
j. …, they may learn something *indirectly* from the passages. (F1)
k. …, they must read the qualifications *carefully*. (F2)

4.3.4 The adjacency condition and the range of position: individual results

This section addresses individual variations as to how adverbs were placed in different positions and the range of positions in which they appeared, thus revealing the similarities and differences both within and across groups which would not have been revealed if each learner had not been investigated separately. With respect to the extent of adjunction, although the advanced group was generally different from the native group, some learners were more native-like than others. Likewise, a few intermediate learners performed quite similarly to their advanced counterparts, despite the fact that overall, they were more conservative with the clause-medial positions. In terms of the range of positions, some of the advanced learners more closely approximated the native group. In addition, the majority of the intermediate learners put adverbs in far less positions than the native and the advanced groups although a few of them showed some resemblance to the advanced learners.

Table 4.5   Comparison of the adjacency condition and the range of positions between the native group, the individual advanced learners, and the individual intermediate learners

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native*	29.5	1.4	2.0	20.2	3.5	27.3	0.9	1.4	1.1	7.5	4.6	0.9	12
Adv 1	44.9	-	1.0	20.7	1.3	20.7	-	-	1.3	3.6	6.1	-	8
Adv 2	47.2	-	0.5	19.0	3.3	21.3	0.3	0.2	1.4	1.7	5.1	-	10
Adv 3	55.9	-	1.9	10.7	1.4	12.1	0.4	0.5	0.2	6.7	9.8	-	10
Adv 4	40.0	0.1	2.9	19.9	2.1	21.1	0.7	0.6	0.9	4.9	6.4	0.4	12
Adv 5	31.1	0.5	2.4	19.9	1.0	25.7	0.5	1.9	1.5	6.8	8.7	0.4	12
Int 1	50.9	-	1.7	15.7	-	13.5	2.6	-	-	3.5	12.2	-	7
Int 2	66.7	0.3	-	6.5	0.3	12.7	-	-	-	2.7	10.7	-	7
Int 3	70.3	-	1.6	7.0	-	11.4	-	-	-	2.7	7.0	-	6
Int 4	69.2	1.2	0.6	5.3	3.0	8.9	-	0.6	2.4	3.0	5.9	-	10
Int 5	43.3	-	2.0	20.1	-	16.7	0.7	-	-	2.7	14.3	-	7

Figures reported in percentage

Table 4.5 compares the degree of adjunction in each position as well as the range of positions between the native group, the individual advanced learners, and the individual intermediate learners. It shows that regardless of its stronger preference for I1, the advanced group varied considerably when each individual learner is taken into consideration. Advanced learners 1 and 2 placed almost 50% of adverbs in I1, with advanced learner 3 showing the most different pattern of adjunction from that of the native group (55%). On the other hand, advanced learners 4 and 5 seemed more on a par with the native group, placing 40% and around 30% of adverbs in this position, respectively. A more favourable picture was found for M2, in which almost all the advanced learners adjoined averagely 20% of adverbs, a very similar proportion to that in the native corpus. Also, slightly more than 20% of adverbs were placed in M4, suggesting again that the advanced group were relatively native-like. However, different from the other learners in the group, advanced learner 3 put only 10% of adverbs in both M2 and M4.

In terms of the range of positions, the advanced learners generally resembled the native group, putting adverbs in almost as many positions, particularly learners 4 and 5. This is illustrated in (4) to (8).

Advanced learner 1
(4)

a.	*Actually*, it is involved a system for explaining ... (I1)
b.	Discourse markers, *however*, do not follow the rules of syntax ... (M1)
c.	She *also* asserts that the reason ... (M2)
d.	... and those meanings will *later* be decoded by ... (M3)
e.	... the texts are *conventionally* produced to serve ... (M4)
f.	... because it enables students to *appropriately* write to the target ... (M7)
g.	... has been studied *considerably* to make some generalizations ... (F1)
h.	Noun modifiers appear *frequently* ... (F2)

Advanced learner 2
(5)

a.	*Furthermore*, importance of ... will be explored. (I1)
b.	This, *consequently*, should lead to an improvement of ... (M1)
c.	... learners *actually* learn to evaluate for them whether ... (M2)
d.	More details on learner autonomy can *also* be reviewed in ... (M3)
e.	Younger learners have *consistently* shown a better performance ... (M4)
f.	He *also widely* uses metaphors and personifications ... (M5)
g.	... is *now widely* spoken by many people. (M6)
h.	It is his mission to *regularly* produce his works for readers ... (M7)
i.	... strategies are defined and classified *differently* by many scholars. (F1)
j.	... children are not born with an ability to use language *immediately*. (F2)

Advanced learner 3
(6)

a.	*Actually*, Weinrich divides CA. into two version ... (I1)
b.	... Thai learners *first* do not pronounce –ed endings. (M1)
c.	Grammar *inevitably* needs to be included in ... (M2)
d.	... can *also* be used in place of who or which. (M3)
e.	The teacher does not *directly* pick on the students' error. (M4)
f.	..., language forms especially grammar *still also* receive attention. (M5)
g.	The term ... was *apparently first* used by Rosenbaum ... (M6)
h.	... who are able to *effectively* communicate in English ... (M7)
i.	The five synonyms can now be distinguished *systematically* by the five major criteria ... (F1)
j.	This pre-emptive focus-on-form occurs quite *often* ... (F2)

Advanced learner 4 (reproduced from (2))

(7)

    a.   *Actually*, we can see that lexical knowledge ... (I1)

    b.   However, *sometimes*, errors can occur as a result of ... (I2)

    c.   ... which *certainly* cannot be taken for granted ... (M1)

    d.   ... teachers *often* perceive these students as exceptional ... (M2)

    e.   ... lexical knowledge can *best* be represented as a continuum ... (M3)

    f.   ... the number of times a word is encountered may *also* affect ... (M4)

    g.   Hung (2004) *therefore further* explains that ... (M5)

    h.   ... but the focus was *later gradually* shifted to include written data. (M6)

    i.   ... extending their learning styles to *better* fit in their future ... (M7)

    j.   Second language lexical acquisition differs *considerably* from ... (F1)

    k.   That is, they will learn more *effectively*. (F2)

    l.   An advertising slogan cannot state *explicitly* a distinction between ... (F3)

Advanced learner 5

(8)

    a.   *However*, ..., it can be clearly seen that ... (I1)

    b.   In Thai, *however*, this does not seem to be the case, ... (I2)

    c.   We, *therefore*, should not make presupposition that ... (M1)

    d.   Beardsmore *also* puts his effort to direct students to ... (M2)

    e.   It can *indeed* be regarded as the systematic exploitation of ... (M3)

    f.   Numerous terms of bilingualism ... are *later on* presented ... (M4)

    g.   ... TOEFL *currently still* lacks of this skill test. (M5)

    h.   The concordance program will be *later on also* employed in ... (M6)

    i.   It is inevitable to *first* understand what the ... mean. (M7)

    j.   ... they will need *later on* in their academic career. (F1)

    k.   ... Beardsmore puts his primary concern on the bilingual individual *instead*. (F2)

    l.   ..., this book should attract *more or less* readers who are ... (F3)

The intermediate learners also similarly exhibited great individual differences.

Intermediate learners 1 to 4 were noticeably different from the native group, placing adverbs

most often in I1, ranging from more than 50% (learner 1) to below 70% (learners 2 to 4). In

contrast, learner 5 adjoined almost 45% of adverbs in I1, matching slightly more with the native

group than the other learners in the group. In comparison with I1, a reverse pattern was found for

M2. That is, very small percentages of adverbs appeared in this position for learners 2 to 4.

Learners 1 and 5, on the other hand, adjoined around 15% and 20% of adverbs in M2,

respectively. When M4 is taken into account, all the intermediate learners were dissimilar to the native group, with the degree of adjunction ranging between only 10% to well below 20%.

Regarding the range of positions, nearly all the intermediate learners adjoined adverbs in I1, M1, M2, M4, F1, and F2. With the other positions, however, a disparity emerged. For example, only intermediate learner 4 placed adverbs in I2, M3, M7, while adjunction in M5 could be identified only for learners 1 and 5. Adjunction in these rare positions was more or less found for the native group. Nevertheless, this should be interpreted cautiously due to the low percentages of occurrence. Examples of adjunction pattern for the intermediate learners are given in (9) to (13).

Intermediate learner 1
(9)
    a.   *Hence*, in English classroom, there are a few diversities … (I1)
    b.   This test, *however*, can provide more information … (M1)
    c.   This theory *also* reminds teachers that … (M2)
    d.   Each instruction is *explicitly* stated. (M4)
    e.   We *still largely* depend on the mainstream standards. (M5)
    f.   … they may learn something *indirectly* from the passages … (F1)
    g.   Most people have learned something *quickly*. (F2)

Intermediate learner 2
(10)
    a.   *Additionally*, a cohesive effect is found … (I1)
    b.   According to …, *on the other hand*, the term … refers to … (I2)
    c.   … the communication … *highly* resembled face-to-face interaction. (M2)
    d.   Then, its significance could *hardly* been ignored. (M3)
    e.   …, cohesion in this paragraph is *also* achieved through … (M4)
    f.   … the nature of such collocational relations cannot be defined *easily* in any systematic way. (F1)
    g.   … English-speaking people used the language *creatively*. (F2)

Intermediate learner 3

(11)

a. *Accordingly*, the application of effective model is really important … (I1)

b. …, teachers *probably* have to think of the computers … (M1)

c. … that *already* appeared in second language research literatures … (M2)

d. …, the issue of starting early should be *carefully* considered. (M4)

e. … you have to get into it and use it *frequently* in order to master that language. (F1)

f. We have to use it correctly and *appropriately*. (F2)

Intermediate learner 4

(12)

a. *Actually*, the IC analysis deals only with the surface structures … (I1)

b. Statistically, *however*, if we know the results of the test, … (I2)

c. they *even* do not have physically fit enough … (M1)

d. …, ambiguity *usually* refers to the property of sentences … (M2)

e. …, phrase structure tree … will *frequently* be used. (M3)

f. As we have *already* known, … (M4)

g. … the role of the critical period in SLA is *still much* debated. (M6)

h. The given test seems to *completely* fulfil only criterion 1-2. (M7)

i. It is essential to think *carefully* about the goals of … (F1)

j. …, younger learners do *better*. (F2)

Intermediate learner 5

(13)

a. *Moreover*, efficient learners seem to use more and better learning … (I1)

b. … which *sometimes* is known as … (M1)

c. Wenden *also* defines the language learning strategies in her study … (M2)

d. …, English has *gradually* become the most popular language … (M4)

e. She *sometimes even* determine the noun type. (M5)

f. … that benefits *directly* to learners … (F1)

g. …, learning strategies have been studied *seriously* … (F2)

A comparison of the individual advanced learners and the individual intermediate learners also revealed that the former were less conservative with the clause-medial positions than the latter. This is evidenced in the degree of adjunction in I1, M2, and M4. Specifically, the percentage of adjunction in I1 for the advanced learners ranged from above 30% to 55%. The intermediate learners, in contrast, put in I1 between 45% and around 70% of adverbs. However, individual variations could also be identified, with advanced learners 1, 2, and 3 adjoining

adverbs in I1 to a larger degree than intermediate learner 5 (44.9%, 47.2%, and 55.9% vs 43.3%, respectively). Further difference was found for adjunction in M2. Most of the advanced learners placed around 20% of adverbs in this position, in comparison with more than half of the intermediate learners, whose placement of adverbs was well above 5%. However, an exception was also found. The rate of adjunction in M2 for advanced learner 3 was only 10%, compared with around 15% and 20% for intermediate learners 1 and 5, respectively. As for M4, the percentage of adjunction was slightly higher for the majority of the advanced learners (from 20% to 25%) than for most of the intermediate learners (around 10%). Advanced learner 3 again performed more like the intermediate group, placing a little over 10% of adverbs in M4. On the other hand, intermediate learner 5 adjoined up to almost 20% of adverbs in this position, more on a par with the advanced group.

With respect to the range of positions of adjunction, the advanced learners placed adverbs in a lot more positions. Learners 4 and 5 adjoined adverbs in all the twelve positions being considered[10], while ten could be identified for learners 2 and 3, and eight for learner 1. The range was not as wide for the intermediate learners, ranging from six for learner 3, seven for learners 1, 2 and 5, to ten for learner 4. Certain positions, namely M5, M6, M7, and F3 were generally never used by this group. Examples can be found in (4) to (13) above.

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[10] This subsumes all the data in the three stages and thus glosses over individual development over time. It will be shown in 4.4.1 and 4.4.2 below that adjunction in certain positions occurred only occasionally.

4.4 Development in terms of the adjacency condition and the range of positions

This section depicts the advanced group's and the intermediate group's development over the three stages in terms of the adjacency condition and the range of positions, focusing on how closely they resembled the native group as well as how closely the intermediate group approximated the advanced group (section 4.4.1). Also, each individual learner is tracked to reveal the idiosyncrasies of his/her transitional pattern (section 4.4.2). Finally, comparisons between the two learner groups are provided (section 4.4.3).

4.4.1 Development in terms of the adjacency condition and the range of positions: group results

In this section, the advanced group's and the intermediate group's development is described in relation to the native group and to one another. It was found that for both groups, the degree of adjunction in I1 and M2 changed only gradually. However, differences between the two arise for adjunction in M4, which did not change much for the former but increased drastically for the latter. In addition, at the end of the periods being investigated, the advanced group placed much more adverbs in I1 than did the natives, whereas their extent of adjunction in M2 and M4 was more or less comparable. Furthermore, despite its higher degree of adjunction in I1 and lower extent of adjunction in M2, the intermediate group was over time becoming more like the native and the advanced groups as far as the placement of adverbs in M4 was concerned. As regards the range of positions, the results indicate that the advanced group paralleled the native group at the outset, and its developmental pattern thus appeared to be relatively stable. The intermediate group, on the other hand, were not on a par with the former two groups, with its transition seemingly more drastic than that of the advanced group. Yet, a very different picture

was revealed when the learners, especially the advanced ones, were examined individually, as

will be shown in 4.4.2 and 4.4.3.

Figure 4.1   The advanced group's development
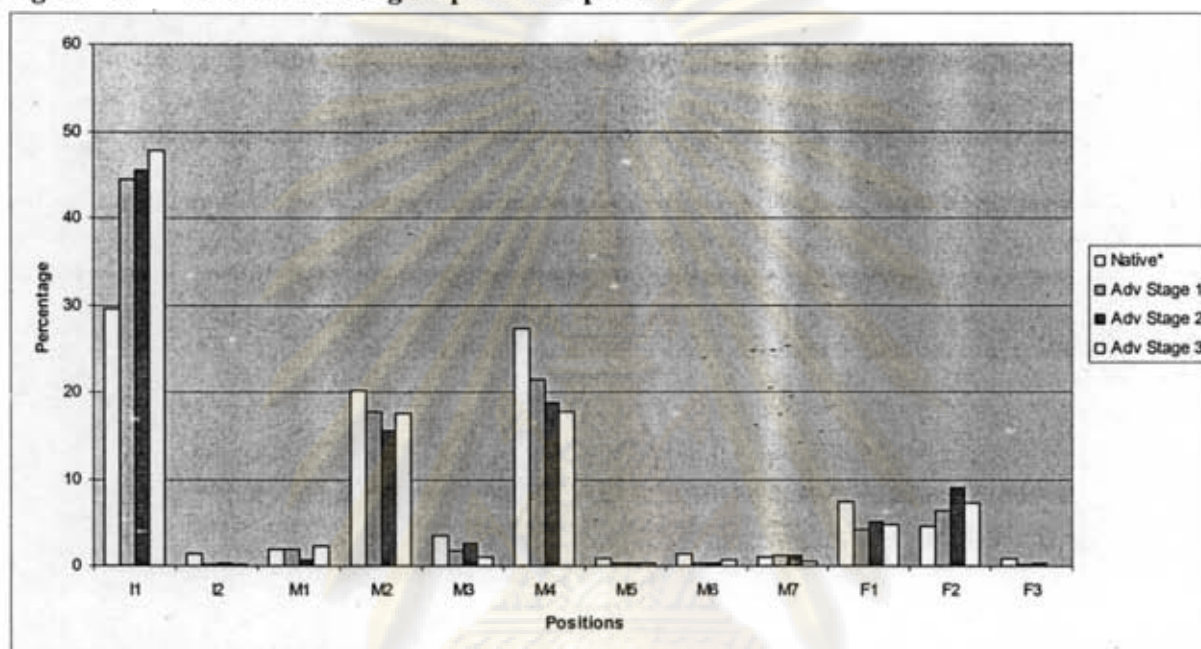
Table 4.6   The advanced group's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native*	29.5	1.4	2.0	20.2	3.5	27.3	0.9	1.4	1.1	7.5	4.6	0.9	12
Adv Stage 1	44.4	0.1	1.9	17.7	1.7	21.4	0.3	0.3	1.3	4.3	6.4	0.1	12
Adv Stage 2	45.5	0.3	0.7	15.6	2.7	18.8	0.4	0.3	1.3	5.1	9.0	0.3	12
Adv Stage 3	47.7	0.2	2.3	17.5	1.1	17.7	0.4	0.7	0.5	4.7	7.2	-	11

Figures reported in percentage

Figure 4.1 and Table 4.6 present the advanced group's development in terms of the degree of adjunction in each position as well as the range of positions in relation to the native group. The extent of adjunction in I1 increased from 44.4% in stage 1 to 45.5% in stage 2 and then to 47.7% in stage 3. These percentages were considerably different from that of the native group, which was below 30%. In M2, the percentage dropped from 17.7% in stage 1 to 15.6% in stage 2 but then rebounded to 17.5% in stage 3. The advanced learners' extent of adjunction in this position was relatively similar to that of the native group, which was a little above 20.2%. As for M4, the degree of adjunction reversed that in I1, starting at 21.4% in stage 1, then falling to 18.8% in stage 2 and 17.7% in stage 3, contrasting with the rate of 27.3% shown by the native group.

With respect to the range of positions, the advanced group appeared to nearly approximate its native counterpart. Adjunction was found in I1, I2, M1, M2, M3, M4, M5, M6, M7, F1, and F2 across all the stages, as illustrated in (14). As for F3, adjunction emerged in stages 1 and 2 but not in stage 3, as exemplified in (15).

Advanced group
(14)   Positions with adjunction across all stages (reproduced from (2))
    a.   *Actually*, we can see that lexical knowledge … (I1)
    b.   However, *sometimes*, errors can occur as a result of … (I2)
    c.   … which *certainly* cannot be taken for granted … (M1)
    d.   … teachers *often* perceive these students as exceptional … (M2)
    e.   … lexical knowledge can *best* be represented as a continuum … (M3)
    f.   … the number of times a word is encountered may *also* affect … (M4)
    g.   Hung (2004) *therefore further* explains that … (M5)
    h.   … but the focus was *later gradually* shifted to include written data. (M6)
    i.   … extending their learning styles to *better* fit in their future … (M7)
    j.   Second language lexical acquisition differs *considerably* from … (F1)
    k.   That is, they will learn more *effectively*. (F2)

(15)   Adjunction in F3 (only in stages 1 and 2)
    a.   This paper therefore investigates *to some extent* this issue to provide a relationship between … (F3)
    b.   An advertising slogan cannot state *explicitly* a distinction between … (F3)

Figure 4.2   The intermediate group's development
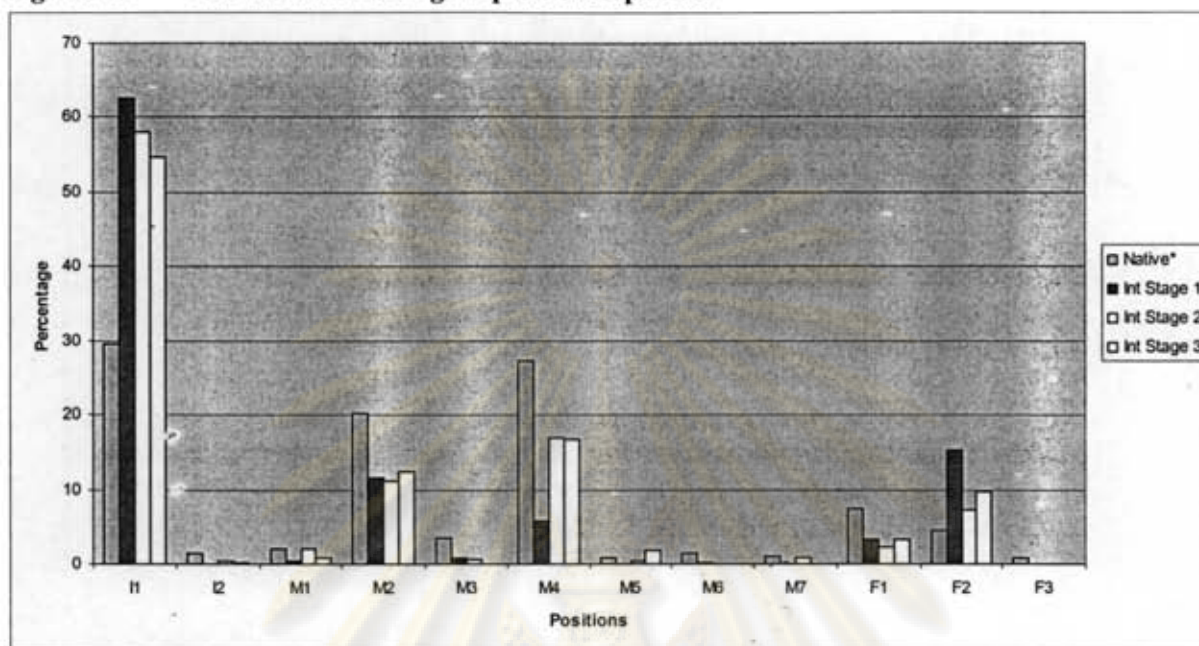
Table 4.7   The intermediate group's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native*	29.5	1.4	2.0	20.2	3.5	27.3	0.9	1.4	1.1	7.5	4.6	0.9	12
Int Stage 1	62.5	-	0.5	11.6	0.8	5.7	-	0.3	-	3.4	15.2	-	8
Int Stage 2	58.1	0.4	2.0	11.1	0.7	16.9	0.4	-	0.9	2.2	7.3	-	10
Int Stage 3	54.8	0.3	0.9	12.4	-	16.7	1.8	-	-	3.3	9.7	-	8

Figures reported in percentage

Figure 4.2 and Table 4.7 demonstrate the intermediate group's development in terms of

the degree of adjunction in each position as well as the range of positions in comparison with the

native group. In I1, the percentage of adjunction declined from 62.5% in stage 1 to 58.1% in

stage 2 and to 54.8% in stage 3. Even at this stage, the intermediate learners' degree of

adjunction differed markedly from that shown in the native group, which was only 29.5%.

Conversely, adjunction in M4 rose sharply from only 5.7% in stage 1 to 16.9% in stage 2 and

remained constant at 16.7% in stage 3, still contrasting with 20.2% for the native group. As for

M2, the degree of adjunction stayed unchanged at around 12%, whereas that of the native group was as high as 20%.

As regards the range of positions, adjunction in I1, M1, M2, M4, F1, and F2 prevailed in all the stages. Examples for this are provided in (16). In addition, the placement of adverbs was tried out with I2, M3, M6, and M7, but this seemed unstable, as suggested by the occurrence of adjunction only in some stages, as shown in (17).

Intermediate group
(16)   Positions with adjunction across all stages (reproduced from (3))
      a.   *However*, some of cultural content is largely irrelevant … (I1)
      b.   …, the teachers *probably* have to think of the computers … (M1)
      c.   … because the authors *already* identified the characteristics of … (M2)
      d.   …, it should be *critically* examined … (M4)
      e.   …, they may learn something *indirectly* from the passages. (F1)
      f.   …, they must read the qualifications *carefully*. (F2)

(17)   Adjunction in I2 (in stages 2 and 3)
      a.   More importantly, *nonetheless*, the test items should be redesigned … (I2)
      b.   According to …, *on the other hand*, the term … refers to … (I2)

Adjunction in M3 (in stages 1 and 2)
      c.   …, phrase structure tree … will *frequently* be used. (M3)
      d.   Then, its significance could *hardly* been ignored. (M3)

Adjunction in M6 (only in stage 1)
      e.   … the role of the critical period in SLA is *still much* debated. (M6)

Adjunction in M7 (only in stage 2)
      f.   The given test seems to *completely* fulfil only criterion 1-2. (M7)

Figure 4.3   Comparison of the development between the advanced group and the intermediate group
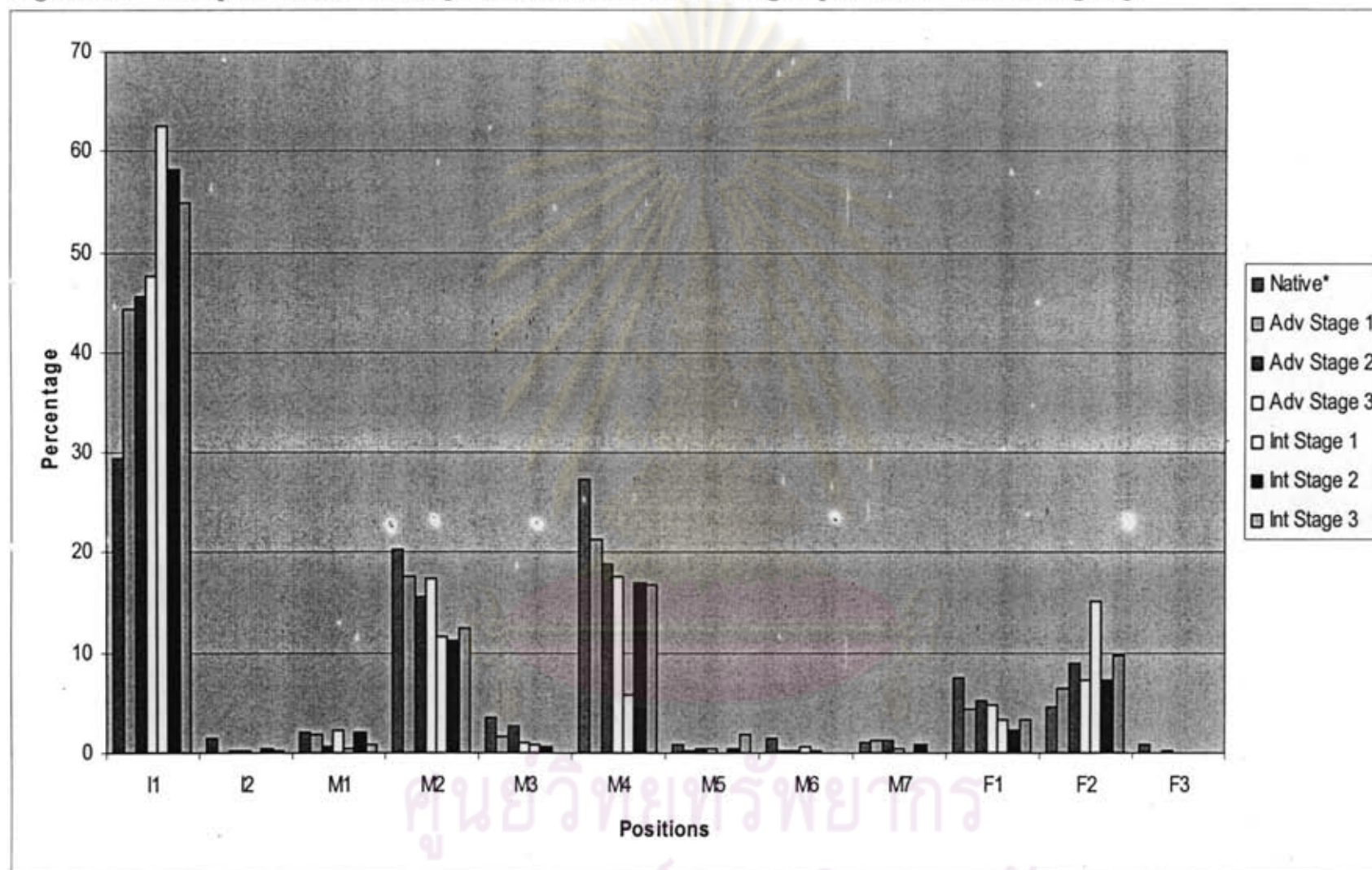
Table 4.8 Comparison of the development between the advanced group and the intermediate group

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native*	29.5	1.4	2.0	20.2	3.5	27.3	0.9	1.4	1.1	7.5	4.6	0.9	12
Adv Stage 1	44.4	0.1	1.9	17.7	1.7	21.4	0.3	0.3	1.3	4.3	6.4	0.1	12
Adv Stage 2	45.5	0.3	0.7	15.6	2.7	18.8	0.4	0.3	1.3	5.1	9.0	0.3	12
Adv Stage 3	47.7	0.2	2.3	17.5	1.1	17.7	0.4	0.7	0.5	4.7	7.2	-	11
Int Stage 1	62.5	-	0.5	11.6	0.8	5.7	-	0.3	-	3.4	15.2	-	8
Int Stage 2	58.1	0.4	2.0	11.1	0.7	16.9	0.4	-	0.9	2.2	7.3	-	10
Int Stage 3	54.8	0.3	0.9	12.4	-	16.7	1.8	-	-	3.3	9.7	-	8

Figures reported in percentage

Figure 4.3 and Table 4.8 compare the advanced group's and the intermediate group's development in relation to the native group and to one another. With respect to the degree of adjunction, the advanced learners were more like the native group than the intermediate learners. However, they showed only a slight change, if any. For example, adjunction in I1 remained relatively steady at 45%. This was also true for M2 and M4, revolving around 17% and 20%, respectively. The intermediate learners, albeit being more dissimilar to the native group, illustrated a more drastic pattern of development. Adjunction in I1 reduced from 62.5% in stage 1 to 58.1% in stage 2 and then 54.8% in stage 3. More noticeably, when M4 was taken into account, the percentage went up sharply from only 5.7% in stage 1 to 16.9% in stage 2, remaining steady at 16.7% in stage 3. However, the extent of adjunction in M2 stayed unchanged at around 11%-12%.

Regarding the range of positions, the advanced group approximated the native group, placing adverbs in nearly all the positions. The intermediate group differed from the advanced learner and the native groups. To illustrate, they put adverbs consistently only in I1, M1, M2, M4, F1, and F2. The other positions, such as M5 and M7, were tried out only at certain stages.

4.4.2 Development in terms of the adjacency condition and the range of positions:

individual results

This section shows each learner's development over time. Although the findings in 4.4.1 indicate that the advanced group's transition in terms of the degree of adjunction seemed gradual, individual variations should not be overlooked indeed since some advanced learners' language fluctuated dramatically. On the other hand, some intermediate learners' language remained relatively stable regardless of the stronger degree of flux in that of the majority of the group. Furthermore, with respect to the range of positions, the results in the previous section glossed over the fact that the development of the advanced learners' language was not as gradual as it first appeared.

Figure 4.4   Advanced learner 1's development
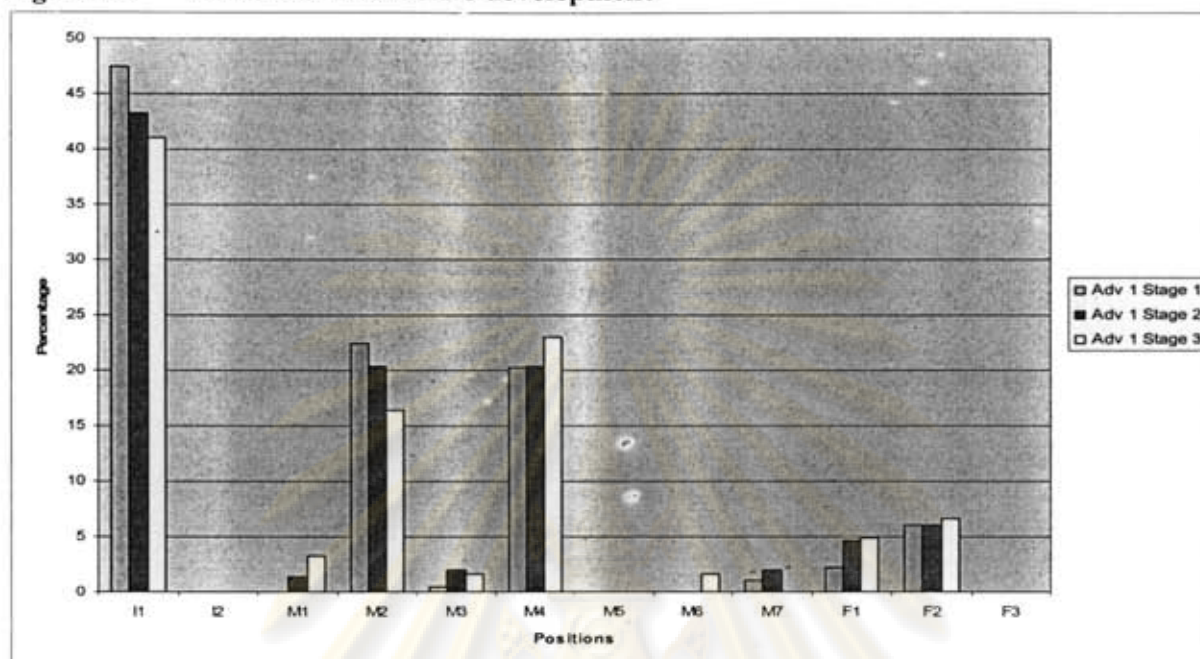
Table 4.9   Advanced learner 1's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Adv 1 Stage 1	47.5	-	-	22.4	0.5	20.2	-	-	1.1	2.2	6.0	-	7
Adv 1 Stage 2	43.2	-	1.4	20.3	2.0	20.3	-	-	2.0	4.7	6.1	-	8
Adv 1 Stage 3	41.0	-	3.3	16.4	1.6	23.0	-	1.6	-	4.9	6.6	-	8

Figures reported in percentage

The extent of adjunction in each position remained relatively unchanged over time.

Adjunction in I1 declined from 47.5% in stage 1 to 43.2% in stage 2 and then to 41% in stage 3.

Similarly for M2, the percentage of adjunction reduced from 22.4% in stage 1 to 20.3% in stage

2 and to 16.4% in stage 3. Conversely, adjunction in M4 increased from 20.2% in stage 1 to

20.3% in stage 2 and then to 23% in stage 3.

The range of positions was consistent for I1, M2, M3, M4, F1, and F2. New positions

were also tried out in certain stages. That is, the placement of adverbs occurred in M1 only in

stages 2 and 3, in M6 only in stage 3, and in M7 only in stages 1 and 2. Nevertheless, adjunction

was never found in I2, M5, and F3.

Advanced learner 1
(18)   Positions with adjunction across all stages
      a.   *Additionally*, the central attention of this study is to … (I1)
      b.   … and they *also* dropped the 'r' in clusters than the high groups. (M2)
      c.   The hearer, *thus*, will determine by himself what would be … (M3)
      d.   … concerned element is *already* known by the listeners, … (M4)
      e.   … the same utterance might be interpreted *differently* by different learners. (F1)
      f.   … they tend to pronounce the 'r' *correctly*. (F2)

(19)   Adjunction in M1 (in stages 2 and 3)
      a.   Discourse markers, *however*, do not contribute towards non-truth conditional terms … (M1)
      b.   Such linguistic differences, *however*, have long been neglected in … (M1)

Adjunction in M6 (only in stage 3)
      c.   … the tokens drawn from two groups of subjects, …, are *also separately* reported. (M6)

Adjunction in M7 (in stages 1 and 2)
      d.   … the use of marked theme enables the writers to *effectively* convey their meaning in their writing. (M7)
      e.   Students should be encouraged to analyse purposes, … in order to *appropriately* write the texts to suit the … (M7)

Figure 4.5 **Advanced learner 2's development**
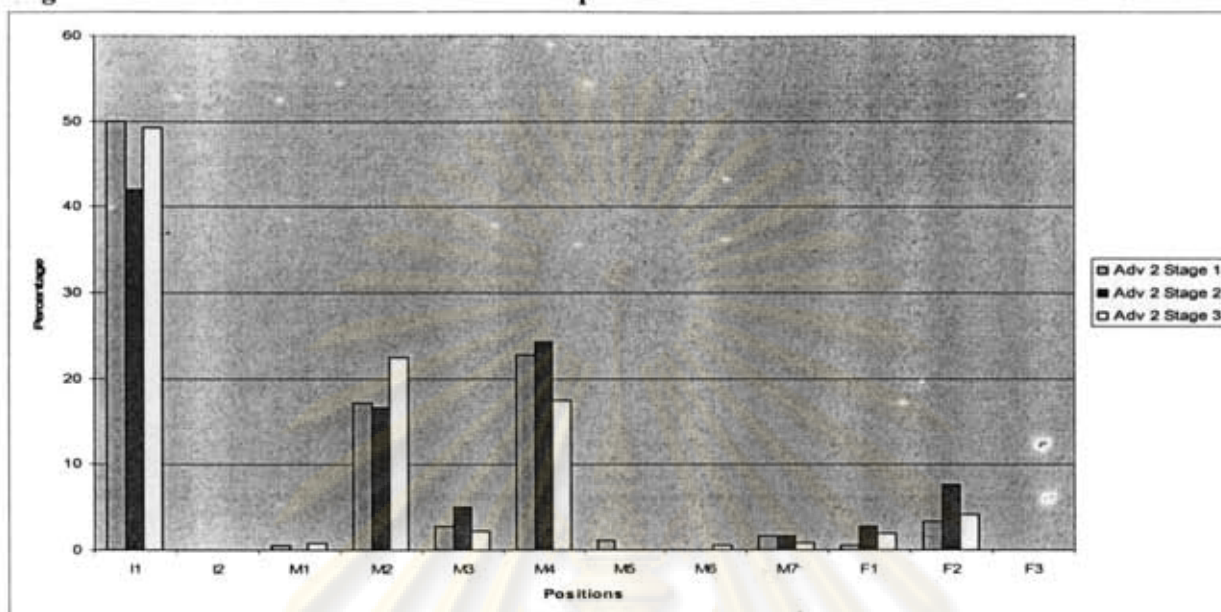
Table 4.10 **Advanced learner 2's development**

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Adv 2 Stage 1	50.0	-	0.6	17.2	2.8	22.8	1.1	-	1.7	0.6	3.3	-	9
Adv 2 Stage 2	42.0	-	-	16.6	5.0	24.3	-	-	1.7	2.8	7.7	-	7
Adv 2 Stage 3	49.3	-	0.9	22.5	2.3	17.4	-	0.5	0.9	1.9	4.2	-	9

Figures reported in percentage

For advanced learner 2, the degree of adjunction in I1 fluctuated somewhat, starting at 50% in stage 1, but falling to 42% in stage 2, and yet rising to 49.3% in stage 3. A similar pattern of change occurred for adjunction in M2. Here, the percentage went down from 17.2% in stage 1 to 16.6% in stage 2 but increased to 22.5% in stage 3. In contrast, adjunction in M4 was at 22.8% in stage 1 but went up to a peak of 24.3% in stage 2 and then down to 17.4% in stage 3.

With regard to the range of positions, adjunction was constantly found in I1, M2, M3, M4, M7, F1, and F2. Adjunction in M1 occurred in stage 1, then disappeared in stage 2, and finally reemerged in stage 3, while adverb placement in M5 occurred only in stage 1. Advanced

learner 2 also tried out adjunction in M6 in stage 3. However, the learner never attempted

adjunction in F3.

Advanced learner 2
(20)   Positions with adjunction across all stages
    a.   *First*, review of literature related to the learning strategies issues … will be done … (I1)
    b.   … which *directly* involve the target language … (M2)
    c.   …, English has *currently* been covered in the course curriculum … (M3)
    d.   … the students can *effectively* use them. (M4)
    e.   … it is his mission to *regularly* produce his works for readers … (M7)
    f.   … be provided alternative strategies so that they can choose which work *best* for them. (F1)
    g.   … children are not born with an ability to use language *immediately*, … (F2)

(21)   Adjunction in M1 (in stages 1 and 3)
    a.   … children *even* cannot learn a language at all. (M1)
    b.   This, *consequently*, should lead to an improvement of … (M1)

Adjunction in M5 (only in stage 1)
    c.   He *also widely* uses metaphors and personifications … (M5)

Adjunction in M6 (only in stage 3)
    d.   Likewise, indirect strategies are *also further* divided into … (M6)

Figure 4.6   **Advanced learner 3's development**
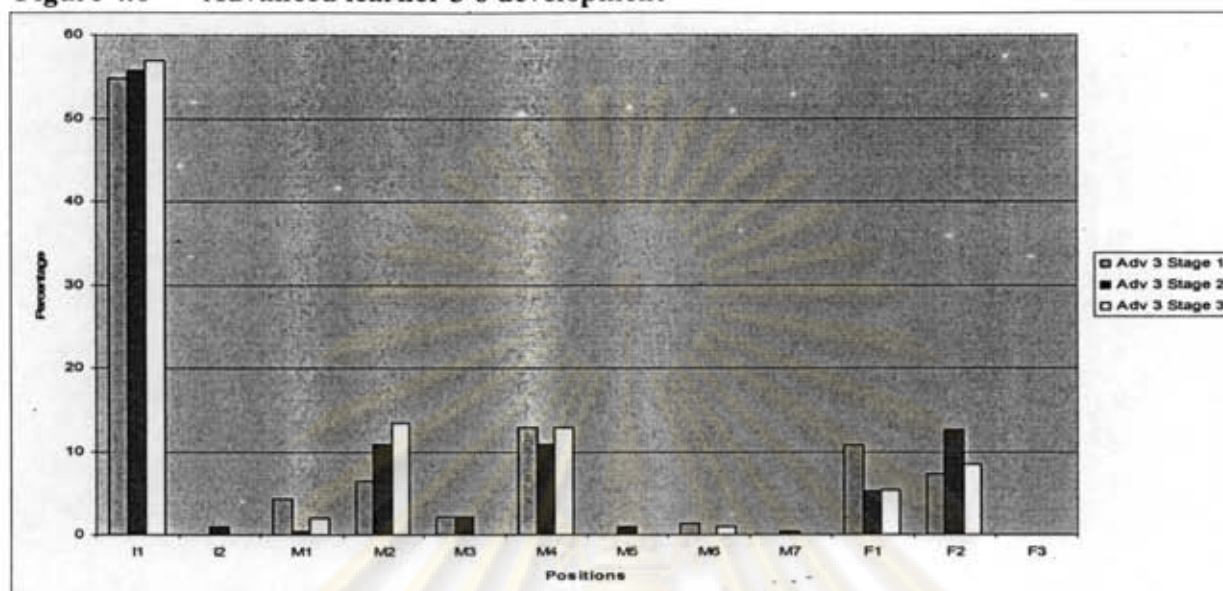
Table 4.11   Advanced learner 3's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Adv 3 Stage 1	54.7	-	4.3	6.5	2.2	12.9	-	1.4	-	10.8	7.2	-	8
Adv 3 Stage 2	55.7	0.9	0.4	10.9	2.2	10.9	0.9	-	0.4	5.2	12.6	-	10
Adv 3 Stage 3	56.9	-	2.0	13.4	-	12.9	-	1.0	-	5.4	8.4	-	7

Figures reported in percentage

Advanced learner 3 seemed more conservative with the clause-medial positions, in comparison with advanced learners 1 and 2, putting adverbs in I1 to the largest extent, and this remained steady over time. Adjunction in I1 rose from 54.7% in stage 1 to 55.7% in stage 2 and then to 56.9% in stage 3. A more drastic change was found for M2, where only 6.5% of adverbs were placed in stage 1. This increased to 10.9% in stage 2 and again to 13.4% in stage 3. The percentage of adjunction in M4 did not change much, ranging between approximately 11% and 13%.

With respect to the range of positions, adverbs were regularly placed in I1, M1, M2, M4, F1, and F2. Advanced learner 3 also made an effort to place adverbs in the other positions, I2 in

stage 2, M3 in stages 1 and 2, M5 in stage 2, M6 in stages 1 and 3, and M7 in stage 2. However,

adjunction in F3 was never found.

Advanced learner 3
(22) Positions with adjunction across all stages
  a.   *Interestingly*, the head NP is often a proper noun … (I1)
  b.   The instructed level, *however*, will not implicate lower or more difficult
        … (M1)
  c.   They *just* supply extra information about … (M2)
  d.   … the learners will *necessarily* acquire the instructed level … (M4)
  e.   … certain grammatical patterns … might occur *naturally* in native
        speakers' speech. (F1)
  f.   … the learners interlanguage stops developing *permanently*. (F2)

(23) Adjunction in I2 (only in stage 2)
  a.   In this regard, *however*, it is found that writing skill is being tested in an
        indirect manner. (I2)

      Adjunction in M3 (in stages 1 and 2)
  b.   … can *also* be observed in this study. (M3)
  c.   … can *also* be used in place of who or which. (M3)

      Adjunction in M5 (only in stage 2)
  d.   … language forms especially grammar *still also* receive attention. (M5)

      Adjunction in M6 (in stages 1 and 3)
  e.   The term … was *apparently first* used by … (M6)
  f.   … is *also sometimes* used alongside this pattern, … (M6)

      Adjunction in M7 (only in stage 2)
  g.   … they should be asked to *actually* write a summary … (M7)

Figure 4.7   Advanced learner 4's development
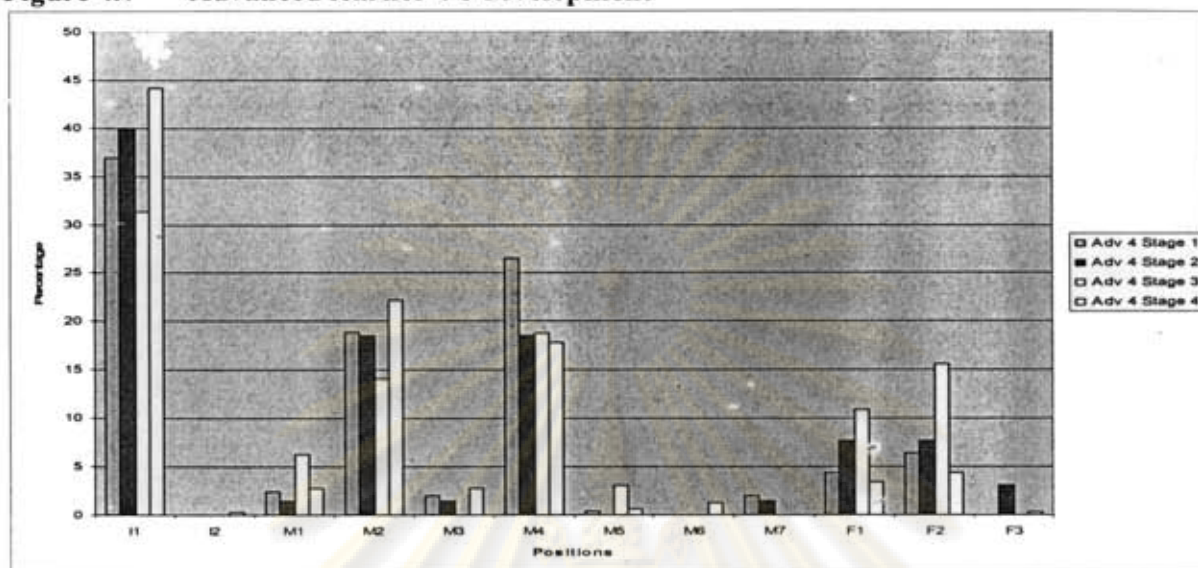
Table 4.12   Advanced learner 4's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Adv 4 Stage 1	36.9	-	2.4	18.9	2.0	26.5	0.4	-	2.0	4.4	6.4	-	9
Adv 4 Stage 2	40.0	-	1.5	18.5	1.5	18.5	-	-	1.5	7.7	7.7	3.1	9
Adv 4 Stage 3	31.3	-	6.3	14.1	-	18.8	3.1	-	-	10.9	15.6	-	7
Adv 4 Stage 4	44.1	0.3	2.8	22.2	2.8	17.8	0.6	1.3	-	3.4	4.4	0.3	11

Figures reported in percentage

As for advanced learner 4, only stages 1 and 4 were taken into consideration since the corpora for stages 2 and 3 were incomparable in size, as shown in Table 4.1b above (section 4.2). It was surprising that adjunction in I1 rose sharply from 36.9% in stage 1 to 44.1% in stage 4. Also, the degree of adjunction in M4 dropped considerably from 26.5% in stage 1 to 17.8% in stage 4. For M2, on the other hand, the percentage went up slightly from 18.9% in stage 1 to 22.2% in stage 4.

The range of positions was noticeable in I1, M1, M2, M3, M4, M5, F1, and F2 in all the stages. The learners also experimented with new positions, namely I2, M6, and F3, in the last stage.

Advanced learner 4

(24) Positions with adjunction across all stages

    a.   *Additionally*, it is commonly held that receptive knowledge … (I1)

    b.   … language teachers *perhaps* should be more aware of … (M1)

    c.   … what it *actually* means for language learners to know … (M2)

    d.   … the view of interconnection can *also* be found. (M3)

    e.   These implications can then be *actively* tested. (M4)

    f.   However, they *sometimes also* have a problem … (M5)

    g.   … when it was used *correctly* at least in three sentences. (F1)

    h.   That is, they will learn more *effectively*. (F2)

(25) Adjunction in I2 (only in stage 4)

    a.   However, *sometimes*, errors can occur as a result of … (I2)

Adjunction in M6 (only in stage 4)

    b.   American English spellings are *also commonly* used due to … (M6)

Adjunction in F3 (only in stage 4)

    c.   An advertising slogan cannot state *explicitly* a distinction between its product and other companies' products. (F3)

Figure 4.8   Advanced learner 5's development
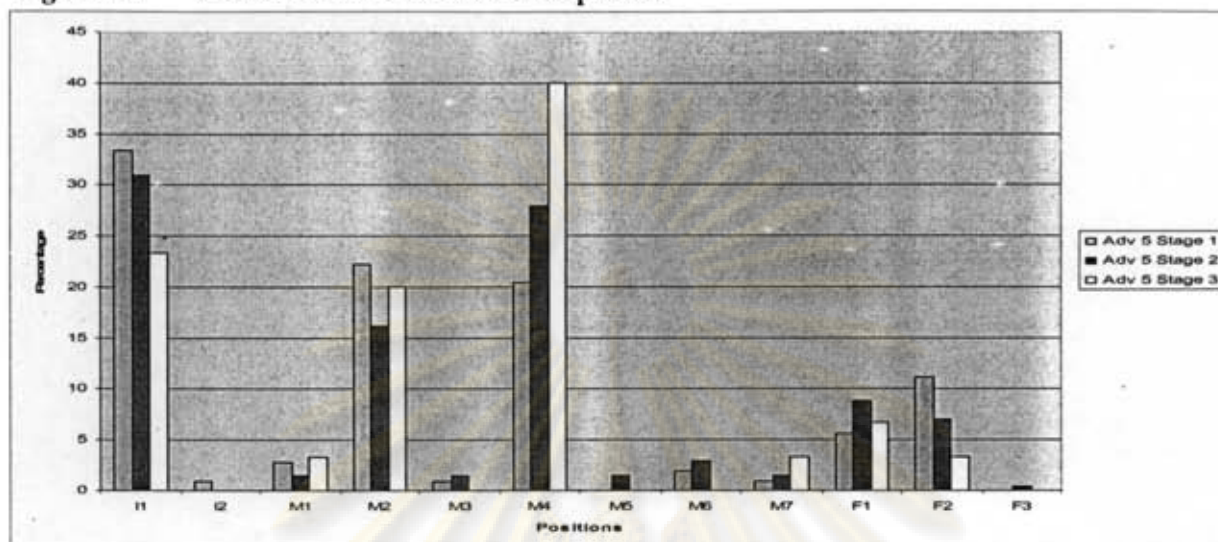
Table 4.13   Advanced learner 5's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of adverbs
Adv 5 Stage 1	33.3	0.9	2.8	22.2	0.9	20.4	-	1.9	0.9	5.6	11.1	-	10
Adv 5 Stage 2	30.9	-	1.5	16.2	1.5	27.9	1.5	2.9	1.5	8.8	7.0	0.4	11
Adv 5 Stage 3	23.3	-	3.3	20.0	-	40.0	-	-	3.3	6.7	3.3	-	7

Figures reported in percentage

Because the corpus size in stage 3 was incompatible with those in the other stages, as shown in Table 4.1b above (section 4.2), only the data in stages 1 and 2 were taken into account. In comparison with the other advanced learners, advanced learner 5 initially appeared to treat English less conservatively over time, as suggested by the degree of adjunction in M4, increasing from 20.4% in stage 1 to 27.9% in stage 2. In addition, the placement of adverbs in I1 reduced slightly from 33.3% in stage 1 to 30.9% in stage 2. However, the percentage of adjunction in M2 also fell quite drastically from 22.2% in stage 1 to 16.2% in stage 2.

Advanced learner 5 placed adverbs consistently in I1, M1, M2, M3, M4, M6, M7, F1, and F2. Adjunction was also found in M3 and M6 in stages 1 and 2. The learner also tried out I2 in stage 1, M5 in stage 2, and F3 in stage 2.

Advanced learner 5
(26)   Positions with adjunction across all stages
    a.   *Accordingly*, Harmer points out that … (I1)
    b.   I *again* do not think our students put the pressure on … (M1)
    c.   … it *certainly* provides an important means of communication (M2)
    d.   … 'the' can *always* be used in front of any countable noun. (M3)
    e.   This approach is *broadly* associated with behavioural learning theory (M4)
    f.   … which does not *necessarily always* impede learning … (M6)
    g.   … many universities seem to *continually* release their … (M7)
    h.   … that can be used *effectively* with our own students … (F1)
    i.   … the grammar-translation method employed the learner's native language quite *extensively*. (F2)

(27)   Adjunction in I2 (only in stage 1)
    a.   In Thai, *however*, this does not seem to be the case … (I2)

Adjunction in M3 (stages 1 and 2)
    b.   Even the learning style has *now* been improved in many schools, … (M3)
    c.   It can *indeed* be regarded as the systematic exploitation of … (M3)

Adjunction in M5 (only in stage 2)
    d.   … TOEFL *currently still* lacks of this skill test. (M5)

Adjunction in F3 (only in stage 2)
    e.   This paper therefore investigates *to some extent* this issue to provide a relationship between … (F3)

To sum up the findings presented in Tables 4.9 to 4.13, the advanced learners seemed conservative with clause-medial adjunction, placing most adverbs in I1, except for advanced learner 5, who put adverbs in M2 and M4 more frequently than the other advanced learners. In addition, the development in this regard was not radical, as indicated by the relatively stable degrees of adjunction in these three major positions for the majority of the learners. With regard to the range of positions, all the advanced learners placed adverbs consistently in I1, M2, M3, M4, F1, and F2. Adverb placement in the other positions emerged at some stages. Again, the transition in this respect was gradual.

Figure 4.9   Intermediate learner 1's development
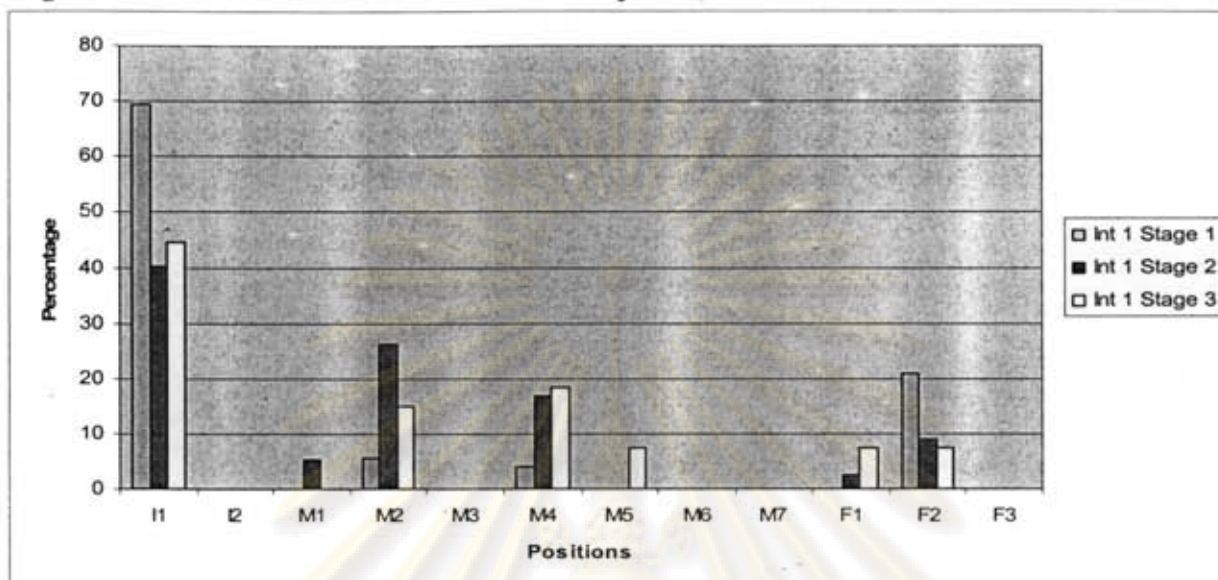
Table 4.14   Intermediate learner 1's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Int 1 Stage 1	69.4	-	-	5.6	-	4.2	-	-	-	-	20.8	-	4
Int 1 Stage 2	40.3	-	5.2	26.0	-	16.9	-	-	-	2.6	9.1	-	6
Int 1 Stage 3	44.4	-	-	14.8	-	18.5	7.4	-	-	7.4	7.4	-	6

Figures reported in percentage

For intermediate learner 1, adjunction in I1 dropped drastically from 69.4% in stage 1 to 40.3% in stage 2 although increased to 44.4% in stage 3, whereas the percentage in M4 rose sharply from only 4.2% in stage 1 to 16.9% in stage 2 and then 18.5% in stage 3. The placement of adverbs in M2 fluctuated considerably, going up from 5.6% in stage 1 to 26% in stage 2, but declining to 14.8% in stage 3.

In terms of the range of positions, adjunction was consistent in I1, M2, M4, and F2. The placement of adverbs also emerged in M1 in stage 2, M5 in stage 3, and F1 in stages 2 and 3.

Intermediate learner 1

(28)   Positions with adjunction across all stages

    a.   *Hence*, in English classroom, there are a few diversities ... (I1)

    b.   ... because they *already* learned the content ... (M2)

    c.   Although, it may *sometimes* seem like ... (M4)

    d.   Most people have learned something *quickly* and comfortably. (F2)

(29)   Adjunction in M1 (only in stage 2)

    a.   This test, *however*, can provide more information ... (M1)

Adjunction in M5 (only in stage 3)

    b.   We *still largely* depend on the mainstream standards. (M5)

Adjunction in F1 (in stages 2 and 3)

    c.   ... they may learn something *indirectly* from the passages ... (F1)

    d.   ... is intended to teach students *directly* about English-speaking ... (F1)

Figure 4.10   Intermediate learner 2's development
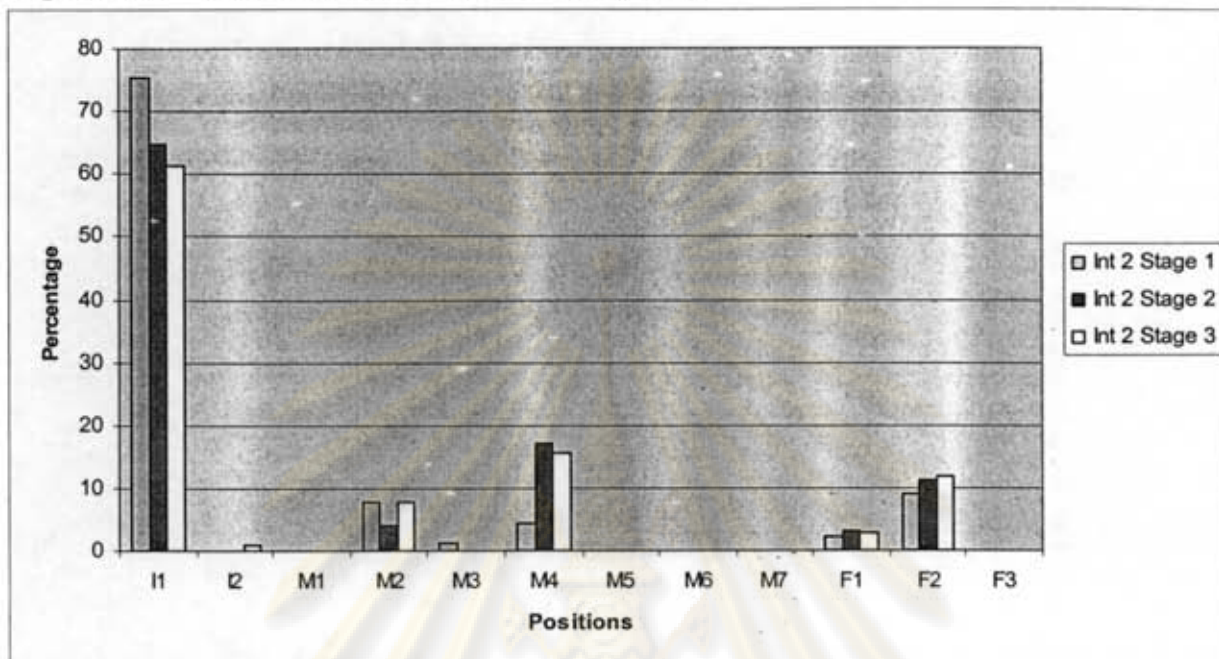
Table 4.15   Intermediate learner 2's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Int 2 Stage 1	75.3	-	-	7.9	1.1	4.5	-	-	-	2.2	9.0	-	6
Int 2 Stage 2	64.6	-	-	4.0	-	17.2	-	-	-	3.0	11.1	-	5
Int 2 Stage 3	61.2	1.0	-	7.8	-	15.5	-	-	-	2.9	11.7	-	6

Figures reported in percentage

The percentage of adjunction in I1 for intermediate learner 2 declined from 75.3% in stage 1 to 64.6% in stage 2, which in turn receded to 61.2% in stage 3. On the other hand, the degree of the placement of adverbs in M4 rose sharply from 4.5% in stage 1 to 17.2% in stage 2 although this dropped a little to 15.5% in stage 3. As for M2, adjunction seemed to spiral between 4% and around 8%.

With respect to the range of positions, adverbs were placed constantly in I1, M2, M4, F1, and F2. Efforts were made to try out adjunction in I2 in stage 3 and M3 in stage 1.

Intermediate learner 2

(30)   Positions with adjunction across all stages

      a.   *Additionally*, she mentions that turn is used in literature … (I1)

      b.   They *also* include phrases such as 'for example,' … (M2)

      c.   Even though, no predicate is *overtly* uttered … (M4)

      d.   … motivation affects achievement *differently* in different contexts. (F1)

      e.   If we manage these motivational strategies *appropriately*, … (F2)

(31)   Adjunction in I2 (only in stage 3)

      a.   According to …, *on the other hand*, the term … refers to … (I2)

      Adjunction in M3 (only in stage 1)

      b.   … its significance could *hardly* been ignored. (M3)
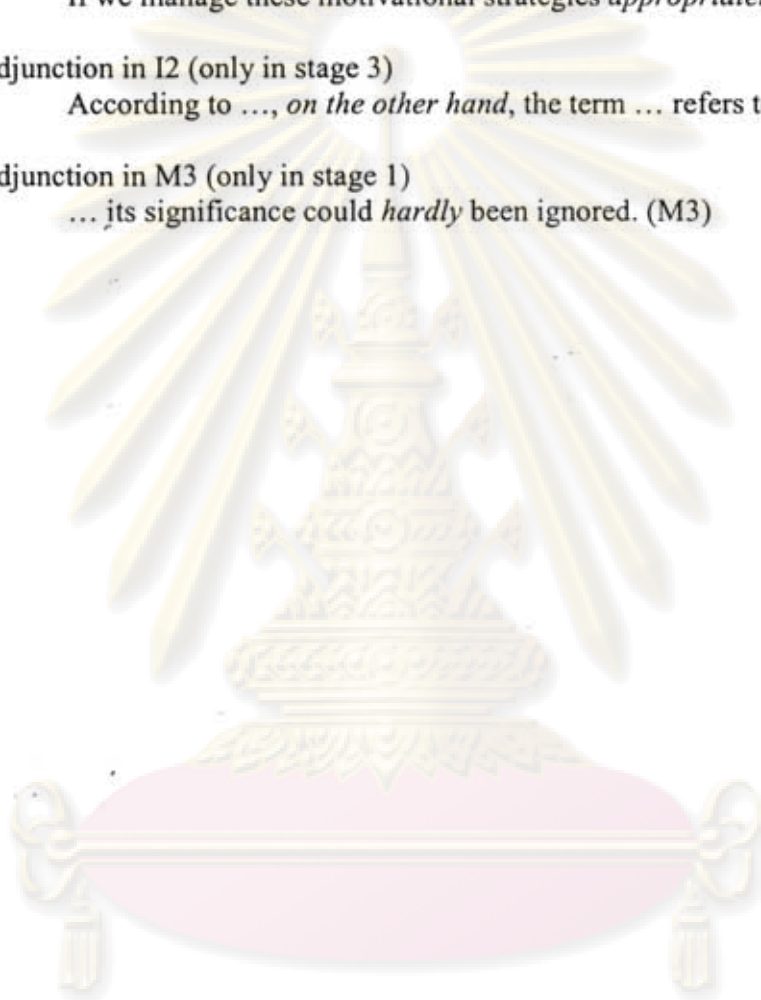
Figure 4.11   Intermediate learner 3's development
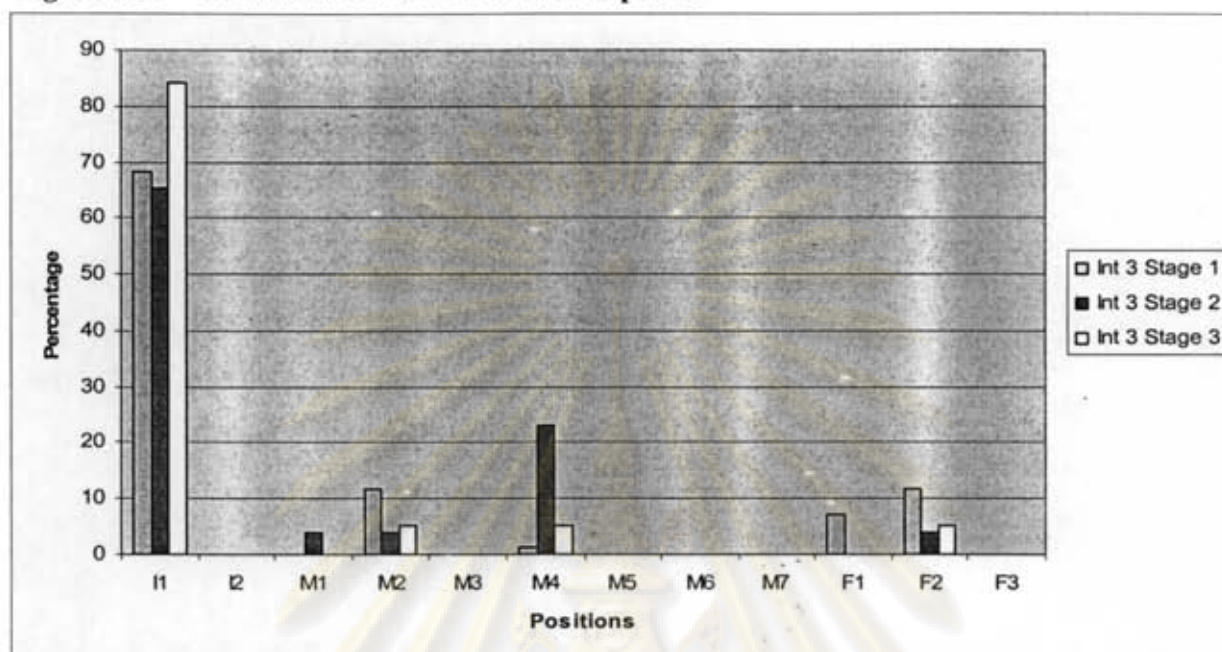
Table 4.16   Intermediate learner 3's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Int 3 Stage 1	68.1	-	-	11.6	-	1.4	-	-	-	7.2	11.6	-	5
Int 3 Stage 2	65.4	-	3.8	3.8	-	23.1	-	-	-	-	3.8	-	5
Int 3 Stage 3	84.2	-	-	5.3	-	5.3	-	-	-	-	5.3	-	4

Figures reported in percentage

Intermediate learner 3 initially placed 68.1% of adverbs in I1. Although this went down

slightly to 65.4% in stage 2, the percentage reached its peak at 84.2% in stage 3. An opposite

direction of development was found for M4. Adjunction in this position began at only 1.4% in

stage 1. However, this climbed rapidly to the maximum of 23.1% in stage 2 before finally

subsiding to 5.3% in stage 3.

Adjunction was constant in only four positions, namely I1, M2, M4, and F2.

Nevertheless, intermediate learner 3 attempted adjunction in M1 in stage 2, F1 in stage 1.

Intermediate learner 3
(32)   Positions with adjunction across all stages
        a.   *Accordingly*, the application of effective model is really important … (I1)
        b.   … that *already* appeared in second language research literatures … (M2)
        c.   … the issue of starting early should be *carefully* considered … (M4)
        d.   We have to use it correctly and *appropriately*. (F2)

(33)   Adjunction in M1 (only in stage 2)
        a.   Accordingly, teachers *probably* have to think of the computers … (M1)

        Adjunction in F1 (only in stage 1)
        b.   … you have to get into it and use it *frequently* in order to master … (F1)
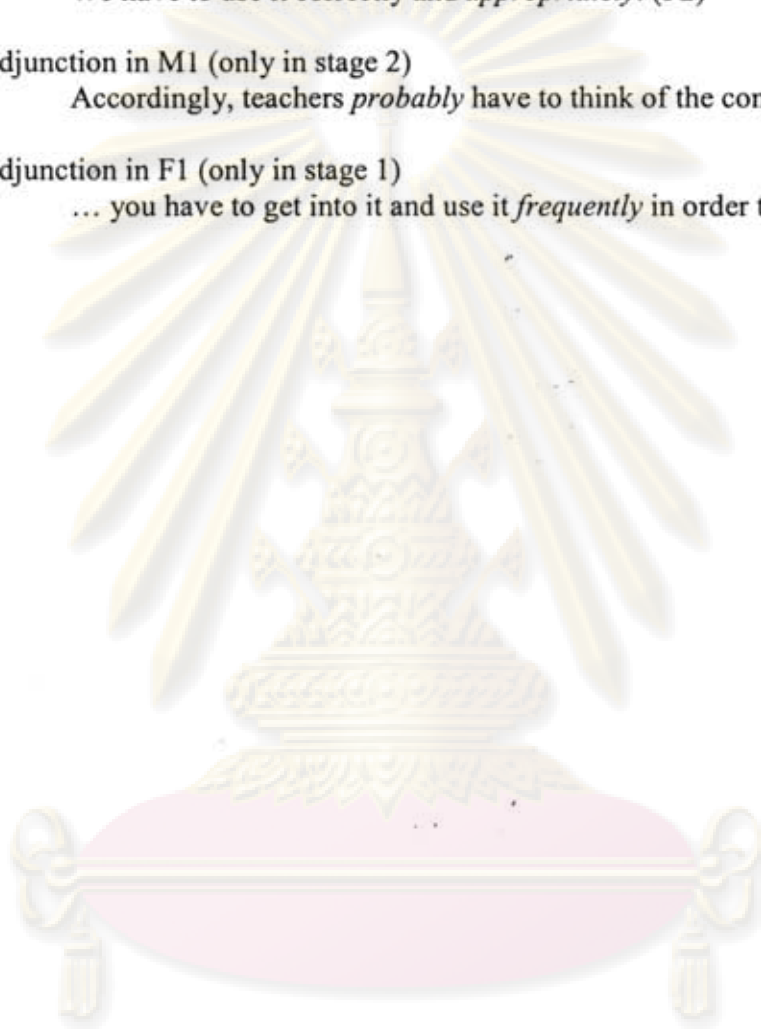
Figure 4.12   Intermediate learner 4's development
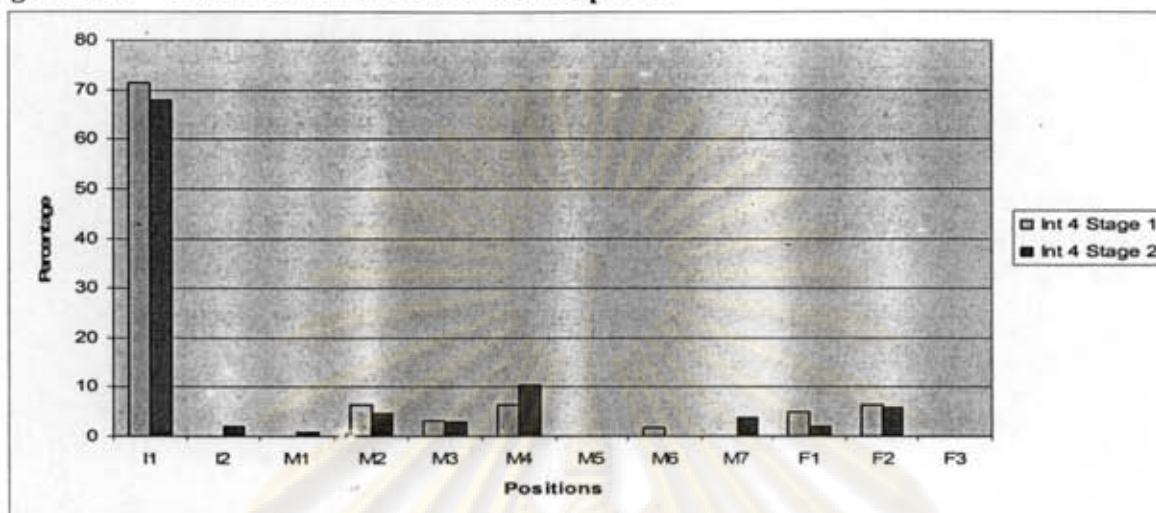
Table 4.17   Intermediate learner 4's development[11]

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Int 4 Stage 1	71.4	-	-	6.3	3.2	6.3	-	1.6	-	4.8	6.3	-	7
Int 4 Stage 2	67.9	1.9	0.9	4.7	2.8	10.4	-	-	3.8	1.9	5.7	-	9

Figures reported in percentage

Among the the others within the group, intermediate learner 4 was most cautious with the

clause-medial positions, as suggested by the highest degree of adjunction in I1 and the lowest extent

of the placement of adverbs in M2 and M4. In addition, this did not change much during the periods

being investigated. Adjunction in I1 reduced from 71.4% in stage 1 to 67.9% in stage 2. The degree

of adjunction in M2 also went down from 6.3% in stage 1 to 4.7% in stage 2. On the other hand, the

percentage of adjunction in M4 increased from 6.3% in stage 1 to 10.4% in stage 2.

Despite being conservative with clause-medial adjunction, intermediate learner 4 seemed

most experimental with regard to the range of positions, trying out adjunction in I2 in stage 2,

M1 in stage 2, M6 in stage 1, and M7 in stage 2. Adjunction was also consistent in I1, M2, M3,

M4, F1, and F2, a slightly broader range than that of the other intermediate learners.

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[11] Intermediate learner 4's data were not available for stage 3. However, it was imperative that the learner be included since only ten MA students agreed to participate in this research (section 3.2). Among these, only five, including intermediate learner 4, provided the most amount of data.

Intermediate learner 4
(34) Positions with adjunction across all stages
- a. *Moreover*, the topic is not relevant to and interesting for … (I1)
- b. … the test *actually* tries to measure reading and writing abilities … (M2)
- c. … after the direction and score allocating should *perhaps* be reviewed. (M3)
- d. … TOEIC test-takers have *recently* included many university graduating seniors … (M4)
- e. … how each synonym is used *differently* by native speakers … (F1)
- f. … even if the objectives are stated *clearly* … (F2)

(35) Adjunction in I2 (only in stage 2)
- a. Statistically, *however*, if we know the results of the test, … (I2)

Adjunction in M1 (only in stage 2)
- b. … they *even* do not have physically fit enough … (M1)

Adjunction in M6 (only in stage 1)
- c. … the role of the critical period in SLA is *still much* debated. (M6)

Adjunction in M7 (only in stage 2)
- d. The given test seems to *completely* fulfil only criterion 1-2. (M7)

Figure 4.13 Intermediate learner 5's development
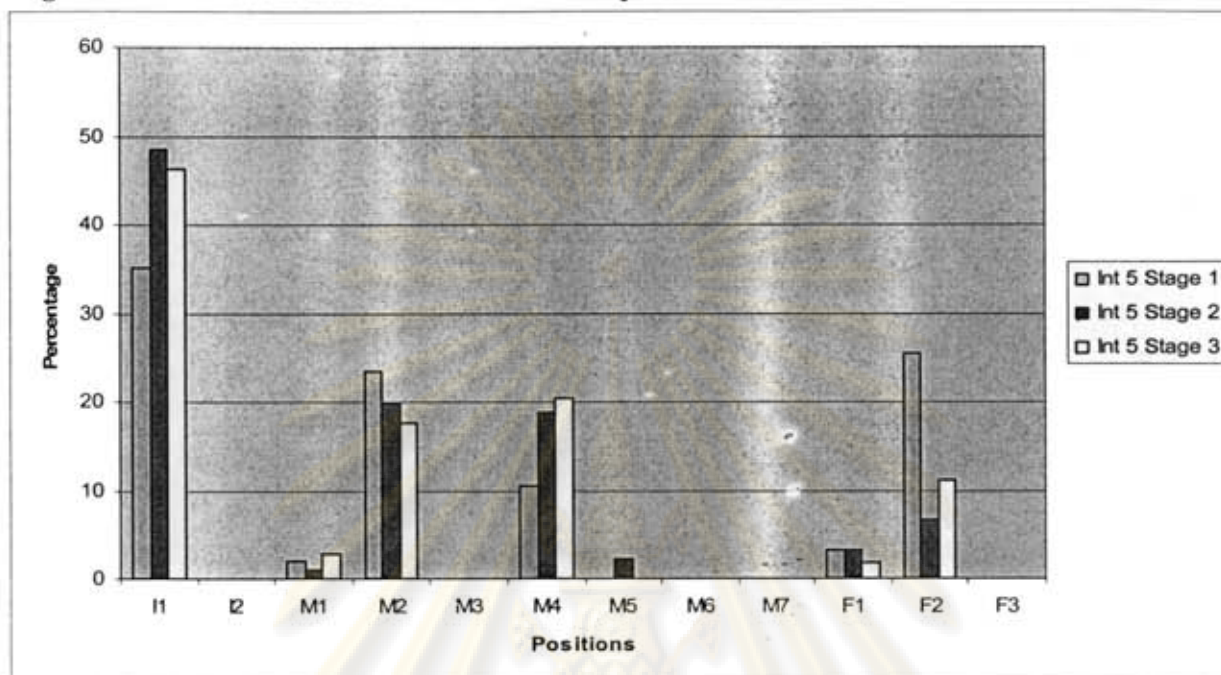
Table 4.18 Intermediate learner 5's development

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Int 5 Stage 1	35.1	-	2.1	23.4	-	10.6	-	-	-	3.2	25.5	-	6
Int 5 Stage 2	48.4	-	1.1	19.8	-	18.7	2.2	-	-	3.3	6.6	-	7
Int 5 Stage 3	46.3	-	2.8	17.6	-	20.4	-	-	-	1.9	11.1	-	6

Figures reported in percentage

For intermediate learner 5, the percentage of adjunction in I1 rose from 35.1% in stage 1 to 48.4% in stage 2 although this went down to 46.3% in stage 3. The placement of adverbs in M2 declined consistently from 23.4% in stage 1 to 19.8% in stage 2 and again to 17.6% in stage 3. A reverse pattern was found for adjunction in M4, which increased from 10.6% in stage 1 to 18.7% in stage 2 and again to 20.4% in stage 3.

With regard to the range of positions, the learner constantly placed adverbs in I1, M1, M2, M4, F1, and F2. Adjunction was experimented only in M5 during stage 2.

Intermediate learner 5

(36) Positions with adjunction across all stages
   a. *In addition*, the article system here covers the … (I1)
   b. An S-form …, *however*, is not required. (M1)
   c. Selinker (1988) *once* mentioned that … (M2)
   d. It is *constantly* changed … (M4)
   e. The words … were used *repeatedly* across four years. (F1)
   f. … the subject had used some particular noun *incorrectly*. (F2)

(37) Adjunction in M5 (only in stage 2)
   a. She *sometimes even* determine the noun type. (M5)

In short, the findings in Tables 4.14 to 4.18 show that the intermediate learners appeared to be stringent with adjunction in M2 and M4, putting most adverbs in I1. In addition, the degrees of adverb placement in these three positions fluctuated a great deal. Regarding the range of positions, all the intermediate learners adjoined adverbs in I1, M2, M4, F1, and F2 across all the stages. Gradual emergence of adjunction in the other positions such as I1, M3, M5 were found in some stages.

4.4.3 Comparison of the developmental patterns of the advanced learners and the intermediate learners

This section compares the developmental patterns of the advanced learners and the intermediate learners. Focusing only on adjunction in I1, M2, and M4 since the highest extent of change occurred in these positions, the findings indicate a more radical transition in the intermediate learners' language although some intermediate learners were more like the advanced learners, and vice versa, as mentioned in 4.4.2. Regarding the range of positions, the results in this section confirm that the development depicted for the advanced and the intermediate learners when they were each treated as a group camouflaged the more remarkable pattern of development found for the advanced learners, contradicting the information in 4.4.1.

Figure 4.14   Development in the degree of adjunction in I1
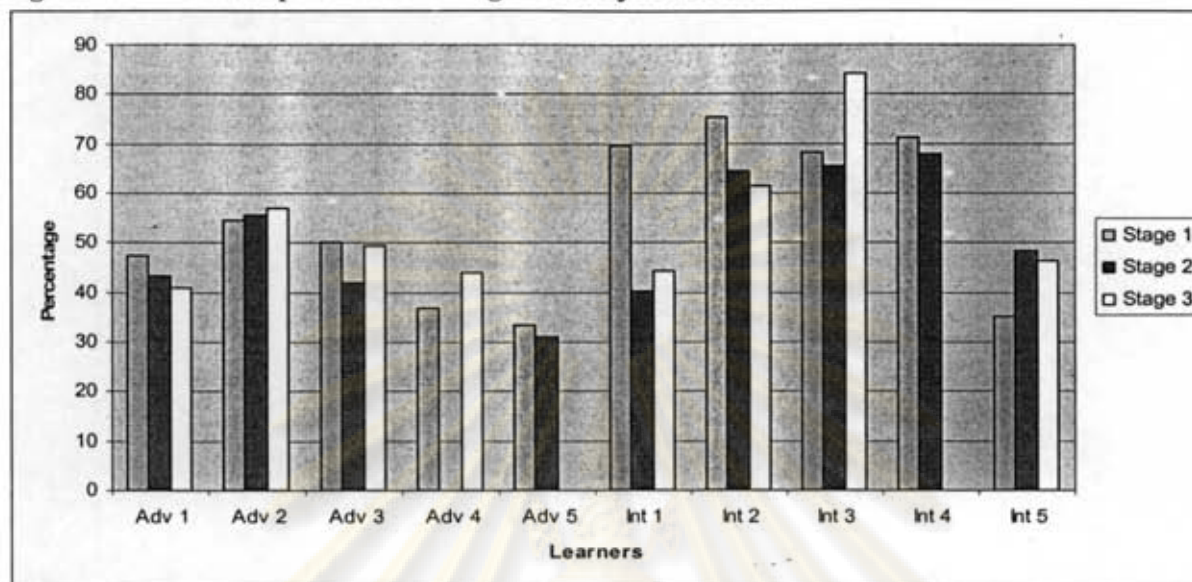
Table 4.19   Development in the degree of adjunction in I1

Learner	Stage 1	Stage 2	Stage 3
Adv 1	47.5	43.2	41.0
Adv 2	54.7	55.7	56.9
Adv 3	50.0	42.0	49.3
Adv 4	36.9	-	44.1
Adv 5	33.3	30.9	-
Int 1	69.4	40.3	44.4
Int 2	75.3	64.6	61.2
Int 3	68.1	65.4	84.2
Int 4	71.4	67.9	-
Int 5	35.1	48.4	46.3

Figures reported in percentage

Figure 4.14 and Table 4.19 show that as regards adjunction in I1, the advanced learners

were more stable than the intermediate learners. The advanced learners showed a change ranging

from a minimum of 3% (advanced learner 5) to a maximum of 8% (advanced learner 3). The

intermediate learners, on the other hand, illustrated a much larger degree of transition, with

intermediate learner 1 being the most noticeable case. In stage 1, the learner placed up to 69.4%

of adverbs in I1. However, this dropped sharply to 40.3% in stage 2 although it went up to 44.4%

in stage 3. That is, adjunction in this position swung between 25% and 30%. The least extent of

change was found with intermediate learner 4. For this learner, adjunction in I1 went down from

71.4% in stage 1 to 67.9% in stage 2, only a 3.5% decrease. At the end of stage 3, the

intermediate learners still differed in general from their advanced counterparts. Intermediate

learners 2, 3, and 4 put a lot more adverbs in I1 although intermediate learners 1 and 5 were

becoming more like the advanced group.

Figure 4.15   Development in the degree of adjunction in M2
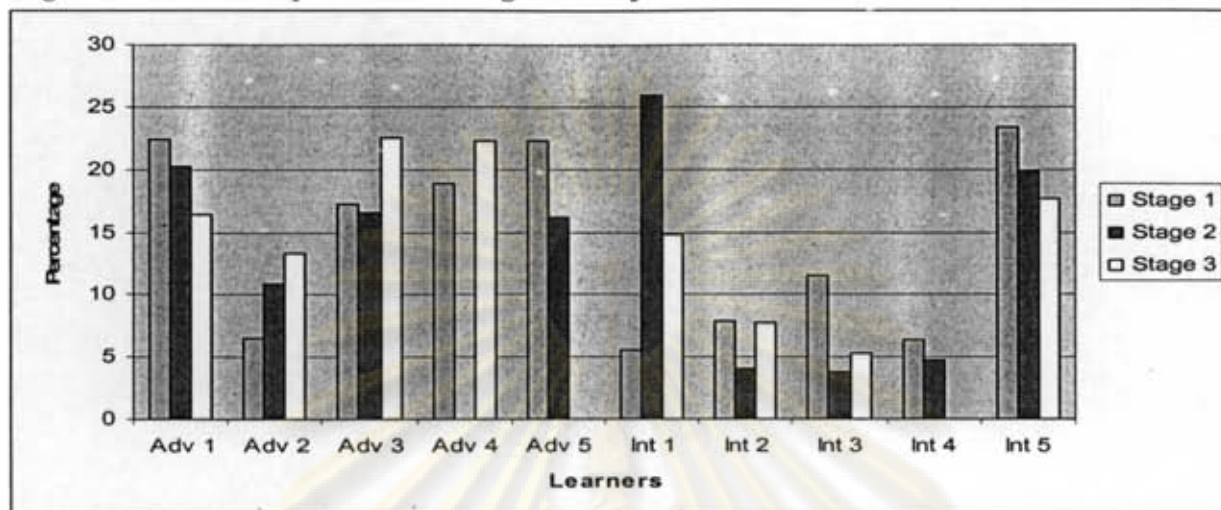
Table 4.20   Development in the degree of adjunction in M2

Learner	Stage 1	Stage 2	Stage 3
Adv 1	22.4	20.3	16.4
Adv 2	6.5	10.9	13.4
Adv 3	17.2	16.6	22.5
Adv 4	18.9	-	22.2
Adv 5	22.2	16.2	-
Int 1	5.6	26.0	14.8
Int 2	7.9	4.0	7.8
Int 3	11.6	3.8	5.3
Int 4	6.3	4.7	-
Int 5	23.4	19.8	17.6

Figures reported in percentage

Figure 4.15 and Table 4.20 demonstrates that the advanced group underwent a lesser

degree of change. Although the highest rate of change could be detected for advanced learner 3,

this occurred within a gap of 7%, rising from 6.5% in stage 1 to 10.9% in stage 2 and then again

to 13.4% in stage 3. For advanced learner 4, adjunction in M2 went up from 18.9% in stage 1 to

22.2% in stage 3, displaying the minimum extent of transition within the group (3.3%).

Conversely, the placement of adverbs in M2 fluctuated considerably for the majority of the

intermediate learners. For example, intermediate learner 1's percentage of adjunction started at

only 5.6% in stage 1 but reached a maximum of 26% in stage 2 and went down to 14.8% in stage

3. This drastic pattern of change was also evident for intermediate learners 3 and 5. The smallest gap of 1.6% came from learner 4. In sum, the change for the advanced group ranged between 3.3% and 7%, whereas that for the intermediate group fluctuated between 1.6% and 20.4%. Again, in the last stage, differences between the two groups could still be identified. On the whole, the advanced group placed much more adverbs in M2. However, when individual variations were taken into consideration, advanced learner 3 was more like the intermediate learners, while intermediate learners 1 and 5 performed more similarly to the advanced learners.
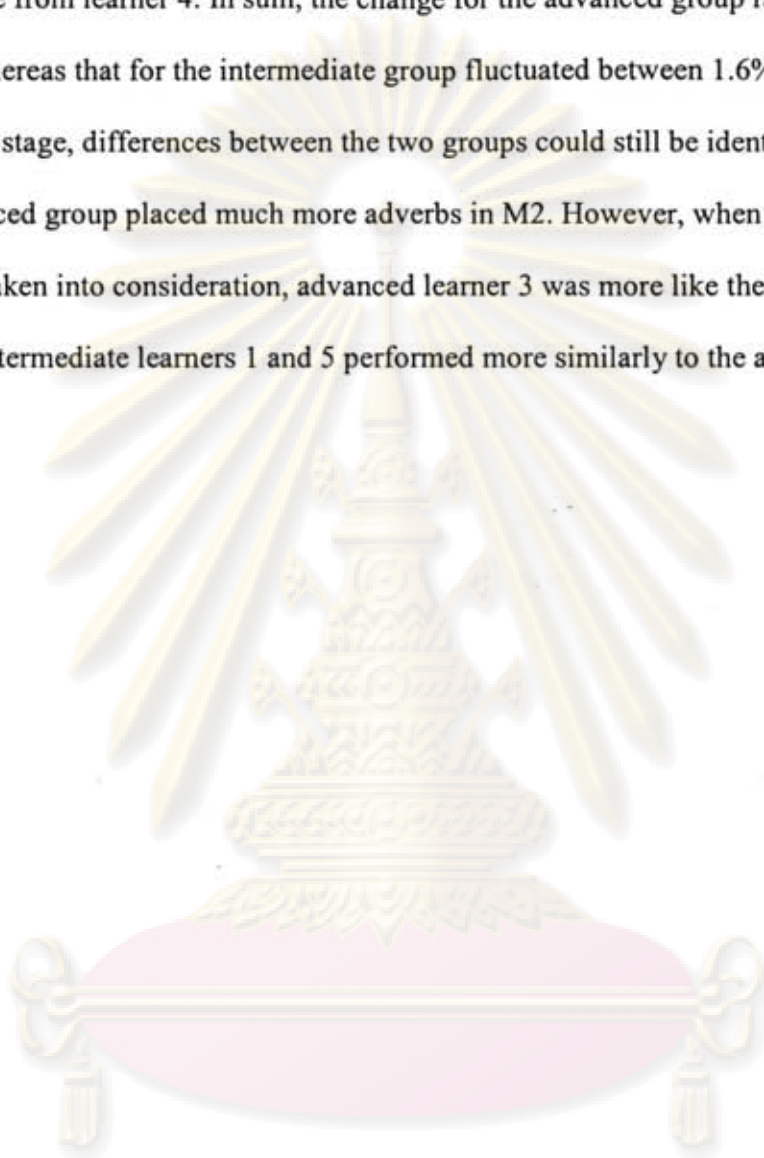
Figure 4.16   Development in the degree of adjunction in M4
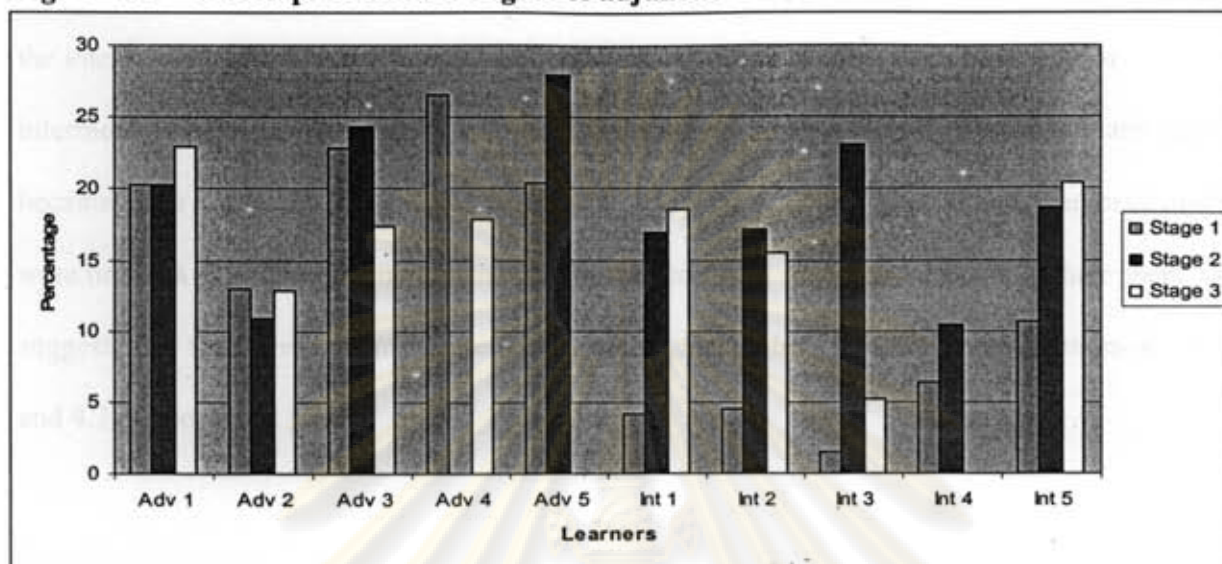
Table 4.21   Development in the degree of adjunction in M4

Learner	Stage 1	Stage 2	Stage 3
Adv 1	20.2	20.3	23.0
Adv 2	12.9	10.9	12.9
Adv 3	22.8	24.3	17.4
Adv 4	26.5	-	17.8
Adv 5	20.4	27.9	-
Int 1	4.2	16.9	18.5
Int 2	4.5	17.2	15.5
Int 3	1.4	23.1	5.3
Int 4	6.3	10.4	-
Int 5	10.6	18.7	20.4

Figures reported in percentage

Figure 4.16 and Table 4.21 illustrate the findings that the rate of transition in the degree of adjunction was less drastic in the advanced group than in the intermediate group. Among the advanced learners, however, advanced learners 4 and 5 changed the most. For the former, the percentage dropped from 26.5% in stage 1 to 17.8% in stage 3. For the latter, this rose from 20.4% in stage 1 to 27.9% in stage 2. In other words, the largest gap was around 8%. On the other hand, strong fluctuations were consistently found in the intermediate group, except for intermediate learner 4. Intermediate learner 3 was a case in point. The percentage rose sharply from as low as 1.4% in stage 1 to a maximum of 23.1% in stage 2, but dropped rapidly to a low

Table 4.22   Development in terms of the range of positions

Learner		I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Adv 1	Stage1	47.5	-	-	22.4	0.5	20.2	-	-	1.1	2.2	6.0	-	7
	Stage 2	43.2	-	1.4	20.3	2.0	20.3	-	-	2.0	4.7	6.1	-	8
	Stage 3	41.0	-	3.3	16.4	1.6	23.0	-	1.6	-	4.9	6.6	-	8
Adv 2	Stage 1	50.0	-	0.6	17.2	2.8	22.8	1.1	-	1.7	0.6	3.3	-	9
	Stage 2	42.0	-	-	16.6	5.0	24.3	-	-	1.7	2.8	7.7	-	7
	Stage 3	49.3	-	0.9	22.5	2.3	17.4	-	0.5	0.9	1.9	4.2	-	9
Adv 3	Stage 1	54.7	-	4.3	6.5	2.2	12.9	-	1.4	-	10.8	7.2	-	8
	Stage 2	55.7	0.9	0.4	10.9	2.2	10.9	0.9	-	0.4	5.2	12.6	-	10
	Stage 3	56.9	-	2.0	13.4	-	12.9	-	1.0	-	5.4	8.4	-	7
Adv 4	Stage 1	36.9	-	2.4	18.9	2.0	26.5	0.4	-	2.0	4.4	6.4	-	9
	Stage 4	44.1	0.3	2.8	22.2	2.8	17.8	0.6	1.3	-	3.4	4.4	0.3	11
Adv 5	Stage 1	33.3	0.9	2.8	22.2	0.9	20.4	-	1.9	0.9	5.6	11.1	-	10
	Stage 2	30.9	-	1.5	16.2	1.5	27.9	1.5	2.9	1.5	8.8	7.0	0.4	11
Int 1	Stage 1	69.4	-	-	5.6	-	4.2	-	-	-	-	20.8	-	4
	Stage 2	40.3	-	5.2	26.0	-	16.9	-	-	-	2.6	9.1	-	6
	Stage 3	44.4	-	-	14.8	-	18.5	7.4	-	-	7.4	7.4	-	6
Int 2	Stage 1	75.3	-	-	7.9	1.1	4.5	-	-	-	2.2	9.0	-	6
	Stage 2	64.6	-	-	4.0	-	17.2	-	-	-	3.0	11.1	-	5
	Stage 3	61.2	1.0	-	7.8	-	15.5	-	-	-	2.9	11.7	-	6
Int 3	Stage 1	68.1	-	-	11.6	-	1.4	-	-	-	7.2	11.6	-	5
	Stage 2	65.4	-	3.8	3.8	-	23.1	-	-	-	-	3.8	-	5
	Stage 3	84.2	-	-	5.3	-	5.3	-	-	-	-	5.3	-	4
Int 4	Stage 1	71.4	-	-	6.3	3.2	6.3	-	1.6	-	4.8	6.3	-	7
	Stage 2	67.9	1.9	0.9	4.7	2.8	10.4	-	-	3.8	1.9	5.7	-	9
Int 5	Stage 1	35.1	-	2.1	23.4	-	10.6	-	-	-	3.2	25.5	-	6
	Stage 2	48.4	-	1.1	19.8	-	18.7	2.2	-	-	3.3	6.6	-	7
	Stage 3	46.3	-	2.8	17.6	-	20.4	-	-	-	1.9	11.1	-	6

Figures reported in percentage

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Table 4.22 compares the development of the advanced learners and the intermediate learners in terms of the range of positions. The grey shading indicates adjunction in some stages but not all, i.e. the positions which were tried only in certain periods. The table illustrates that the advanced group generally placed adverbs in more positions than the intermediate group across all the stages. Specifically, in the advanced group, adjunction occurred consistently in six positions for advanced learners 1, 2, and 3, and in eight and nine positions for advanced learners 4 and 5, respectively. In contrast, in the intermediate group, intermediate learners 1 and 3 regularly put adverbs in four positions, and intermediate learner 2 in five positions. Interestingly, intermediate learners 4 and 5 were becoming increasingly similar to the advanced learners (specifically advanced learners 1 and 2), both adjoining adverbs in six positions. Nevertheless, if occurrence in two out of the three stages was taken into account, the number of positions would increase to eight for advanced learner 1, with adjunction in M1 and M7 being included. Similarly, the placement of adverbs in M3 would be counted for advanced learner 2, leading to adjunction in seven positions. Not only did the advanced learners put adverbs in more positions, but they were also more experimental with where the category in question could adjoin, as indicated by the number of grey boxes associated with them. In this regard, however, intermediate learners 1 and 4 appeared to be more like the advanced group, attempting two new positions in stages 2 and 3, and trying out three new positions in stage 2, respectively. This suggests that development with respect to the range of positions seemed gradual on the whole, particularly for the intermediate group, since not many new positions emerged. In addition, when this did occur, it was occasional at most.

4.5 L1 transfer and the underrepresentation of L2 adverbs

Following White (1989a, 1989b), the adjacency parameter was first applied in this study to analyse the syntax of English adverbs in the interlanguage of Thai learners with respect to the range of positions of adjunction. The basic rationale behind her proposal is that the transfer of the [+strict adjacency] setting from an L1, i.e. a language with a narrower grammar, would lead to the use of a more limited range permitted by an L2 with the [+/-strict adjacency] parameter, i.e. a language which has a wider grammar. It seems that White (1989a) takes L1 transfer as occurring on the syntactic level, as far as adverbial adjunction is concerned. However, the findings presented thus far do not point to any direct correlation between transfer of the adjacency parameter and the range of positions of adjunction. That is, while the Thai learners were still constrained by the subset grammar of the L1, putting most adverbs in the clause-initial position, their interlanguage grammar nevertheless properly represented as wide a range of positions as that of the natives, particularly in the case of the advanced learners (sections 4.3 and 4.4). How can this dilemma be accounted for?

While not altogether rejecting White's (1989a) approach, I propose that the lexical parameter is also at play here (e.g. Inagaki, 2001, 2002; Jiang, 2000; Juffs, 1996; Slabakova, 2002, 2006). Specifically, the syntax of adverbs in Thai is underspecified, compared with that of English adverbs (section 4.7.5 below). For example, in Thai, adverbs in a certain semantic type can usually adjoin in one or two positions. In contrast with this, English adverbs can subcategorise for a number of positions which match them in terms of syntactico-semantic requirements (Cobb, 2006a; Ernst, 2002; Jackendoff, 1972). Provided this syntactic underspecification of Thai adverbs, L1 transfer can thus be evaluated in terms of the range of positions in which adverbs in each semantic class are adjoined. In section 4.5.1, the range of

positions of adverbs in different semantic categories is illustrated for the native, the advanced, and the intermediate groups. Then, the learners are individually compared in 4.5.2. The findings thus far show that the range of positions of adjunction was relatively similar between the three groups of subjects when the classifications of adverbs were not taken into account (sections 4.3 and 4.4). When adverbs were categorised according to their semantic categories, however, differences between the three groups became more recognisable (section 4.5.1). That is, adverbs in each semantic class were placed in more positions by the native group than by the advanced group and by the intermediate group, respectively (section 4.5.1). Despite this tendency, individual results reveal similarities between some of the advanced learners and the natives and between some of the intermediate learners and the advanced learners (section 4.5.2).

4.5.1 Positions of adverbs in different semantic categories: group results

This section presents the positions in which adverbs in different semantic categories were placed by each group. It shows that with the 37 semantic classes of adverbs being examined, the range of positions was generally broadest for the native group, followed by the advanced group and the intermediate group. However, the advanced group was nearly native-like when some classes were taken into account. Likewise, the intermediate group paralleled the advanced group for certain types of adverbs. This provides evidence that the specification of L1 adverbs was transferred into the use of the L2 and that this was in part related to proficiency level. It should be noted that only the range of positions associated with the semantic classes used by all the three groups are discussed.

To facilitate the discussion, the semantic classes being used by the three groups of subjects are grouped into four tables as follows.

Table 4.23a: CONCESSIVE, CONSEQUENTIAL, ADVERSATIVE, CONCESSIVE: CONTINUATIVE, ADDITIVE: CONTRASTIVE, ADDITIVE: SERIAL ORDER, ADDITIVE: UNEXPECTED, EPISTEMIC, and NECESSITY adverbs

Table 4.23b: NON-EPISTEMIC, METALINGUISTIC, REINFORCING, EVIDENTIAL, FACTUAL, TEMPORAL: GENERAL, TEMPORAL 2, DURATIVE, SUMMATION/FINAL, and SIMULTANEOUS adverbs

Table 4.23c: FUTURE: PROXIMATE, FUTURE: NON-PROXIMATE, PRETERITE: RECENT, ANTERIOR, IRREGULAR, FREQUENTATIVE, HABITUAL/GENERAL, REPETITIVE, PERMANENT, and COMPLETIVE adverbs

Table 4.23d: PARTIAL, RESTRICTIVE, EVALUATIVE, VP-RELATED, and INSIGNIFICANT DEGREE adverbs

Table 4.23a   Positions of adverbs by subject group (CONCESSIVE to NECESSITY)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Concessive e.g. *nevertheless*	Native	69.0	-	3.4	13.8	-	3.4	-	-	-	6.9	3.4	-	6
	Advanced	98.2	-	-	1.8	-	-	-	-	-	-	-	-	2
	Intermediate	91.7	8.3	-	-	-	-	-	-	-	-	-	-	2
Consequential e.g. *accordingly, thus, therefore*	Native	50.0	2.7	2.7	26.3	2.4	8.0	1.5	1.5	-	2.1	3.0	-	10
	Advanced	79.7	-	4.1	12.0	0.3	1.7	0.3	-	-	-	1.7	-	7
	Intermediate	96.6	-	1.1	1.1	-	1.1	-	-	-	-	-	-	4
Adversative *however*	Native	57.5	12.0	5.5	15.7	-	1.6	-	-	-	4.9	2.8	-	7
	Advanced	90.9	0.4	2.6	4.3	-	-	-	-	-	-	1.7	-	5
	Intermediate	90.6	1.1	2.8	5.0	-	-	-	-	-	-	0.6	-	5
Concessive: continuative *still*	Native	3.3	-	6.7	36.7	8.3	41.7	-	3.3	-	-	-	-	6
	Advanced	21.9	-	3.1	40.6	3.1	28.1	3.1	-	-	-	-	-	6
	Intermediate	5.9	-	-	35.3	-	35.3	17.6	5.9	-	-	-	-	5
Additive: contrastive *otherwise*	Native	33.3	-	-	-	33.3	33.3	-	-	-	-	-	-	3
	Advanced	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Intermediate	25.0	-	-	-	-	75.0	-	-	-	-	-	-	2
Additive: serial order e.g. *also, first, second*	Native	28.7	-	-	33.5	6.9	23.2	1.3	1.9	-	1.9	1.7	0.8	9
	Advanced	53.6	-	0.7	23.6	3.5	11.9	0.5	0.7	0.2	0.2	5.3	-	10
	Intermediate	69.0	-	0.3	17.3	0.3	6.0	-	-	-	0.6	6.5	-	7
Additive: unexpected *even*	Native	-	-	-	25.0	20.0	45.0	-	5.0	5.0	-	-	-	5
	Advanced	-	-	16.7	50.0	-	33.3	-	-	-	-	-	-	3
	Intermediate	-	-	10.0	30.0	-	50.0	10.0	-	-	-	-	-	4
Epistemic e.g. *certainly, probably*	Native	29.2	-	4.2	15.0	6.7	32.5	-	2.5	-	6.7	3.3	-	8
	Advanced	18.8	-	9.4	46.9	-	21.9	-	-	-	-	3.1	-	5
	Intermediate	25.0	-	37.5	12.5	-	25.0	-	-	-	-	-	-	4
Necessity e.g. *inevitably, necessarily*	Native	19.6	-	2.2	37.0	2.2	39.1	-	-	-	-	-	-	5
	Advanced	-	-	-	-	-	83.3	-	16.7	-	-	-	-	2
	Intermediate	-	-	-	-	-	-	-	-	-	-	-	-	0

Figures reported in percentage for each semantic category

Table 4.23a compares the native, the advanced, and the intermediate groups in terms of the range of positions for the first nine semantic categories. It demonstrates that the native group adjoined adverbs in more positions than the advanced and the intermediate groups. In addition, the range of positions used by the advanced learners was generally wider than that by the intermediate learners. For instance, the number of positions in which the native group put CONSEQUENTIAL adverbs was ten, whereas the advanced group placed these adverbs in seven positions. The intermediate group used the narrowest range, adjoining CONSEQUENTIAL adverbs in only four positions.

Native group
(38)
   a.   *Therefore*, … were counted as three tokens and three types. (I1)
   b.   Almost automatically, *therefore*, dispreferred responses stimulate the need … (I2)
   c.   … expert findings *therefore* cannot be applied directly … (M1)
   d.   R. Ellis or J. Willis *therefore* accepts the need to … (M2)
   e.   D could not *therefore* be obtained for … (M3)
   f.   … may not *therefore* become available for learning. (M4)
   g.   … Spanish L1 speakers of L2 English *therefore* frequently forgo encoding manner … (M5)
   h.   … whose messages were *therefore* automatically deleted. (M6)
   .i.   It is important, *therefore*, to appreciate the strong political consensus … (F1)
   j.   Reliability is crucial, *therefore*, and … (F2)

Advanced group
(39)
   a.   *Therefore*, it is probably safe to argue that … (I1)
   b.   We *therefore* cannot count … as … (M1)
   c.   … which *thus* facilitates the use and elaboration of this domain … (M2)
   d.   It can *therefore* be said that integrating computers into the … (M3)
   e.   The feature [-NP] is *thus* cancelled … (M4)
   f.   Hung (2004) *therefore* further explains that … (M5)
   g.   … goals and objectives may have to be revised *accordingly*. (F2)

Intermediate group
(40)

    a.   ...; *therefore*, a transformational rule ... is obligatory applied. (I1)
    b.   This structure, *therefore*, should be explicitly taught. (M1)
    c.   The generalizability *therefore* is appropriate ... (M2)
    d.   ... it is *therefore* assumed that ... (M4)

Despite the above findings, the advanced group was relatively comparable to the native

group where CONCESSIVE: CONTINUATIVE and ADDITIVE: SERIAL ORDER adverbs were concerned.

Examples for the former are provided in (41) and (42).

Native group
(41)

    a.   *Still*, the rate at which Aboriginal people are taken into police custody ... (I1)
    b.   ... the students at this level *still* cannot carry on a discussion-like interaction. (M1)
    c.   ... who *still* 'idealize reality' and shun 'the actual experience of language' ... (M2)
    d.   ... B will *still* be receiving inputs from A and B ... (M3)
    e.   ... familiarity with .... is *still* assumed. (M4)
    f.   ... it is *still* intimately connected with the other dimensions ... (M6)

Advanced group
(42)

    a.   *Still*, that can be used to refer to persons as well in ... (I1)
    b.   ... children *still* can learn a language after puberty ... (M1)
    c.   ..., Text 3B *still* features more anaphoric lexical items. (M2)
    d.   ... the CBT version was *still* being used. (M3)
    e.   ... but they will *still* speak RP ... (M4)
    f.   ... language forms especially grammar *still* also receive attention. (M5)

Also worth mentioning is the fact that the advanced and the intermediate groups were

relatively on a par for such categories as ADVERSATIVE and EPISTEMIC adverbs. Comparability in

the distribution of ADVERSATIVE adverbs is illustrated.

Advanced group
(43)

a. *In contrast*, mistakes are less serious … (I1)
b. In Thai, *however*, this does not seem to be the case, … (I2)
c. The instructed level, *however*, will not implicate lower or more difficult … (M1)
d. Adjemian (1976), *however*, opposed to this notion … (M2)
e. … an unequal variance t-test will be used *instead*. (F2)

Intermediate group
(44)

a. *However*, they like to participate in group activities as well … (I1)
b. According to …, *on the other hand*, the term … refers to … (I2)
c. The rater reliability, *however*, can be claimed that … (M1)
d. This test, *however*, tries to develop only one skill … (M2)
e. … the context requires the complementizer 'whether' *instead*. (F2)

Table 4.23b   Positions of adverbs by subject group (NON-EPISTEMIC to SIMULTANEOUS)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Non-epistemic *perhaps, possibly*	Native	37.8	-	5.4	21.6	2.7	24.3	2.7	2.7	-	2.7	-	-	8
	Advanced	20.0	-	20.0	50.0	-	10.0	-	-	-	-	-	-	4
	Intermediate	57.1	-	-	-	14.3	28.6	-	-	-	-	-	-	3
Metalinguistic e.g. *actually, honestly*	Native	33.0	-	1.0	30.9	2.1	32.0	-	-	1.0	-	-	-	6
	Advanced	64.9	-	1.8	21.1	-	5.3	-	-	1.8	5.3	-	-	6
	Intermediate	82.8	-	-	6.9	-	10.3	-	-	-	-	-	-	3
Reinforcing *indeed*	Native	79.7	-	1.4	1.4	4.1	12.2	-	-	-	-	1.4	-	6
	Advanced	-	-	-	-	50.0	-	-	-	-	-	50.0	-	2
	Intermediate	-	-	-	-	-	-	-	-	-	-	-	-	0
Evidential e.g. *apparently, evidently*	Native	35.2	1.9	5.6	25.9	5.6	20.4	-	-	1.9	3.7	-	-	8
	Advanced	66.7	-	-	19.4	-	11.1	-	2.8	-	-	-	-	4
	Intermediate	16.7	-	-	-	-	66.7	-	-	-	-	16.7	-	3
Factual e.g. *really*	Native	22.2	-	22.2	33.3	-	11.1	-	-	11.1	-	-	-	5
	Advanced	23.1	-	-	38.5	-	30.8	-	-	-	-	7.7	-	4
	Intermediate	50.0	-	-	-	-	50.0	-	-	-	-	-	-	2
Temporal: general e.g. *now, nowadays*	Native	10.8	-	0.6	34.8	12.0	36.1	1.3	1.3	-	1.3	1.9	-	9
	Advanced	14.0	-	2.0	12.0	12.0	56.0	2.0	2.0	-	-	-	-	7
	Intermediate	40.0	-	-	20.0	-	40.0	-	-	-	-	-	-	3
Temporal 2 e.g. *once*	Native	3.7	-	-	18.5	14.8	59.3	-	-	-	-	3.7	-	5
	Advanced	7.1	-	-	10.7	-	60.7	-	-	-	3.6	17.9	-	5
	Intermediate	-	-	-	-	-	50.0	-	-	-	-	50.0	-	2
Durative *long*	Native	-	-	-	-	40.0	60.0	-	-	-	-	-	-	2
	Advanced	-	-	-	-	-	-	-	-	-	-	-	-	0
	Intermediate	-	-	-	-	-	100.0	-	-	-	-	-	-	1
Summation/ Final e.g. *finally*	Native	74.0	-	-	11.7	2.6	9.1	-	-	-	2.6	-	-	5
	Advanced	73.3	-	-	13.3	-	8.9	-	-	-	-	4.4	-	4
	Intermediate	92.3	-	-	3.8	-	-	-	-	-	-	3.8	-	3
Simultaneous e.g. *meanwhile, simultaneously*	Native	66.7	2.4	-	14.3	-	4.8	-	-	2.4	-	9.5	-	6
	Advanced	52.0	-	-	8.0	-	4.0	-	-	-	8.0	28.0	-	5
	Intermediate	66.7	-	-	8.3	-	-	-	-	-	8.3	16.7	-	4

Figures reported in percentage for each semantic category

Table 4.23b compares the native, the advanced, and the intermediate groups in terms of the range of positions for the next ten semantic categories. Again, the native group employed more positions than the advanced group, with the intermediate group coming last in the rank. For instance, NON-EPISTEMIC adverbs were placed in eight positions by the native group, four by the advanced learners, and three by the intermediate learners.

Native group
(45)
    a.   *Perhaps*, we have been starting in the wrong place … (I1)
    b.   … we *perhaps* did not want to praise RCGP too much … (M1)
    c.   … which *possibly* leads to a rash … (M2)
    d.   … this could *possibly* be developed from a real experiment. (M3)
    e.   … how the occurrence … could *possibly* carry the sort of informational burden … (M4)
    f.   … which *perhaps* only achieved false automatization … (M5)
    g.   The authority … is *perhaps* best articulated at the structural level. (M6)
    h.   It seems surprising, *perhaps*, that the interviewer should compare … (F1)

Advanced group
(46)
    a.   *Possibly*, it can mean that the man was showing love … (I1)
    b.   … language teachers *perhaps* should be more aware of … (M1)
    c.   … the translator *perhaps* misunderstood the word … (M2)
    d.   This type of deviation is *perhaps* attributed to the complicated English rules … (M4)

Intermediate group
(47)
    a.   *Perhaps*, the users perceived that it was impractical … (I1)
    b.   … the direction and score allocating should *perhaps* be reviewed. (M3)
    c.   … it is *perhaps* used in political, artistic and academic contexts … (M4)

However, it is worth noting that the classes in which near similarities between the advanced and the native groups could be identified were METALINGUISTIC, FACTUAL and SUMMATION/FINAL adverbs. (48) and (49) give examples for FACTUAL adverbs.

Native group
(48)

a.   *In reality*, the concept of the linguistic fingerprint is an unhelpful ... (I1)
b.   ... inter-mental mediation *really* does lead to ... (M1)
c.   ... LFP *really* needs to be subjected to an in-depth regime of evaluation ... (M2)
d.   ... mechanisms of this sort do not *really* figure in any of the current models ... (M4)
e.   ... in order to *really* understand how lexicons work, ... (M7)

Advanced group
(49)

a.   *In reality*, the students might not encounter this type of invented language. (I1)
b.   The translator *really* substituted the right English words ... (M2)
c.   ... this test does not *really* serve this purpose. (M4)
d.   ... some potential errors or problems ... did not occur *in reality*. (F2)

In addition, the intermediate group almost approximated the advanced group for NON-EPISTEMIC, SUMMATION/FINAL, and SIMULTANEOUS adverbs. NON-EPISTEMIC adverbs are exemplified in (50) and (51).

Advanced group
(50)

a.   *Possibly*, it can mean that the man was showing love ... (I1)
b.   ... language teachers *perhaps* should be more aware of ... (M1)
c.   ... the translator *perhaps* misunderstood the word ... (M2)
d.   This type of deviation is *perhaps* attributed to the complicated English rules ... (M4)

Intermediate group
(51)

a.   *Perhaps*, the users perceived that it was impractical ... (I1)
b.   ... the direction and score allocating should *perhaps* be reviewed. (M3)
c.   ... it is *perhaps* used in political, artistic and academic contexts ... (M4)

Table 4.23c Positions of adverbs by subject group (FUTURE: PROXIMATE to COMPLETIVE)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Future: proximate e.g. *immediately, soon*	Native	14.9	-	-	21.3	-	23.4	-	-	4.3	27.7	4.3	4.3	7
	Advanced	-	-	-	-	25.0	25.0	-	-	-	-	50.0	-	3
	Intermediate	-	-	-	100.0	-	-	-	-	-	-	-	-	1
Future: non-proximate e.g. *later, later on*	Native	20.0	2.2	-	15.6	-	13.3	-	-	-	20.0	28.9	-	6
	Advanced	34.7	-	-	-	4.3	21.7	-	8.7	-	13.0	17.4	-	6
	Intermediate	54.5	-	-	-	-	-	-	-	-	9.1	36.4	-	3
Preterite: recent e.g. *just, recently*	Native	14.7	-	-	8.8	8.8	55.9	-	2.9	-	5.9	2.9	-	7
	Advanced	75.0	-	-	25.0	-	-	-	-	-	-	-	-	2
	Intermediate	50.0	-	-	-	-	50.0	-	-	-	-	-	-	2
Anterior *already*	Native	-	-	-	16.7	-	83.3	-	-	-	-	-	-	2
	Advanced	-	-	-	12.5	-	87.5	-	-	-	-	-	-	2
	Intermediate	-	-	-	27.8	-	72.2	-	-	-	-	-	-	2
Irregular e.g. *occasionally, sometimes*	Native	12.9	-	3.2	29.0	-	48.4	-	3.2	-	-	3.2	-	6
	Advanced	45.0	7.5	2.5	12.5	2.5	30.0	-	-	-	-	-	-	6
	Intermediate	42.8	-	14.3	14.3	-	28.6	-	-	-	-	-	-	4
Frequentative e.g. *often, frequently*	Native	3.1	-	3.8	31.9	3.8	46.9	0.6	1.3	-	5.0	3.8	-	9
	Advanced	4.4	-	-	32.4	1.5	45.6	-	-	-	11.8	4.4	-	6
	Intermediate	-	-	-	10.0	5.0	30.0	-	-	-	10.0	45.0	-	5
Habitual/ General e.g. *generally, usually*	Native	12.6	-	1.4	30.8	4.9	39.9	2.1	2.1	-	3.5	2.8	-	9
	Advanced	7.6	-	0.8	34.7	2.5	50.8	-	0.8	1.7	0.8	-	-	8
	Intermediate	28.0	-	-	32.0	-	32.0	-	-	-	4.0	4.0	-	5
Repetitive *again*	Native	63.0	-	-	16.7	-	3.7	-	-	-	9.3	7.4	-	5
	Advanced	28.6	-	4.8	4.8	14.3	28.6	-	-	-	14.3	4.8	-	7
	Intermediate	83.3	-	-	-	-	-	-	-	-	-	16.7	-	2
Permanent *always*	Native	-	-	4.1	16.3	2.0	75.5	-	-	2.0	-	-	-	5
	Advanced	-	-	-	33.3	13.3	46.7	-	6.7	-	-	-	-	4
	Intermediate	-	-	-	16.7	-	83.3	-	-	-	-	-	-	2
Completive e.g. *completely, entirely*	Native	-	5.0	-	5.0	-	35.0	-	-	15.0	30.0	5.0	5.0	7
	Advanced	-	-	-	-	-	50.0	-	-	10.0	20.0	20.0	-	4
	Intermediate	-	-	-	20.0	-	40.0	-	-	40.0	-	-	-	3

Figures reported in percentage for each semantic category

Table 4.23c compares the native, the advanced, and the intermediate groups in terms of the range of positions for the next ten semantic categories. The advanced group equalled the native group in a number of instances, leaving the intermediate group behind. As an illustration, FUTURE: NON-PROXIMATE adverbs were placed in six positions by both the native and the advanced groups. This statement was also generally applicable to IRREGULAR, HABITUAL/GENERAL, REPETITIVE, and PERMANENT adverbs. Examples are provided for FUTURE: NON-PROXIMATE adverbs.

Native group
(52)

a.	*Later on*, the so-called cultural difference researchers, …, would argue that … (I1)
b.	However, *later*, a more complex role was proposed … (I2)
c.	… Laufer and Nation *later* assert, without any proviso, that … (M2)
d.	… that was *later* contradicted by DNA evidence. (M4)
e.	… they were responded to *later* in the thread. (F1)
f.	… as we will see *later on*. (F2)

Advanced group
(53)

a.	*Later on*, creation took over frumsceaft completely in all context … (I1)
b.	… those meanings will *later* be decoded by the listeners' perception … (M3)
c.	… it was *later* found that focusing only on language forms is not the right track … (M4)
d.	… but the focus was *later* gradually shifted to include written data … (M6)
e.	More details will be discusses *later* under the section … (F1)
f.	This will be fully discussed *later*. (F2)

However, the native group fared better than the advanced group for FUTURE: PROXIMATE, PRETERITE: RECENT, and FREQUENTATIVE adverbs. PRETERITE: RECENT adverbs are exemplified in (54) and (55).

Native group
(54)

    a.   *Recently*, a number of linguists … have applied their initial work … (I1)
    c.   … when certain threads *just* take off … (M2)
    d.   This practice … has only *recently* been adopted by the UK … (M3)
    e.   … whose work has more *recently* become prominent. (M4)
    f.   This learner has only *just* begun to develop the association … (M6)
    g.   An interesting debate emerged *recently* in Germany … (F1)
    h.   It has received further attention *recently*, … (F2)

Advanced group
(55)

    a.   Most *recently*, the … dictionary was co-published in 2000 by … (I1)
    b.   … another plane of the same airline … *just* crashed. (M2)

Three categories in which the intermediate group (almost) resembled the advanced group

were PRETERITE: RECENT, FREQUENTATIVE, and COMPLETIVE adverbs[12]. Examples are given for

FREQUENTATIVE adverbs.

Advanced group
(56)

    a.   *Often*, the scientific processes of observation … is naturally an
        information gap … (I1)
    b.   … relative clauses … *frequently* lack relative pronouns. (M2)
    c.   … learners have *frequently* been exposed to a target feature. (M3)
    d.   … coordinating conjunctions are *frequently* omitted in … (M4)
    e.   … which can be found very *frequently* in advertising slogans. (F1)
    f.   … the translator uses footnotes very *frequently*. (F2)

Intermediate group
(57)

    a.   … it *often* precedes a noun … (M2)
    b.   … phrase structure tree … will *frequently* be used. (M3)
    c.   From the corpus, … is *frequently* used in the political context … (M4)
    d.   … you have to get into it and use it *frequently* in order to master that
        language. (F1)
    e.   … there are three main types of … which occur *frequently*. (F2)

---

[12] ANTERIOR adverb was not mentioned here because it adjoins in two fixed positions only, namely M2 and M4.

Table 4.23d   Positions of adverbs by subject group (PARTIAL to INSIGNIFICANT DEGREE)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of adverbs
Partial *partially, partly*	Native	-	-	-	11.1	-	33.3	-	11.1	-	44.4	-	-	4
	Advanced	-	-	-	-	-	-	-	-	-	-	-	-	0
	Intermediate	-	-	-	100.0	-	-	-	-	-	-	-	-	1
Restrictive *e.g. merely, only*	Native	16.7	-	-	28.6	10.7	41.7	1.2	-	-	1.2	-	-	6
	Advanced	23.3	-	-	39.5	11.3	25.6	-	-	-	-	-	-	4
	Intermediate	20.0	-	-	60.0	-	20.0	-	-	-	-	-	-	3
Evaluative *e.g. oddly, unfortunately*	Native	66.7	2.2	-	17.8	-	11.1	-	2.2	-	-	-	-	5
	Advanced	88.9	-	-	-	-	11.1	-	-	-	-	-	-	2
	Intermediate	100.0	-	-	-	-	-	-	-	-	-	-	-	1
VP-related *e.g. easily, gradually, quickly*	Native	4.1	-	0.6	13.5	1.7	34.5	0.6	1.4	2.9	20.1	18.4	2.2	11
	Advanced	2.9	-	-	11.9	-	31.4	0.4	0.7	5.4	19.9	27.1	0.4	9
	Intermediate	3.6	-	-	14.5	0.6	28.5	-	-	1.2	12.7	38.8	-	7
Insignificant degree *e.g. hardly*	Native	-	-	-	28.6	-	66.7	-	-	-	4.8	-	-	3
	Advanced	-	-	-	66.7	-	30.0	-	-	-	-	-	3.3	3
	Intermediate	-	-	-	42.9	14.3	42.9	-	-	-	-	-	-	3

Figures reported in percentage for each semantic category

Table 4.23d compares the native, the advanced, and the intermediate groups in terms of the range of positions for the last five semantic categories. Again, the native group exhibited a broader range of positions than the advanced group and the intermediate group, respectively. For example, the native group placed VP-related adverbs in up to eleven positions, whereas the number of positions in which these adverbs were placed was nine for the advanced group and seven for the intermediate group, as shown in (58) to (60).

Native group
(58)

    a.   …; *pragmatically*, the expression has a distinct evaluative slant … (I1)

    b.   … which errors *seriously* threaten phonological intelligibility in ILT. (M2)

    c.   ... as if it might *usefully* be applied. (M3)

    d.   … the English used is *radically* recontextualised … (M4)

    e.   It hence *typically* focuses on the problems of design, … (M5)

    f.   … Krashen's monitor model was often *rightly* criticized … (M6)

    g.   … communicative purpose cannot help analysts to *quickly*, smoothly, and incontrovertibly decide … (M7)

    h.   … they can be produced *quickly* under semi-controlled conditions. (F1)

    i.   The initial state of each word is also determined *randomly*, … (F2)

    j.   This was used to challenge *successfully* the claim of police officers that they had independently remembered, …(F3)

Advanced group
(59)

    a.   *Broadly*, it is agreed that 13) and 14) are true … (I1)

    b.   … students *correctly* perceive recasts as a reformulation … (M2)

    c.   … newspaper articles might *implicitly* combine the feature of … (M4)

    d.   He also *widely* uses metaphors and personifications … (M5)

    e.   … but the focus was later *gradually* shifted to include written data. (M6)

    f.   … the use of marked theme enables the writers to *effectively* convey their meaning in their writing. (M7)

    g.   … teachers or NS provide the correct form of language *implicitly* without saying … (F1)

    h.   … since the researchers interpreted it *differently*. (F2)

    i.   An advertising slogan cannot state *explicitly* a distinction between … (F3)

Intermediate group
(60)

    a.   *Theoretically*, it will bring to light more understanding about learners' interlanguage … (I1)

    b.   This test *directly* links the specifications to the learning objectives … (M2)

    c.   The issue of reliability of a test may *best* be addressed by … (M3)

    d.   … it is *widely* known that the condition for language learning … (M4)

    e.   … it is possible to *accurately* gauge the difficulty of the new test … (M7)

    f.   … it is essential to think *carefully* about the goals of … (F1)

    g.   … the adult cannot learn an L2 *naturally*. (F2)

The classes in which the advanced group nearly approximated the native group were

RESTRICTIVE and INSIGNIFICANT DEGREE adverbs. Examples for RESTRICTIVE adverbs are given.

Native group
(61)

    a.   *Specifically*, it has left intact the notion of language … (I1)

    b.   … that *specifically* reflects the extent to which the active vocabulary … (M2)

    c.   … even if that can *only* be achieved by creating a preposterous imaginary world. (M3)

    d.   … which is *specifically* made for them, … (M4)

    e.   … which perhaps *only* achieved false automatization … (M5)

    f.   … which are designed *specifically* to provide exposure to a range of NNS accents, … (F1)

Advanced group
(62)

    a.   *In particular*, children can speak a foreign language … (I1)

    b.   She *just* wants the students to be aware of … (M2)

    c.   … may *just* be used to resist boredom … (M3)

    d.   … even though it may not be *specifically* taught. (M4)

The intermediate group was on a par with the advanced group where INSIGNIFICANT

DEGREE adverbs were concerned.

Advanced group
(63)

    a.   … and it *hardly* occurs in real life. (M2)

    b.   Translation problems are *rarely* found in this novel. (M4)

Intermediate group
(64)

    a.   … the tense in the main clause *rarely* controls the tense in the subordinate complement. (M2)

    b.   Then, its significance could *hardly* been ignored. (M3)

    c.   … absolute synonyms are to be *rarely* founded in English lexicon … (M4)

4.5.2 Positions of adverbs in different semantic categories: individual results

In this section, the positions in which adverbs in different semantic classes were adjoined are demonstrated for each individual learner. The results in 4.5.1 were confirmed, with the advanced learners generally placing adverbs in more positions than the intermediate learners for the majority of the semantic classes of adverbs. However, some advanced learners were more like their intermediate counterparts, and vice versa, for certain types of adverbs. It is worth noting that the discussion focuses mainly on the categories which were used by at least three learners in each group.

To facilitate the discussion, the semantic classes being used by the two groups of learners are grouped into seven tables as follows.

Table 4.24a: CONCESSIVE, CONSEQUENTIAL, ADVERSATIVE, CONCESSIVE: CONTINUATIVE, and ADDITIVE: CONTRASTIVE adverbs

Table 4.24b: ADDITIVE: SERIAL ORDER, ADDITIVE: UNEXPECTED, EPISTEMIC, NECESSITY, and NON-EPISTEMIC adverbs

Table 4.24c: METALINGUISTIC, REINFORCING, EVIDENTIAL, FACTUAL, TEMPORAL: GENERAL, and TEMPORAL 2 adverbs

Table 4.24d: DURATIVE, SUMMATION/FINAL, SIMULTANEOUS, FUTURE: PROXIMATE, FUTURE: NON-PROXIMATE, and PRETERITE: RECENT adverbs

Table 4.24e: ANTERIOR, IRREGULAR, FREQUENTATIVE, and HABITUAL/GENERAL adverbs

Table 4.24f: REPETITIVE, PERMANENT, COMPLETIVE, PARTIAL, RESTRICTIVE, and EVALUATIVE adverbs

Table 4.23g: VP-RELATED and INSIGNIFICANT DEGREE adverbs.

Table 4.24a Positions of adverbs by learner (CONCESSIVE to ADDITIVE: CONTRASTIVE)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Concessive e.g. *nevertheless*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 4	94.1	-	-	5.9	-	-	-	-	-	-	-	-	2
	Int learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	90.9	9.1	-	-	-	-	-	-	-	-	-	-	2
Consequential e.g. *accordingly, thus, therefore*	Adv learner 1	85.7	-	2.0	12.2	-	-	-	-	-	-	-	-	3
	Adv learner 2	79.8	-	5.5	7.3	0.9	2.8	-	-	-	-	3.7	-	6
	Adv learner 3	89.2	-	-	10.8	-	-	-	-	-	-	-	-	2
	Adv learner 4	70.5	-	7.4	17.9	-	2.1	1.1	-	-	-	1.1	-	6
	Adv learner 5	85.0	-	5.0	10.0	-	-	-	-	-	-	-	-	3
	Int learner 1	98.2	-	-	1.8	-	-	-	-	-	-	-	-	2
	Int learner 2	94.6	-	-	2.7	-	2.7	-	-	-	-	-	-	3
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	87.5	-	8.3	-	-	4.2	-	-	-	-	-	-	3
Adversative *however*	Adv learner 1	77.1	-	8.6	11.4	-	-	-	-	-	-	2.9	-	4
	Adv learner 2	98.7	-	-	-	-	-	-	-	-	-	1.3	-	2
	Adv learner 3	93.5	-	1.6	4.8	-	-	-	-	-	-	-	-	3
	Adv learner 4	95.9	-	-	4.1	-	-	-	-	-	-	-	-	2
	Adv learner 5	70.8	4.2	8.3	8.3	-	-	-	-	-	-	8.3	-	5
	Int learner 1	75.0	-	10.0	15.0	-	-	-	-	-	-	-	-	3
	Int learner 2	95.2	2.4	-	2.4	-	-	-	-	-	-	-	-	3
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	96.2	3.8	-	-	-	-	-	-	-	-	-	-	2
	Int learner 5	92.3	-	1.9	3.8	-	-	-	-	-	-	1.9	-	4
Concessive: continuative *still*	Adv learner 1	-	-	-	75.0	-	25.0	-	-	-	-	-	-	2
	Adv learner 2	-	-	20.0	-	-	80.0	-	-	-	-	-	-	2
	Adv learner 3	50.0	-	-	33.3	8.3	-	8.3	-	-	-	-	-	4
	Adv learner 4	8.3	-	-	58.3	-	25.0	8.3	-	-	-	-	-	4
	Adv learner 5	-	-	-	66.7	-	33.3	-	-	-	-	-	-	2
	Int learner 1	-	-	-	-	-	25.0	75.0	-	-	-	-	-	2
	Int learner 2	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 4	-	-	-	20.0	-	60.0	-	20.0	-	-	-	-	3
	Int learner 5	16.7	-	-	50.0	-	33.3	-	-	-	-	-	-	3
Additive: contrastive *otherwise*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1

Figures reported in percentage for each semantic category

Table 4.24a shows that the number of positions of CONSEQUENTIAL adverbs ranged from two to six for the advanced group but from two to three for the intermediate group. In addition, the advanced learners placed ADVERSATIVE adverbs in two to four positions, whereas the intermediate learners put them in two to three positions. In this regard, intermediate learner 5 was more like the advanced group, adjoining these adverbs in up to four positions. Finally, the range of positions of CONCESSIVE: CONTINUATIVE adverbs was between two and four for the advanced learners but between one and three for the intermediate learners. However, it should be noted that intermediate learner 5 was again the only one in the group who approximated the advanced learners. Examples are given for CONSEQUENTIAL adverbs, with advanced learner 2 and intermediate learner 2 being compared.

Advanced learner 2
(65)
- a. *Therefore*, they are exposed to different accents. (I1)
- b. This paper *therefore* will explore the related issues ... (M1)
- c. Students *therefore* need to learn about a variety of cultures, ... (M2)
- d. It can *therefore* be said that integrating computers into the ... (M3)
- e. Research framework ... of this study is *therefore* based on the ... (M4)
- f. ... goals and objectives may have to be revised *accordingly*. (F2)

Intermediate learner 2
(66)
- a. *Therefore*, the teachers should employ the motivational strategies ... (I1)
- b. This objective marking *therefore* ensures the reliability of ... (M2)
- c. ... it is *therefore* assumed that instrumental motivation is essential ... (M4)

Table 4.24b   Positions of adverbs by learner (ADDITIVE: SERIAL ORDER to NON-EPISTEMIC)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Additive: serial order e.g. *also, first, second*	Adv learner 1	47.9	-	-	33.9	1.7	9.9	-	0.8	-	-	5.8	-	6
	Adv learner 2	59.2	-	-	16.9	3.5	8.5	0.7	0.7	-	0.7	9.9	-	8
	Adv learner 3	59.3	-	0.5	18.7	6.0	12.6	0.5	-	-	-	2.2	-	7
	Adv learner 4	49.7	-	1.3	26.8	2.6	15.0	0.7	0.7	-	-	3.3	-	8
	Adv learner 5	37.1	-	2.9	34.3	-	14.3	-	2.9	2.9	-	5.7	-	7
	Int learner 1	44.2	-	-	39.5	-	-	-	-	-	-	16.3	-	3
	Int learner 2	79.3	-	-	9.0	-	5.4	-	-	-	0.9	5.4	-	5
	Int learner 3	86.4	-	-	9.1	-	4.5	-	-	-	-	-	-	3
	Int learner 4	81.0	-	-	7.1	2.4	2.4	-	-	-	-	7.1	-	5
	Int learner 5	45.9	-	1.4	29.7	-	13.5	-	-	-	1.4	8.1	-	6
Additive: unexpected *even*	Adv learner 2	-	-	50.0	-	-	50.0	-	-	-	-	-	-	2
	Adv learner 3	-	-	16.7	66.7	-	16.7	-	-	-	-	-	-	3
	Adv learner 4	-	-	-	33.3	-	66.7	-	-	-	-	-	-	2
	Adv learner 5	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 1	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 4	-	-	50.0	-	-	50.0	-	-	-	-	-	-	2
	Int learner 5	-	-	-	-	-	-	100.0	-	-	-	-	-	1
Epistemic e.g. *certainly, probably*	Adv learner 1	50.0	-	-	50.0	-	-	-	-	-	-	-	-	2
	Adv learner 2	60.0	-	20.0	20.0	-	-	-	-	-	-	-	-	3
	Adv learner 3	-	-	-	54.5	-	45.5	-	-	-	-	-	-	2
	Adv learner 4	15.4	-	23.1	53.8	-	7.7	-	-	-	-	-	-	4
	Adv learner 5	-	-	-	50.0	-	25.0	-	-	-	-	25.0	-	3
	Int learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 3	33.3	-	50.0	16.7	-	-	-	-	-	-	-	-	3
Necessity e.g. *inevitably, necessarily*	Adv learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 4	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 5	-	-	-	-	-	-	-	100.0	-	-	-	-	1
Non-epistemic *perhaps, possibly*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 3	-	-	-	50.0	-	50.0	-	-	-	-	-	-	2
	Adv learner 4	-	-	28.6	71.4	-	-	-	-	-	-	-	-	2
	Adv learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	33.3	-	-	-	-	66.7	-	-	-	-	-	-	2
	Int learner 4	-	-	-	-	100.0	-	-	-	-	-	-	-	1

Figures reported in percentage for each semantic category

Table 4.24b reveals that for ADDITIVE: SERIAL ORDER adverbs, the number of positions ranged between six and eight for the advanced group but between three and four for the majority of the intermediate learners. Within the latter group, intermediate learners 4 and 5 appeared to be slightly more extraordinary, putting ADDITIVE: SERIAL ORDER adverbs in up to five positions. In addition, the advanced learners adjoined EPISTEMIC adverbs in two to four positions. On the other hand, only one in the intermediate group placed these adverbs in three positions, whereas adjunction in one position was identified for the other two. The positions in which advanced learner 3 and intermediate learner 4 placed ADDITIVE: SERIAL ORDER adverbs are compared below.

Advanced learner 3
(67)

 a. *Additionally*, the integrated writing task requires the test takers to … (I1)
 b. … Thai learners *first* do not pronounce –ed endings. (M1)
 c. Since the relative pronoun co-occurs with a preposition and *also* acts as its object, … (M2)
 d. … other qualities of a good test should *also* be focused on here. (M3)
 e. … the values of the features must *also* agree. (M4)
 f. … language forms especially grammar still *also* receive attention. (M5)
 g. … but they can result in errors *as well*. (F2)

Intermediate learner 4
(68)

 a. *Additionally*, the notion of the Critical Period Hypothesis, …, has strong influences on … (I1)
 b. This *also* happen in the case of synonym pairs … (M2)
 c. … PS rules can *also* be used to provide different structures … (M3)
 d. They can *also* apply these rules when they use the language. (M4)
 e. It can have negative washback to the teaching *as well*. (F2)

Table 4.24c   Positions of adverbs by learner (METALINGUISTIC to TEMPORAL 2)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Metalinguistic *actually, honestly*	Adv learner 1	72.2	-	-	5.6	-	5.6	-	-	-	16.7	-	-	4
	Adv learner 2	77.8	-	-	22.2	-	-	-	-	-	-	-	-	2
	Adv learner 3	55.6	-	-	33.3	-	5.6	-	-	5.6	-	-	-	4
	Adv learner 4	45.5	-	9.1	27.3	-	9.1	-	-	9.1	-	-	-	5
	Adv learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 3	62.5	-	-	-	-	37.5	-	-	-	-	-	-	2
	Int learner 4	84.6	-	-	15.4	-	-	-	-	-	-	-	-	2
	Int learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1
Reinforcing *indeed*	Adv learner 3	-	-	-	-	-	-	-	-	-	-	100.0	-	0
	Adv learner 5	-	-	-	-	100.0	-	-	-	-	-	-	-	0
Evidential e.g. *apparently, evidently*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 2	92.9	-	-	7.1	-	-	-	-	-	-	-	-	2
	Adv learner 3	58.3	-	-	16.7	-	16.7	-	8.3	-	-	-	-	4
	Adv learner 4	16.7	-	-	66.7	-	16.7	-	-	-	-	-	-	3
	Adv learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 2	-	-	-	-	-	50.0	-	-	-	-	50.0	-	2
	Int learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1
Factual *really*	Adv learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 3	12.5	-	-	62.5	-	12.5	-	-	-	-	12.5	-	4
	Adv learner 4	75.0	-	-	-	-	25.0	-	-	-	-	-	-	2
	Adv learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	0
Temporal: general e.g. *now, nowadays*	Adv learner 1	-	-	-	40.0	-	60.0	-	-	-	-	-	-	2
	Adv learner 2	20.0	-	6.7	-	13.3	53.3	-	6.7	-	-	-	-	5
	Adv learner 3	7.7	-	-	30.8	23.1	38.5	-	-	-	-	-	-	4
	Adv learner 4	30.0	-	-	-	-	70.0	-	-	-	-	-	-	2
	Adv learner 5	-	-	-	-	14.3	71.4	14.3	-	-	-	-	-	3
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	33.3	-	-	33.3	-	33.3	-	-	-	-	-	-	3
Temporal 2 e.g. *once*	Adv learner 1	7.1	-	-	7.1	-	64.3	-	-	-	7.1	14.3	-	5
	Adv learner 2	-	-	-	-	-	25.0	-	-	-	-	75.0	-	2
	Adv learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 4	-	-	-	33.3	-	66.7	-	-	-	-	-	-	2
	Adv learner 5	33.3	-	-	-	-	66.7	-	-	-	-	-	-	2
	Int learner 2	-	-	-	-	-	25.0	-	-	-	-	75.0	-	2
	Int learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1

Figures reported in percentage for each semantic category

Table 4.24c shows that the advanced learners put METALINGUISTIC adverbs in two to five positions. The exception to this is advanced learner 5, for whom only one position could be identified. In contrast, the intermediate learners adjoined these adverbs in one to two positions. As for EVIDENTIAL adverbs, adjunction was generally found in two to four positions for the advanced group although advanced learners 1 and 5 placed them in one position. On the other hand, two of the intermediate learners put EVIDENTIAL adverbs in one position, whereas only intermediate learner 2 adjoined them in two positions. Finally, adjunction of TEMPORAL: GENERAL adverbs was found in two to five positions for the advanced learners but in one position for the majority of the intermediate learners. It should be noted that intermediate learner 5 placed them in three positions, surpassing advanced learner 2. Where advanced learner 3 and intermediate learner 4 placed METALINGUISTIC adverbs is shown in (69) and (70).

Advanced learner 3
(69)
    a. *Actually*, Weinreich divides CA. into two versions ... (I1)
    b. ... what *actually* takes place in language classroom. (M2)
    c. Before this test is *actually* administered for the final examination, ... (M4)
    d. ... they should be asked to *actually* write a summary ... (M7)

Intermediate learner 4
(70)
    a. *Actually*, it cannot be clear cut whether the test is reliable ... (I1)
    b. ... since the test *actually* tries to measure reading and writing abilities ... (M2)

Table 4.24d   Positions of adverbs by learner (DURATIVE to PRETERITE: RECENT)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Durative *long*	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
Summation/ final e.g. *finally*	Adv learner 1	87.5	-	-	-	-	12.5	-	-	-	-	-	-	2
	Adv learner 2	71.4	-	-	14.3	-	14.3	-	-	-	-	-	-	3
	Adv learner 3	83.3	-	-	-	-	8.3	-	-	-	-	8.3	-	3
	Adv learner 4	60.0	-	-	26.7	-	6.7	-	-	-	-	6.7	-	4
	Adv learner 5	83.3	-	-	16.7	-	-	-	-	-	-	-	-	2
	Int learner 2	91.7	-	-	-	-	-	-	-	-	-	8.3	-	2
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	75.0	-	-	25.0	-	-	-	-	-	-	-	-	2
Simultaneous e.g. *meanwhile, simultaneously*	Adv learner 1	50.0	-	-	-	-	-	-	-	-	50.0	-	-	2
	Adv learner 2	66.7	-	-	11.1	-	-	-	-	-	-	22.2	-	3
	Adv learner 3	57.1	-	-	14.3	-	-	-	-	-	-	28.6	-	3
	Adv learner 4	28.6	-	-	-	-	14.3	-	-	-	14.3	42.9	-	4
	Int learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 3	25.0	-	-	-	-	-	-	-	-	25.0	50.0	-	3
	Int learner 5	50.0	-	-	50.0	-	-	-	-	-	-	-	-	2
Future: proximate e.g. *immediately, soon*	Adv learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 2	-	-	-	-	-	-	-	-	-	-	100.0	-	1
	Adv learner 4	-	-	-	-	33.3	-	-	-	-	33.3	33.3	-	3
	Int learner 3	-	-	-	100.0	-	-	-	-	-	-	-	-	1
Future: non-proximate e.g. *later, later on*	Adv learner 1	-	-	-	-	50.0	-	-	-	-	-	50.0	-	2
	Adv learner 2	50.0	-	16.7	-	-	-	-	-	-	33.3	-	-	3
	Adv learner 3	16.7	-	-	-	-	33.3	-	-	-	-	50.0	-	3
	Adv learner 4	40.0	-	-	-	-	40.0	-	20.0	-	-	-	-	3
	Adv learner 5	20.0	-	-	-	-	40.0	-	20.0	-	20.0	-	-	4
	Int learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	50.0	-	-	-	-	-	-	-	-	-	50.0	-	2
	Int learner 3	-	-	-	-	-	-	-	-	-	-	100.0	-	1
	Int learner 5	-	-	-	-	-	-	-	-	-	50.0	50.0	-	2
Preterite: recent e.g. *just, recently*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 5	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 4	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1

Figures reported in percentage for each semantic category

Table 4.24d demonstrates that SUMMATION/FINAL adverbs were placed in two to four positions by the advanced learners, but in one to two positions by the intermediate learners. In addition, the former group put SIMULTANEOUS adverbs in two to four positions, whereas the latter adjoined them in one to three positions. Further difference between the two groups could be identified for FUTURE: NON-PROXIMATE adverbs. The range of positions in which these adverbs were placed was between two and four for the advanced learners but between one and two for the intermediate learners. Examples of the positions in which SUMMATION/FINAL adverbs were adjoined are provided for advanced learner 4 and intermediate learner 2.

Advanced learner 4
(71)
    a.   *Lastly*, the translator just replaced Thai cultural-specific terms with … (I1)
    b.   … they *finally* master how to put them together to … (M2)
    c.   … which will *eventually* result in productive vocabulary. (M4)
    d.   … the more receptive words they will know *overall*. (F2)

Intermediate learner 2
(72)
    a.   *Finally*, the report of the study is written. (I1)
    b.   These can bring about the improvement of their competence in communicative interaction *in the end*. (F2)

Table 4.24e   Positions of adverbs by learner (ANTERIOR to HABITUAL/GENERAL)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Anterior *already*	Adv learner 1	-	-	-	8.3	8.3	83.3	-	-	-	-	-	-	3
	Adv learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 3	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 4	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 5	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 1	-	-	-	33.3	-	66.7	-	-	-	-	-	-	2
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 3	-	-	-	25.0	-	75.0	-	-	-	-	-	-	2
	Int learner 4	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 5	-	-	-	50.0	-	50.0	-	-	-	-	-	-	2
Irregular e.g. *occasionally, sometimes*	Adv learner 1	25.0	25.0	-	25.0	-	25.0	-	-	-	-	-	-	4
	Adv learner 2	40.0	20.0	-	40.0	-	-	-	-	-	-	-	-	3
	Adv learner 3	35.3	-	-	11.8	5.9	47.1	-	-	-	-	-	-	4
	Adv learner 4	50.0	5.6	5.6	5.6	-	27.8	5.6	-	-	-	-	-	6
	Adv learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 1	50.0	-	-	-	-	50.0	-	-	-	-	-	-	2
	Int learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	16.7	-	33.3	33.3	-	-	16.7	-	-	-	-	-	4
Frequentative e.g. *often, frequently*	Adv learner 1	-	-	-	18.2	-	72.7	-	-	-	-	9.1	-	3
	Adv learner 2	-	-	-	20.0	-	-	-	-	-	60.0	20.0	-	3
	Adv learner 3	4.5	-	-	45.5	4.5	36.4	-	-	-	4.5	4.5	-	6
	Adv learner 4	-	-	-	21.1	-	68.4	-	-	-	10.5	-	-	3
	Adv learner 5	15.4	-	-	38.5	-	30.8	-	-	-	15.4	-	-	4
	Int learner 2	-	-	-	20.0	-	80.0	-	-	-	-	-	-	2
	Int learner 3	-	-	-	50.0	-	-	-	-	-	50.0	-	-	2
	Int learner 4	-	-	-	-	50.0	50.0	-	-	-	-	-	-	2
	Int learner 5	-	-	-	-	-	9.1	-	-	-	9.1	81.8	-	3
Habitual/ general e.g. *generally, usually*	Adv learner 1	-	-	-	42.1	5.3	52.6	-	-	-	-	-	-	3
	Adv learner 2	31.8	-	-	31.8	-	31.8	-	-	4.5	-	-	-	4
	Adv learner 3	3.0	-	-	27.3	-	69.7	-	-	-	-	-	-	3
	Adv learner 4	3.1	-	9.4	31.3	6.3	46.9	-	3.1	-	-	-	-	6
	Adv learner 5	-	-	-	53.3	-	33.3	-	-	6.7	6.7	-	-	4
	Int learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 2	50.0	-	-	-	-	50.0	-	-	-	-	-	-	2
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 5	22.2	-	-	38.9	-	27.8	-	-	-	5.6	5.6	-	5

Figures reported in percentage for each semantic category

Table 4.24e illustrates that for IRREGULAR adverbs, the range was between three and six positions for the advanced learners, with only advanced learner 5 placing them in one position. In contrast, most of the intermediate learners put IRREGULAR adverbs in one to two positions despite the fact that adjunction was found in up to four positions for intermediate learner 5. Further disparity came from the distribution of FREQUENTATIVE adverbs, which were adjoined in three to six positions by the advanced learners. For the intermediate learners, the number of positions was two. However, it should be reminded that intermediate learner 5 was again the only person in this group who placed FREQUENTATIVE adverbs in three positions. The patterns of adjunction of IRREGULAR adverbs are illustrated for advanced learner 3 and intermediate learner 1.

Advanced learner 3
(73)
     a.   *Sometimes*, the test writer might discover that … (I1)
     b.   They *sometimes* lack enough confidence to cope with … (M2)
     c.   Some of those can *sometimes* be replaced by another, … (M3)
     d.   A restrictive relative clause is *sometimes* known as … (M4)

Intermediate learner 1
(74)
     a.   *Sometimes*, we cannot simply do that. (I1)
     b.   Although, it may *sometimes* seem like there is only one … (M4)

Table 4.24f   Positions of adverbs by learner (REPETITIVE to EVALUATIVE)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Repetitive *again*	Adv learner 2	33.3	-	-	33.3	-	-	-	-	-	-	33.3	-	3
	Adv learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 4	25.0	-	-	-	18.8	37.5	-	-	-	18.8	-	-	4
	Adv learner 5	-	-	100.0	-	-	-	-	-	-	-	-	-	1
	Int learner 3	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	-	-	-	-	-	-	-	-	-	-	100.0	-	1
Permanent *always*	Adv learner 1	-	-	-	50.0	-	50.0	-	-	-	-	-	-	2
	Adv learner 2	-	-	-	50.0	-	50.0	-	-	-	-	-	-	2
	Adv learner 3	-	-	-	16.7	16.7	66.7	-	-	-	-	-	-	3
	Adv learner 4	-	-	-	33.3	33.3	33.3	-	-	-	-	-	-	3
	Adv learner 5	-	-	-	-	-	-	-	100.0	-	-	-	-	1
	Int learner 2	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 4	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1
Completive e.g. *completely, entirely*	Adv learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 2	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Adv learner 3	-	-	-	-	-	66.7	-	-	-	33.3	-	-	2
	Adv learner 4	-	-	-	-	-	20.0	-	-	20.0	20.0	40.0	-	4
	Adv learner 5	-	-	-	-	-	-	-	-	-	50.0	50.0	-	2
	Int learner 1	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 4	-	-	-	-	-	-	-	-	100.0	-	-	-	1
	Int learner 5	-	-	-	-	-	100.0	-	-	-	-	-	-	1
Partial *partially, partly*	Int learner 5	-	-	-	100.0	-	-	-	-	-	-	-	-	1
Restrictive e.g. *merely, only*	Adv learner 1	37.5	-	-	25.0	-	37.5	-	-	-	-	-	-	3
	Adv learner 2	50.0	-	-	16.7	-	16.7	-	-	-	16.7	-	-	4
	Adv learner 3	-	-	-	62.5	12.5	25.0	-	-	-	-	-	-	3
	Adv learner 4	18.2	-	-	50.0	13.6	18.2	-	-	-	-	-	-	4
	Adv learner 5	-	-	-	33.3	-	66.7	-	-	-	-	-	-	2
	Int learner 1	-	-	-	-	-	100.0	-	-	-	-	-	-	1
	Int learner 2	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Int learner 4	50.0	-	-	50.0	-	-	-	-	-	-	-	-	2
Evaluative e.g. *oddly, unfortunately*	Adv learner 1	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Adv learner 3	75.0	-	-	-	-	25.0	-	-	-	-	-	-	2
	Adv learner 4	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 2	100.0	-	-	-	-	-	-	-	-	-	-	-	1
	Int learner 5	100.0	-	-	-	-	-	-	-	-	-	-	-	1

Figures reported in percentage for each semantic category

Table 4.24f shows that two of the advanced learners placed REPETITIVE adverbs in three to four positions, whereas the other two put them in only one position. Adjunction was found in one position for all the intermediate learners. The positions in which PERMANENT adverbs were placed by the advanced learners ranged between two to three although advanced learner 5 adjoined them in only one position, which was also the case for the intermediate group. Regarding COMPLETIVE adverbs, adjunction was found in two to four positions for the advanced group. However, it should be noted that unlike the others within the group, advanced learners 1 and 2 adjoined these adverbs in one position only. Again, this was the tendency for the intermediate group. Finally, RESTRICTIVE adverbs were put in two to four positions by the advanced learners but in one to two positions by the intermediate learners. REPETITIVE adverbs are exemplified, with advanced learner 2 and intermediate learner 4 being compared.

Advanced learner 2
(75)

    a.   *Again*, the same translation technique is applied here for … (I1)
    b.   … which *again* hinders the equivalent effect for the readers of … (M2)
    c.   … if the learners want to enter into the lessons *again*. (F2)

Intermediate learner 4
(76)

    Again, the results from the PS rules can help us see … (I1)

Table 4.24g   Positions of adverbs by learner (VP-RELATED to INSIGNIFICANT DEGREE)

Semantic category	Learner	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
VP-related e.g. *easily, gradually, quickly*	Adv learner 1	4.4	-	-	11.1	-	33.3	-	-	11.1	15.6	24.4	-	6
	Adv learner 2	4.1	-	-	9.6	-	21.9	1.4	1.4	-	27.4	34.2	-	7
	Adv learner 3	-	-	-	12.7	-	36.4	-	-	12.7	12.7	25.5	-	5
	Adv learner 4	1.0	-	-	11.5	-	28.8	-	1.0	2.9	21.2	30.8	2.9	8
	Adv learner 5	4.9	-	-	7.3	-	46.3	-	-	2.4	22.0	17.1	-	6
	Int learner 1	-	-	-	12.5	-	35.0	-	-	-	20.0	32.5	-	4
	Int learner 2	3.2	-	-	-	-	29.0	-	-	-	16.1	51.6	-	4
	Int learner 3	-	-	-	17.6	-	23.5	-	-	-	-	58.8	-	3
	Int learner 4	11.1	-	-	5.6	5.6	16.7	-	-	11.1	22.2	27.8	-	7
	Int learner 5	5.1	-	-	25.4	-	28.8	-	-	-	6.8	33.9	-	5
Insignificant degree e.g. *hardly*	Adv learner 2	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Adv learner 3	-	-	-	100.0	-	-	-	-	-	-	-	-	1
	Adv learner 4	-	-	-	50.0	-	50.0	-	-	-	-	-	-	2
	Adv learner 5	-	-	-	-	-	-	-	-	-	-	94.2	5.8	2
	Int learner 2	-	-	-	-	50.0	50.0	-	-	-	-	-	-	2
	Int learner 4	-	-	-	-	-	50.0	-	-	-	-	50.0	-	2
	Int learner 5	-	-	-	66.7	-	33.3	-	-	-	-	-	-	2

Figures reported in percentage for each semantic category

Table 4.24g demonstrates that the range of positions of VP-RELATED adverbs was between five and eight for the advanced learners but between three and seven for the intermediate learners. However, it is worth mentioning that intermediate learner 4 was the only one within the group who adjoined these adverbs in as many as seven positions. Examples are provided for the use of VP-RELATED adverbs by advanced learner 1 and intermediate learner 1.

Advanced learner 1
(77)
- a. *Broadly*, it is agreed that 13) and 14) are true … (I1)
- b. … and teachers *explicitly* directed children's attention to … (M2)
- c. … particular sounds or phonetic realizations … cannot be *easily* changed. (M4)
- d. … students usually fail to *correctly* perceive the recasts. (M7)
- e. … whereas the same utterance might be interpreted *differently* by different listeners. (F1)
- f. … they tend to pronounce the 'r' *correctly*. (F2)

Intermediate learner 1

(78)

    a.   The authors *appropriately* designed the research procedures ... (M2)

    b.   ... it should be *critically* examined as it has strengths and weaknesses ... (M4)

    c.   ... that is intended to teach students *directly* about English-speaking cultures. (F1)

    d.   ... that a language of wider communication serves both globally and *locally*. (F2)

4.6 Summary

With respect to the range of positions of adjunction (section 4.3.3), the data show that the advanced group places adverbs in all the twelve positions being investigated, on a par with the native group, whereas the positions in which adjunction occurs are less varied for the intermediate group, which put adverbs mostly in nine positions. However, where adjacency is concerned (section 4.3.3), the native group noticeably differs from the advanced group, which, in turn, bears little similarity with the intermediate group. For the natives, adverbs are distributed relatively equally in I1 as well as M2 and M4. The advanced learners, on the other hand, adjoin adverbs mostly in I1, followed by M4 and M2. Among the three groups, the intermediate learners illustrate the highest degree of adjunction in I1 and the lowest extent of the placement of adverbs in M2 and M4. Nevertheless, individual variations are found (section 4.3.4), with some advanced learners performing more similarly to the native group and some intermediate learners becoming more like their advanced counterparts, both in terms of the range of positions and the adjacency condition. Also shown is that the results cannot, or can only partially, be attributed to the differences in the proportion of the semantic types of adverbs used by each group since this is generally the same for all the groups and where disparities are found, they are confined to the adverbs with a very low frequency of occurrence (section 4.3.2).

Analysis of the development of the two groups of learners (section 4.4.1) reveals that the advanced group undergoes a slow transition. Both the range of positions of adjunction and the degree of adjunction in I1, M2, and M4 do not change drastically. In addition, even at the end of the periods being explored, the percentage of the placement of adverbs in I1 and M4 is anything but similar to that found for the native group although a parallel between the two groups can be drawn in terms of adjunction in M2. A slightly different picture emerges for the intermediate group. The range of positions becomes wider. Furthermore, the extent of adjunction in M4 increases sharply, despite the fact that no significant change can be found for the placement of adverbs in I1 and M2. Regardless of its more dramatic developmental pattern, the intermediate group is still not comparable to the advanced group at the end of stage 3.

However, when the subjects are examined individually (sections 4.4.2 and 4.4.3), the analysis shows that the higher degree of emergence of new positions found for the intermediate group is actually misleading since it is the advanced learners who attempt to place adverbs in more positions than the intermediate learners. Regarding the degree of adjunction in I1, M2, and M4, however, the individual results correspond with the group results, with the intermediate learners' language varying to a larger degree. Nevertheless, it is also found that gradual transition does not apply to all the advanced learners insofar as not all the intermediate learners can be characterised by drastic development. Additionally, at the end of the periods under investigation, some advanced learners more closely approximate the native group than others, and, in turn, some intermediate learners appear to be more on a par with the advanced learners althoug'. differences between the three groups can still generally be found in both aspects.

Further investigation shows that the lexical parameter also plays a part in the acquisition of where adverbs can adjoin in English (section 4.5). Adverbs in Thai are syntactically

underspecified in comparison with ones in English. When this is transferred, English adverbs will be underrepresented in the interlanguage of Thai learners. The findings indicate that this is the case, as evidenced by the fact that the range of positions in which adverbs in the majority of the semantic classes being explored are placed is broader for the native group than for the advanced group and the intermediate group, respectively (section 4.5.1). It should nevertheless also be pointed out that the advanced group nearly equals the native group, and the intermediate group is almost on a par with the advanced group, for some semantic categories. When individual differences are taken into consideration (section 4.5.2), it is revealed that some advanced learners place adverbs in certain semantic types in far more positions than others and that one or two intermediate learners perform nearly the same as the advanced learners.

CHAPTER V

DISCUSSION AND CONCLUSION

The present study concerns the syntactic variation of English adverbs in the interlanguage of Thai learners, focusing on positions of adjunction, e.g. *(Possibly,) They (possibly) may (possibly) have (possibly) been sent to London*. The acquisition of adverbs has aroused my interest because it has hardly been investigated in SLA research. With this dearth of work comes the difficulty of locating the relevant literature. After an extensive review, however, it has been found that the range of positions of adjunction is an interesting issue to explore further for various reasons. First, it has been examined in only three studies (Johansson and Dahl, 1982; Selinker, 1969; White, 1989a). Furthermore, these articles investigated learners whose L1s share certain morphological and syntactic similarities with the L2, i.e. French and Norwegian learners of English. Their findings are thus not directly applicable to Thai learners, whose L1 is different from English, both morphologically and syntactically. Moreover, the only explanation which has been proposed to account for the acquisition of adverbs was in terms of the adjacency parameter (White, 1989a). Finally, how Thai learners acquire English adverbs has never been investigated.

In this dissertation, production data from five MA and five PhD students were analysed over a period of two years, divided into four stages (sections 3.1 and 3.2). The corpus size was around 150,000 words for the first group of subjects, and around 200,000 words for the second (section 3.3). Also, a baseline corpus of approximately 240,000 words was formed from the articles published in the Applied Linguistics journal (section 3.3). From this, a sub-corpus was developed for comparison with the interlanguage of the five learners in each group at a single point in time or with the interlanguage of a particular learner across time (section 3.3).

With respect to the range of positions, only adjunction relative to the clause was explored, including both parenthetical adverbs, e.g. *He has, cleverly, answered the question*, and integrated adverbs, e.g. *He has cleverly answered the question* (sections 1.6.1 and 1.6.2). These adverbs were in the form of either morphologically unified adverbs, e.g. *quickly, enormously*, or lexical-phrase adverbs, e.g. *as a consequence*, but not adverbials, e.g. *She went to England to see her brother* (section 1.6.4). The investigation classified twelve positions of adjunction, for which the three groups of subjects were analysed in relation to one another, as follows (section 4.3.1).

I1 = Adv + S + V
e.g. ... *and conceptually, they function through English.*

I2 = XX + Adv + S + V
e.g. *To be successful, however, it had to be aligned with ...*

M1 = S + Adv + Aux
e.g. ... *the love of role play indeed may be re-exposed ...*

M2 = S + Adv + V
e.g. *Mellow carefully distinguishes the various forms of items ...*

M3 = S + Aux1 + Adv + Aux2
e.g. *They may, however, be used creatively, ...*

M4 = S + Aux + Adv + V
e.g. *Humour ... is clearly appreciated by the participants ...*

M5 = S + Adv + Adv + V
e.g. *It hence typically focuses on the problems of design, ...*

M6 = S + Aux + Adv + Adv + V
e.g. ... *Krashen's monitor model was often rightly criticized ...*

M7 = to + Adv + V
e.g. *LHRs advocates need to consistently bear in mind the distinction ...*

F1 = S + V (+ O) + Adv + XX
e.g. ... *emergentist thinking should be applied consistently to all areas ...*

F2 = S + V (+ O + XX) + ADV
e.g. ...; *otherwise, they would have been used more frequently.*

F3 = S + V + Adv + heavy NP O (i.e. *heavy NP shift*)

e.g. *An advertising slogan cannot state <u>explicitly</u> a distinction between ...*

5.1 The adjacency condition and the range of positions of adjunction

To recall, White (1989a) proposed the subset-superset relations to explain the placement of adverbs in French by English learners (section 2.3.6). With its [+strict adjacency] setting, English is a subset of French, a [+/-strict adjacency] language. Specifically, English prohibits adjunction between the governing verb and its direct object, making sentences like **Mary prepared <u>quickly</u> the dinner* (p. 155) ungrammatical. This, however, is allowed in French, as in *Marie a preparé <u>rapidement</u> le repas* (p. 156). White explained that transfer of the [+strict adjacency] parameter, where English learners of French were concerned, would not result in outright errors, but rather the use of a more limited range of positions permitted by French. This also seems to happen with Norwegian learners of English, who were more cautious with adjunction in the position between the subject and the verb than they should have been, thus placing adverbs in this position to a much less extent than the control group (Johansson and Dahl, 1982) (section 2.3.6).

Being the only framework in this area of inquiry, the adjacency parameter has thus been applied in the present study to investigate the range of positions of adjunction employed by Thai learners. Albeit being more restrictive than French in that it does not allow adjunction in the position between the verb and the object, English has a more general grammar than Thai. Specifically, English permits adjunction in various positions within the clause, whereas Thai grammar rules out clause-medial adjunction (section 2.3). The positions of adjunction possible in both languages are clause-initial and clause-final, as exemplified below.

(1)   English

    a.   *Possibly*, they may have been sent to London.
    b.   They *possibly* may have been sent to London.
    c.   They may *possibly* have been sent to London.
    d.   They may have *possibly* been sent to London.
    e.   They may have been sent to London, *possibly*.
        (Adapted from Quirk *et al.*, 1985: 490f, cited in Hoye, 1997: p. 148)

(2)   Thai

    a.

dang0nan3	pra1den0	maj2chaj2		khxx2	rvvang2
thus	issue	not		only	matter
kh@@ng4	khwaam0suuaj4		txx1	kiiaw1	kap1
of	beauty		but	involve	with
khuuam0txxk1taang1	thaang0chaat2phan0				
difference	racial				

        '*Thus*, the issue is not only a matter of beauty but also that of racial differences.'

    b.

t@@n0nii3	raw0	thuuk1		kam0not1	haj2	t@@ng2
now	we	PSV		force	give	must
svv3	nam3taan0	naj0	raa0khaa0	13-14	baat1	
buy	sugar	in	price	13-14	baht	

        '*Now*, we are forced to buy sugar at the price of 13-14 baht.'

    c.

txx1	kh@@2thet3cing0	nan3	man0	mii0	kaan0tii0khuuam0
but	fact	that	it	have	interpretation
khaw2	maa0	kiiaw1kh@@ng2	**jaang1nxx2n@@n0**		
enter	come	involve	**certainly**		

        '… but that fact *certainly* involves interpretations.'

    d.

nvva3kaj1	lx3	khaj1	ca1	t@@ng2	mii0
chicken	and	egg	will	must	have
raa0khaa0	suung4		khvn2	**jaang1liik1liiang2maj2daj2**	
price	high		up	**inevitably**	

        'Chicken and eggs will *inevitably* become more expensive.'

In (1), *possibly* adjoins in the clause-initial position, between the subject and the verbal construction, between the modal auxiliary *may* and the auxiliary *have*, between the auxiliary *have* and the tensed auxiliary *been*, between the tensed auxiliary *been* and the finite main verb *sent*, and in the clause-final position. On the other hand, in (2a) and (2b), the adverbs *dang0nan3*

'thus' and *t@@n0nii3* 'now' adjoin in the clause-initial position, while in (2c) and (2d), the adverbs *jaang1nxx2n@@n0* 'certainly' and *jaang1liik1liiang2maj2daj2* 'inevitably' adjoin in the clause-final position.

Thus, English is a [+/-strict adjacency] language, whereas Thai is characterised by the [+strict adjacency] setting. Viewed in terms of the subset-superset relations, the grammars of the two languages can be diagrammed as in (3).

(3)

English grammar
[+/-strict adjacency]

Thai grammar
[+strict adjacency]

(Adapted from White, 1989b: pp. 142, 166)

From the foregoing discussion, the relationships between L1 transfer and adverbial adjunction in the L2 seem to occur on the syntactic level. White (1989a) obviously takes this as such when she claims that if the [+strict adjacency] parameter of the L1 is not reset to the [+/-strict adjacency] setting associated with the L2, conservatism as to the range of positions will be observed. She further explains that since the L2 grammar properly contains the grammar of the L1, parameter resetting is based on positive evidence (White, 1989b). That is, failure of the L1 grammar to account for the input will trigger L2 learners to reconstruct their interlanguage to include the

grammatical aspects of the L2 not available in the L1. The L2 input can contain something like (4), reproduced from (1).

(4)

	a.	*Possibly*, they may have been sent to London.
	b.	They *possibly* may have been sent to London.
	c.	They may *possibly* have been sent to London.
	d.	They may have *possibly* been sent to London.
	e.	They may have been sent to London, *possibly*.

(Adapted from Quirk *et al.*, 1985: 490f, cited in Hoye, 1997: p. 148)

For the lexical category in question, Thai learners' acquisition of the range of positions of adjunction in English, according to White's (1989b) proposal, will proceed as follows. When they see or hear sentences like (4a) and (4e), they will know that adjunction can occur clause-initially and clause-finally in English, which happens to correspond with the pattern in Thai. However, sentences like (4b) to (4d) are also available in the L2 data, making the learners hypothesise that adjunction is possible in the positions between the subject and the verbal construction and between any two auxiliaries, and perhaps in the other clause-medial positions. As more such sentences are observed, their hypothesis will eventually be confirmed, and the [+strict adjacency] parameter of the L1 will thus be reset to accommodate the more general [+/-strict adjacency] setting of the L2[1]. If this line of analysis is correct, what can be expected is that parameter resetting will lead to a broader range of positions of adjunction in the use of English adverbs by Thai learners.

But reality bites. Although the range of positions of adjunction in the interlanguage of Thai learners is almost as wide as that in the language of native speakers of English (section 4.3.3), differences between the three groups are remarkable in terms of the adjacency condition. The natives place adverbs more or less to the same extent in I1, M2, and M4 (section 4.3.3). The

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[1] This does not entail that instructional L2 input does not play any role but just focuses on the interplay between naturalistic data and SLA (cf. Trahey, 1996; Trahey and White, 1993; White, 1991b, 1992, among others, for the (in)significance of L2 instruction).

advanced group, on the other hand, adjoins adverbs in I1 twice as much as they do in M2 and M4 (section 4.3.3). For the intermediate group, the degree of adjunction in I1 is the highest, more than twice as much as that in M2 and M4 combined (section 4.3.3). In other words, the [+strict adjacency] setting of Thai is only partially reset. What, then, could account for this not-so-favourable situation?

In theory, parameter resetting seems straightforward. Once learners are exposed to positive L2 data, their interlanguage grammar is restructured to divert from the L1 setting and then let in that of the L2. In reality, however, the process is not as simple as that. Ayoun (2005) suggests that English is a mixed language, in which both settings of a parameter are instantiated, i.e. [+/-strict adjacency][2]. Thus, Thai learners, negatively affected by the [+strict adjacency] parameter of the L1, have to distinguish English as a [-strict adjacency] language for adjunction between the subject and the verb, between an auxiliary and a main verb, between two auxiliaries, for example. Furthermore, they have to learn that English is also a [+strict adjacency] language when it comes to adjunction between the verb and the object. Because of this overlap in parameter settings, the SLA process is slowed down, with Thai learners adopting a more conservative L2 value, i.e. leaning towards the [+strict adjacency] value of the language. With regard to this, Schwartz points out that:

> "… Primary linguistic data do not come labelled as to which parameter they are intended to be evidence for; it is thus possible that primary linguistic data do not always lead to a unique analysis on the part of grammars. If this is so, … a developing grammar may (initially) adopt a different analysis for a type of input data" (Schwartz, 1996: p. 216, cited in Ayoun, 2005: pp. 41-42).

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[2] Ayoun (2005) discusses this with regard to verb-raising, but the idea is applied here.

Indeed, positive evidence in terms of the range of positions of adjunction can greatly obscure the binary settings of English. Ayoun (2005) and Inagaki (2002) stress the significance of frequency and clarity of L2 data in SLA, the two criteria which adverbs do not seem to meet. First, although sentences like those in (4) above are available, they are very infrequent. As can be seen from 4.2, adverbs occur only around thirteen to fifteen times per 1,000 words. It is thus more likely for L2 learners to find such a sentence as in (5) below than those in (4).

(5)   They may have been sent to London.
            (Adapted from Quirk *et al.*, 1985: 490f, cited in Hoye, 1997: p. 148)

Furthermore, provided that adverbs are distributed mainly in three positions, I1, M2, and M4, as shown in the data, there will be just around ten adverbs out of 1,000 words to suggest that one of the parametric values of English is [-strict adjacency]. Second, sentences like (6a) and (6b), reproduced from (4a) and (4b), may even confuse L2 learners about which setting, [+strict adjacency] or [-strict adjacency], is actually the value associated with English. In case they know that either is possible, they may even wonder further which is the better value.

(6)
        a.   *Possibly*, they may have been sent to London.
        b.   They *possibly* may have been sent to London.
                (Adapted from Quirk *et al.*, 1985: 490f, cited in Hoye, 1997: p. 148)

Evidence of the relationship between the poverty and/or complexity of the L2 input and the delay in parameter setting is not rare in the literature. Montrul (2001), for example, explored Spanish learners' acquisition of transitivity alternation in English *manner-of-motion verbs* (e.g. *march, walk*), as shown in (7) and (8).

(7)   English
     a.   The soldiers marched.
     b.   The captain marched the soldiers to the tents.

(8)   Spanish
     a.   Los soldados marcharon.
     b.   *El capitán marchó a los soldados hasta el campamento.
          the captain marched to the soldiers to the camp
          'The captain marched the soldier to the camp.'

                              (Adapted from Inagaki, 2002 : p. 7)

In English, manner-of-motion verbs can be used intransitively, as in (7a). In addition, a transitivity alternation is allowed when there is a PP, as in (7b). Spanish, in contrast, permits only (8a). In other words, Spanish is a superset of English in terms of argument structure. Thus, in order for them to acquire the argument structure of English, Spanish learners, being exposed to positive evidence suggesting that (7b) is possible, must have their grammar reset to allow the superset L2 value. Montrul (2001) found, unfortunately, that 98% of seventeen intermediate Spanish learners rejected sentences like (7b). The failure of the Spanish learners to take in the superset grammar of English, as Inagaki (2001) points out, can be attributed to the fact that transitivity alternations are not productive in English. In other words, positive evidence is not frequent enough to trigger parameter resetting.

In his own study, Inagaki (2002) investigated Japanese learners' acquisition of English manner-of-motion verbs (e.g. *swim, run, jump*) with *locational/directional PPs* (e.g. *under, behind, in*), as illustrated in (9).

(9)
     a.   John swam under the bridge.   (locational/directional)
     b.   John ran behind the wall.   (locational/directional)
     c.   John jumped in the water.   (locational/directional)
                              (Adapted from Inagaki, 2001: p. 13)

(9a) can mean either *John swam under the bridge* (locational) or *John swam to a spot under the bridge* (directional), and this applies to (9b) and (9c). These dual readings are not possible in Japanese, in which only locational readings are allowed, as shown in (10).

(10)

    a.   John-wa   hasi-no   sita-de   oyoida (locational only)
          John-TOP bridge-GEN   under-at   swam
          'John swam under the bridge.'

    b.   John-wa   kabe-no   usiro-de   hasitta (locational only)
          John-TOP wall-GEN   back-at   ran
          'John ran behind the wall.'

    c.   John-wa   puuru-no   naka-de   tonda (locational only)
          John-TOP pool-GEN   inside-at   jumped
          'John jumped in the pool.'

For example, (10a) can mean only *John swam under the bridge* (locational), not *John swam to a spot under the bridge*. Thus, the argument structure of English is a superset of that of Japanese, and sentences like those in (9) should suggest to Japanese learners that manner-of-motion verbs can have directional readings in English. The results indicate that 70.24% of 35 Japanese learners associated the examples in (9) with only locational readings, whereas only 21.67% interpreted them as having both locational and directional readings. In other words, exposure to positive evidence did not lead to a complete acquisition of the L2 setting. Inagaki (2002) argues that this could be due to the infrequency of manner-of-motion verbs co-occurring with PPs having both readings. Furthermore, even when the L2 data in this regard are available, it would be difficult for the Japanese learners to distinguish which sentences have locational readings and which have directional readings since either interpretation is possible in English. All in all, the situation confronting the Japanese learners in Inagaki's (2002) study is similar to that challenging the Thai learners in this study; that is, resetting from the L1 to the L2 parameter occurs in the dearth and complexity of the L2 input. This perhaps explains why the Thai learners

still seem conservative with regard to the [-strict adjacency] value of English, placing most adverbs in I1 (section 4.3.3).

It should be noted that the findings in the present research also suggest that with enough L2 data, the Thai learners will probably approximate the natives. This claim is made on the grounds that the degree of clause-medial adjunction is stronger for the advanced group than for the intermediate group (section 4.3.3). Of course, proficiency level cannot strictly be equated with L2 exposure. Some L2 learners may have been exposed to an ample amount of L2 input but have not progressed far in their acquisition. On the other hand, some L2 learners may have mastered the setting associated with the L2 despite the limited amount of L2 input available for them. However, as Ayoun (2005: p. 42) notes, advanced L2 learners "are more likely to have adopted the L2 value of the parameter" because of their "longer exposure to the L2 than intermediate learners".

5.2 Development in terms of the adjacency condition and the range of positions of adjunction

The findings in 4.3 and 4.4 demonstrate that the range of positions of adjunction is broader over time. Although the group data, especially those for the advanced group, do not seem suggestive of any evidence of development, the individual results reveal that new positions are attempted in later stages. In addition, the range of positions used by the advanced learners, and a few intermediate learners, is getting close to that used by native speakers despite the fact that disparity between the three groups can still be seen. In other words, Thai learners' interlanguage is becoming increasingly complex where adverb placement is concerned, with the possibility of becoming native-like. This phenomenon is not novel but the interpretations

emerging from it often vary, thus making it worth mentioning how interlanguage development is perceived by different linguists.

Nemser (1971), for example, explains this in terms of 'approximative system' (p. 55). According to him, SLA involves three linguistic systems: the L1 system, the L2 system, and an approximative or interlanguage (IL) system. Starting from the parameter associated with the L1, the approximative systems successively form an increasingly complex series, which, as the term approximative suggests, *might* finally approach the L2 setting, a view which Corder (1977) shares. This is shown in the following diagram.

(11)
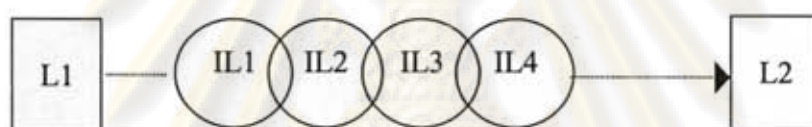
Adapted from James (1980: 5)

However, Selinker (1975) strongly opposes the above belief, saying that:

> "An assumption held by some researchers working in the area of the organisation of second language speech–but not by this author–is that the learner's language is (a) 'directional' in that it evolves in stages which closer and closer 'approximate' the norm of the TL[3], and (b) that these stages are necessarily discrete" (p. 48; emphasis in original).

It should be noted that Nemser is specifically referred to in the above quote. Unfortunately, Nemser (1971) seems to be misunderstood for he makes it clear in his paper that the linguistic system which L2 learners use in their attempt to communicate in the L2, i.e. the approximative system, is 'deviant' (p. 55) and distinct from both the L1 and the L2. In addition, although he does not reject the possibility of a perfect mastery of the L2, he stresses that such a case is exceptional with the keyword being *might*, particularly in the case of adult L2 learners. Finally,

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[3] TL = target language or L2

nowhere in his article does he claim that interlanguages at different stages of development are discrete; in fact, he even implies that they form developmental continua (Corder, 1977; also Corder, 1976) when he refers to interlanguages as forming 'an evolving series' (p. 56), with 'evolving' taken in the strictest sense. Regardless of these contradictions, one view certainly shared by both is that it is rare to find a case in which L2 learners' interlanguage representation approaches the state of being native-like. This is somewhat contrary to what is found in the present research, which requires an explanation.

White (2003) takes a more non-monolithic view regarding the interlanguage representation of L2 learners, pointing out that it "might be fully native-like, near-native, or non-native (in varying degrees)" (p. 242). By saying this, she does not use a fixed label characterising L2 learners as such and such. Instead, there is an equal chance for them to reach any of these states. On top of this, empirical evidence suggests that full acquisition of some aspects of the L2, particularly by adult learners, may not be as atypical as has once been thought. For example, White and Genesee (1996, cited in White, 2003) tested the *Subjacency Principle* in the interlanguage of French adult L2 speakers of English. According to the Subjacency Principle, a *wh*-phrase is barred from crossing more than one bounding node, i.e. NP and IP in English, at a time, as shown in (12).

(12)

*This is the boy [$_{CP}$ who$_i$ [$_{IP}$ Mary described [$_{NP}$ the way [$_{CP}$ t$_i$ that [$_{IP}$ Bill attacked t$_i$]]]]]

(12) is ungrammatical because the *wh*-phrase *who* has crossed a contiguous NP and IP. White and Genesee found that the subjects who had started learning English during either childhood or adulthood performed similarly to native speakers on both grammatical and ungrammatical sentences. Furthermore, the time that each group spent on each sentence, i.e. response time, was

not different. Several studies reviewed in White (2003) (e.g. John and Newport, 1991) and elsewhere (e.g. Lardiere, 1998a, 1998b), and also the present study, point to this likelihood of near-native attainment.

Also worth further discussion is the fact that the range of positions of adjunction is more restrictive for the majority of the intermediate learners (and some advanced learners) than for the natives since this might suggest that it is unlikely that they will attain a native-like representation of the L2 grammar . That is, they are at such an advanced level that further development may not be possible. In other words, their interlanguage may have fossilised, i.e. have ceased to develop (e.g. Selinker, 1972, 1978). However, fossilisation does not seem to be the case here for a number of reasons. First, as White (2003) notes, proficiency level is often mistakenly associated with a steady state: "a person might be at a low level of L2 proficiency with an interlanguage grammar already at the steady state; a learner might be at a high level of proficiency and yet not at the endstate …" (p. 244). White's (2003) remarks correspond with Selinker (1975), who adds that fossilisation can be characterised by stability, whereas instability shows signs of further change in an interlanguage system. In view of this, the learners in the present study will probably undergo a period in which their interlanguage develops into a type of representation which is different from, hopefully more complex than, that shown here. Evidence for this comes from their attempts to place adverbs in new positions in the later stages of investigation, as shown in the individual results.

The matter becomes more pessimistic, however, when the learners' treatment of the [+/-strict adjacency] of the L2 is taken into account. The data suggest that their degree of adjunction in certain positions somehow does not change much, especially where the advanced learners are concerned (section 4.4). In other words, stability can be observed in this regard. On

face value, this does not directly involve the complexity of interlanguage in relation to the L2 in the sense that adjunction is still found in those positions, i.e. their interlanguage bears similarity with the L2 in terms of complexity, but what differs is just the extent to which adverbs are placed there. That is, the range of positions in the interlanguage of the learners is not different from that of the natives, so why should the degree of adjunction reflecting the [+strict adjacency] of Thai be a concern?

Nevertheless, if the notion of approximative system is to be taken seriously, the learners' interlanguage is apparently not similar to the language of the natives, and thus this lacklustre situation should be addressed. However, the picture is not as sombre as it might at first appear. Sharwood Smith and Truscott (2005) suggest that parameter resetting does not at once remove the L1 value. This implies that there will be a period in which a drastic change is not found in L2 learners' interlanguage, which is not exactly the same as that further development cannot at all be expected (section 5.3 below). Indeed, the different degrees of adjunction in the clause-initial and the clause-medial positions between the advanced learners and the intermediate learners, with the former approximating the natives more than the latter, point to the possibility that the intermediate learners will become more like the advanced learners, and the advanced learners will resemble the natives even more, at certain points in their learning stage.

5.3 Developmental pattern: gradual or drastic?

The findings illustrate that the learners' interlanguage development is both gradual and drastic (section 4.4.2). For example, new positions of adjunction emerge slowly, particularly in the case of the intermediate learners. However, the degree of adjunction in different positions goes up and down dramatically, which also happens to be more remarkable where the intermediate learners are concerned, although the degree of adjunction in certain positions becomes relatively stable in the later stages. In other words, their interlanguage can be characterised in terms of stages and continua at the same time (Sharwood Smith and Truscott, 2005).

To recall, the discussion in 5.2 shows that there seems to be tension in how to describe L2 learners' developmental pattern (Sharwood Smith and Truscott, 2005). Nemser (1971), according to Selinker (1975), takes L2 learners' interlanguages as forming stages. Selinker (1975), in contrast, depicts them in terms of continua. Apparently in agreement with Selinker, Corder (1977) calls the interlanguage of L2 learners 'a developmental continuum' (p. 90). Further complicating the problem, Sharwood Smith and Truscott (2005) note that those who ascribe interlanguage development to 'gradual growth' perceive "a sequence of discrete stages" as "an artificial way of organising learner data imposed by researchers simply as a matter of convenience" (p. 219). That is, to those in the 'gradual' camp, researchers in the 'stage' camp often disregard gradual movement because they see it as noise in the data. Sharwood Smith and Truscott (2005) also point out, however, that mainstream SLA studies show that change occurs in the form of "a stepwise movement from one rule system to another" (p. 219), i.e. interlanguages indeed form stages. So, which in fact provides a better description of how L2 learners' interlanguage develops over time?

The answer is both are equally legitimate. In their paper, Sharwood Smith and Truscott (2005) discuss at great length why interlanguage development should be taken as forming both stages and continua. On one hand, a focus on only the former amounts to overlooking the gradual nature of development which has much been seen in the literature to delineate L2 learners' interlanguage. Several studies (e.g. Dittmar, 1981; Klein, 1981; Meisel, 1987; Schuumann, 1987) reviewed in Sato (1990) as well as her own research show that the acquisition of *past time reference (PTR)*, i.e. marking past time with morphological (e.g. *cooked*) and lexical (e.g. *slept*) means, progressed gradually, if at all. More recently, the results of the series of studies on verb-raising[4] (e.g. Lardiere, 1998b; Trahey, 1996; Trahey and White, 1993; White, 1991a, 1991b; Yuan, 2001) also reflect a gradual change. For example, there is little sign of development shown in L2 learners at a particular state, most often the initial state, even when an abundance of positive evidence is provided to them that verb-raising is ungrammatical in English (e.g. White, 1991a, 1991b).

On the other hand, Sharwood Smith and Truscott (2005) also stress the possibility of depicting L2 learners' interlanguages as discrete stages of development, explaining that "structural change naturally suggests movement from one system to another one" (p. 221). For example, Spanish has the pro-drop parameter, i.e. *Is raining* is grammatical in the language, whereas English has the opposite setting. According to them, suppliance of expletives like *there* and *it* in the subject position by Spanish learners of English, despite the fact that this may not be completely target-like, shows that a structurally different grammar is emerging. In other words, the grammar in which the subject is dropped altogether is at stage G, closer to the L1, while that in which the expletives are supplied is at stage G+1, more similar to the L2. This discrete pattern

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[4] Verb-raising refers to the movement of the verb from V to I, leading to the ungrammatical English order SVAO, e.g. *Tom ate quickly the cookies* (cf. section 2.2.3).

of change can also somehow correlate with proficiency level. Although the studies on verb-raising cited above do not reveal any sign of restructuring of the interlanguage grammar, L2 learners, after reaching a certain proficiency level, say, the intermediate level, have acquired the knowledge regarding its ungrammaticality (e.g. Lardiere, 1998b; Yuan, 2001). That is, their grammar at proficiency level X is qualitatively different from that at proficiency level X-1, i.e. a lower level of proficiency. Integrating both stages and continua into the characterisation of interlanguage development, Sharwood Smith and Truscott (2005) present the following diagram.

(13)

(Sharwood Smith and Truscott, 2005: p. 222)

The figure shows that the pattern of interlanguage development can be both gradual and drastic. There are periods in which it takes the form of a continuum, showing no or little sign of change. However, there are also periods in which change is dramatic, with the representation of the L2 grammar noticeably moving from one stage to another. In addition, it is likely that the gradual change accumulates and then "triggers a relatively swift, 'catastrophic' restructuring of the system" (Lightfoot, 1999, cited in Sharwood Smith and Truscott, 2005: p. 223). Finally, the

unequal interval between each pair of vertical lines shows that the time taken for the grammar to restructure can vary across different stages.

It might be asked how the above discussion is relevant to the findings in the present research. After all, the works cited deal with the issues which are obligatory in English like past time marking, the presence of the subject, and the absence of verb-raising. In contrast, this study concerns adverbs, which are well known for their being notoriously optional; L2 development will proceed either with or without them. Then, one might argue that the gradual nature of development with respect to the acquisition of adverbs may be only a reflection of their optionality. That is, the development is gradual because adverbs are rarely needed. Another argument which might arise is that the drastic upward and downward movement of the intermediate learners' interlanguages in terms of the degree of adjunction in different positions, i.e. their interlanguages do not form a predictable discrete stage, is due to the fact that adverbs are not obligatory. Thus, stability, in the sense not related to fossilisation, may not be expected. All in all, this basically means that it will be very difficult, if not impossible, to systematically describe L2 learners' interlanguage development, as far as the acquisition of adverbs is concerned. However, as can be seen, the acquisition of past time marking, for instance, which is obligatory in English, is also gradual. Furthermore, L2 learners' development in this regard can in some sense be described as unpredictable. For example, Sato's (1990) research on past time marking, in addition to showing that it emerges gradually, demonstrates a case of inconsistent movement; the degree to which her subjects marked past time fluctuated over the periods being investigated. In short, grammatical status, whether obligatory or optional, does not matter; what does here is how to come to an understanding of the development of L2 learners' grammar in the light of the present data.

5.4 Individual variations

What emerges from the findings in 4.3 and 4.4 is that individual learners at a particular level of proficiency are not similar in their competence and performance in the L2. For instance, while the majority of the advanced learners are less constrained by the [+strict adjacency] setting of Thai, one or two in the group less often place adverbs clause-medially, more like the majority of the intermediate learners. Despite this fact, one or two of the intermediate learners approximate the advanced group, putting fewer adverbs in I1 and more adverbs in M2 and M4 than their peers. A similar tendency can be determined in terms of the range of positions of adjunction. With regard to developmental pattern, the issue of individual differences is also no less striking. A few advanced learners are more like their intermediate counterparts where their interlanguage development is concerned, and vice versa. Furthermore, they seem to be variously affected by the setting of Thai in different stages of learning. For example, learner 3 in the intermediate group adjoined less than 5% of adverbs in M4 in stage 1, but this increased to more than 20% in stage 2 and then dropped to around 5% in stage 3. In other words, variations can be found not only across different individuals but also within an individual.

This peculiarity is not unusual, however, as it is reflected in the term 'idiosyncratic dialect', which has long been coined by Corder (1967) to refer to four types of language: the language of poems, the speech of aphasics, the language of infants learning their L1, and the language of L2 learners (pp. 16-17). What is of interest here is the last type, which, he further explains, "is regular, systematic, meaningful, i.e., it has a grammar, and is, in principle, describable in terms of a set of rules of the target social dialect" (p. 17). L2 learners' language is also a dialect in the sense that it is shared by other learners with "similar cultural background, aims or linguistic history" (p. 19). However, together with the 'dialect' notion comes the word

'idiosyncratic', suggesting that Corder envisages L2 learners' language not only to converge at some point but also to diverge at the same time. This view is also taken by Selinker (1975), who noticed that English children learning French in Canada produced within two minutes three different versions of "I like …" in French, J'ai aime, I'aime, and then Je aime. However, they were on the whole not very different from one another.

If proficiency level or the degree of exposure to the L2 (section 5.1), is a variable, why L2 learners' interlanguage should be systematic suggests itself. What deserves further discussion is why it should diverge. Different linguists come up with different explanations. This has been neatly summarised in Richards and Sampson (1974), Tarone (1988), and more recently Preston (1996) and Preston and Bayley (1996). For example, Richards and Sampson (1974: pp. 5-11) mentioned at least five factors influencing individual variations: L1 transfer, intralingual interference, sociolinguistic situation, modality, and age. L1 transfer refers to the effects of the L1 on the acquisition of the L2. Intralingual interference refers generally to the difficulty of (the aspects of) the L2 being learnt. Sociolinguistic situation includes various variables such as the settings within which L2 learning and use takes place (e.g. instructional vs naturalistic), motivations, and so on. With respect to modality, variations exist in terms of whether productive or receptive knowledge is assessed. Finally, age at first exposure to the L2 affects learners' interlanguage. Whilst taking into account these individual differences, Richards and Sampson have obviously taken into consideration L2 learners from several L1 backgrounds, acquiring different L2s, in instructional as opposed to naturalistic settings, and so forth. Thus, this does not truly reflect what is going on in the present study, in which L2 learners share the same L1, acquire the same L2, and are more or less in the same learning environment. That is, explanations for variations must lie elsewhere.

One possible account can be found in Corder (1976), who argues that SLA is a very individual experience. He explains this in the light of psychological processes that L2 learners, interacting with positive evidence, construct their interlanguages differentially. In other words, they build on their own 'personal grammars' (Corder, 1976: p. 73; emphasis added). From this statement, it seems to follow that the characteristics of L2 learners' interlanguages *would* never be similar, and thus no systematicity *could* be expected. However, his argument should not be interpreted strictly as such since he apparently does not intend it to be that off-putting; he earlier refers to L2 learners' interlanguages as idiosyncratic 'dialects' (Corder, 1967). For L2 learners to construct their L2 grammars in different ways does not reject the likelihood of constructing them similarly. In the same vein, for them to have personal grammars does not necessarily mean that their grammars cannot converge to some degree. Nevertheless, Corder's view highlights variations in L2 learners' interlanguage in terms of how it is individually organised.

Research evidence suggests that the properties imposed on the L2 data and thus how an L2 is acquired can vary indeed, resulting in individual differences in SLA. It appears to be so even in the case when L2 learners are in a nearly identical learning environment, with the five variables suggested by Richards and Sampson (1974) being held constant. Sato (1990) is a case in point. In her study, Sato tracked how two brothers from South Vietnam, Tai and Thanh, acquired English past time referents. The brothers were around ten and twelve, respectively, when they arrived in the U.S. in 1981. Since then, they have lived with American foster parents. According to Sato, they were "immersed in the *same* sociolinguistic environment" (p. 53; emphasis in original) although Tai was placed in a third/fourth grade mixed class, and Thanh in the sixth grade. Despite these similarities, the two learners' interlanguages were anything but convergent. For example, at the beginning of her investigation, Sato found that Thanh marked

past time referents 40% of the time, while the percentage was only 20% for Tai, and this fluctuated a lot during a ten-month period. The chance that their rates of past tense marking would be equal was extremely slim. Extreme identicality such as this is perhaps rare, but needless to say, indivual variations are a very real phenomenon.

The findings in Sato's (1990) study as well as in this research also imply that it is probably not wise to treat L2 learners as invariably homogeneous, particularly when a small number of learners are examined. This is due to the fact that group results often camouflage how individual learners actually perform in an L2. In other words, their interlanguage may be overrated or underrated. It may be recalled that the results in 4.3.4 show that with respect to the adjacency condition, some advanced learners resemble the natives more when considered individually than when investigated as a group. Likewise, it will not be known that some intermediate learners are more on a par with the advanced learners should they not be explored as individuals. Also shown in 4.4.1 and 4.4.2 is that on the surface, the advanced group seems to try fewer positions of adjunction than the intermediate group. When tracked individually, however, the individual advanced learners are in fact more experimental with adjunction in new positions.

That group results are misleading is evident in the literature. For instance, Eubank *et al.* (1997) claimed that Chinese learners' interlanguage English allowed verbs to raise (cf. 2.2.3) and that individual data corresponded with group data in that the learners were different from native speakers. Reanalysing their findings, Choi (2005), however, found that some of the individual learners were in fact very similar to the native speakers. 53% of the advanced learners and 36% of the intermediate learners rejected the ungrammatical sentences involving verb-raising 90% to 100% of the time, which also happened to be the case for the subjects in Choi (2005) and Ayoun

(2005). This important piece of the jigsaw would not have been revealed if individual variations had not been taken into account.

5.5 The adjacency parameter vs. the lexical parameter

Ironically, transfer of the [+strict adjacency] setting does not seem directly related to the range of positions of adjunction used by the Thai learners. The findings in 4.3 and 4.4 reveal that they treat English more conservatively than they should, on one hand, and place adverbs in almost as many positions as the native group, on the other hand, particularly in the case of the advanced learners. Furthermore, the learners attempt new positions of adjunction, despite little change in their perception of the [+/-strict adjacency] setting of English, evidenced by the relatively stable degree of adjunction in I1, M2, and M4. This tendency is also visible in Johansson and Dahl's (1982) study as their subjects' language exhibit the same variety of positions of adjunction as that of the control group, in spite of the fact that the subjects are more reluctant with adjunction in the position between the subject and the verb (section 2.3.6). What, then, can account for this murky situation?

5.5.1 L1 transfer and the underrepresentation of L2 adverbs

I propose that L1 transfer also occurs on the lexical level (e.g. Inagaki, 2001, 2002; Jiang, 2000; Juffs, 1996; Slabakova, 2006). According to Jiang (2000), the lexicon contains such information as the semantic and syntactic properties of words. However, the lexical representations of the L1 and the L2 are different in that the former is fully specified whereas the specification of the latter can be either partial or complete. This depends on several factors like L2 learners' proficiency, exposure to the L2, and the way in which words in the L2 are taught

(e.g. through L1 words via translation equivalents or through direct associations with words and concepts in the L2), including the degree of difference between words in the L1 and the L2. If words in the L1 are underspecified in relation to those in the L2, transfer occurs.

Juffs (1996), for example, investigated the acquisition of *psychological verbs (psych verbs)* by Chinese learners of English. In English, both transitive and periphrastic causatives, as in *John disappointed Mary* vs *John made Mary disappointed*, are allowed, whereas the latter is the only parameter permitted in Chinese, as in *Zhang San shi Li Si hen shiwang* 'John made Mary disappointed' (p. 171). In other words, psych verbs in Chinese are less specified than, i.e. form a subset of, those in English. Thus, in order for Chinese learners to acquire English psych verbs, the lexical parameter must be reset, based on positive evidence, to accommodate the broader setting that both transitive and periphrastic causatives are possible. Juffs found that the more restrictive lexical setting of Chinese was transferred, leading to two consequences. First, the less proficient subjects used less transitive psych verbs than the more proficient subjects. Second, the overuse of periphrastic causatives persisted until the advanced stage.

In view of this, Thai adverbs are syntactically underspecified in comparison with their English counterparts. In Thai, an adverb usually has one or two positions unique to it. To support this claim, a brief survey has been conducted to investigate Thai adverbs with respect to the range of positions of adjunction[5] and reported in Table 5.1. The first column of the table

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[5] The procedures are as follows. Adverbs in each semantic category proposed by Beijer (2005) were first translated into Thai, based on the *Oxford-River Books English-Thai Dictionary* by the Chalerm Prakiat Translation and Interpretation Centre, the Faculty of Arts, Chulalongkorn University. Then, the *Thai Concordance* (http://www.arts.chula.ac.th/%7Eling/ThaiConc/) was used to discover where these adverbs appeared. The concordance is made up of texts from various corpora such as news, general articles, academic articles, etc. Only the corpus containing academic articles was selected because of its direct relevance to the present study. The academic corpus had been formed from academic journals appearing on Midnight University's website, reaching the size of *approximately 3.5 million words*. The search option was set to show 200 words to the left and the right of a keyword (i.e. an adverb) and to generate a maximum of 200 examples. Thus, if the keyword appeared in all the examples, 200 concordance lines would be displayed. On the other hand, if the keyword appeared in, for instance, 20 examples, only 20 concordance lines would be shown.

illustrates the semantic categories of adverbs. In the second and the third columns, sample tokens in English and their equivalents in Thai are given. The positions in which each adverb appeared in the corpus are summarised in the fifth column. The symbol ✓ indicates occurrence, and the symbol × non-occurrence. The symbol ? indicates that the Thai equivalents did not appear in the corpus. It should be noted that the clause-medial position in the table refers only to the one between the subject and the verb without including the other clause-medial positions, e.g. between two auxiliaries or between an auxiliary and a main verb. This exclusion is due mainly to the reason of practicality. In addition, if an adverb, except the CONSEQUENTIAL adverb *cvng0* 'thus/therefore', can adjoin in the position between the subject and the verb, it can generally also adjoin in the other clause-medial positions. Examples are provided for the PRETERITE: RECENT adverb *phvng2* 'just': *khaw4 phvng2 kin0 khaaw2* 'he just ate' (adjunction between the subject *khaw4* 'he' and the verb *kin0* 'eat'), *khaw4 naa2ca1 phvng2 kin0 khaaw2* 'it is likely that he just ate' (adjunction between the modal aux *naa2ca1* 'it is likely that' and the main verb *kin0* 'eat').

Table 5.1   Positions of adjunction of adverbs in Thai

Semantic category	Sample token in English	Equivalents in Thai	Position		
			Initial	Medial	Final
Concessive	nevertheless	jaang1raj0k@@2taam0,	✓	×	×
		txx1kra1nan3	✓	×	×
Consequential	accordingly,	taam0naj0nan3,	✓	×	×
	consequently,	pr@3cha1nan3,	✓	×	×
	therefore,	duuaj2heet1nan3,	✓	×	×
	thus	dang0nan3,	✓	×	×
		cvng0	×	✓	×
Adversative	however	jaang1raj0k@@2taam0	✓	×	×
		txx1tha1waa2	✓	×	×
Concessive: continuative	still	jang0	×	✓	×
		jang0khong0	×	✓	×
Additive: contrastive	otherwise	mi3cha1nan3	✓	×	×
		naj0thaang0trong0-kan0khaam2	✓	×	×
Additive: serial order	also	jing2paj0kwaa1nan3	✓	×	×
Additive: unexpected	even	thvng4kha1naat	×	✓	×

Table 5.1 **Positions of adjunction of adverbs in Thai (continued)**

Semantic category	Sample token in English	Equivalents in Thai	Position		
			Initial	Medial	Final
Epistemic	certainly, surely	jaang1nxx2n@@n0,	×	×	✓
		dooj0maj2t@ng2song4saj4	×	×	✓
	probably	jaang1naa2ca1pen0	?	?	?
	undoubtedly,	jaang1maj2t@ng2song4saj,	×	×	✓
	unquestionably	dooj0maj2t@ng2song4saj4	×	×	✓
Necessity	inevitably	jaang1liik1liiang2maj2-daj2	×	×	✓
	necessarily	jaang1cam0pen0	?	?	?
Non-epistemic: possibility	perhaps	baang0thii0	✓	×	×
	possibly	jaang1pen0paj0daj2	?	?	?
Metalinguistic	actually	thii2cing0,	✓	×	×
		taam0kwaam0pen0-cing0,	✓	×	×
		cing0cing0lxxw3,	✓	×	×
		jaang1pqqt1phqqj4	×	×	✓
	honestly	jaang1cing0caj0	×	×	✓
Reinforcing	indeed	thii2cing0	✓	×	×
		cing0cing0lxxw3	✓	×	×
Evidential	apparently,	jaang1den1chat3,	×	×	✓
	evidently,	jaang1hen4daj2chat3,	×	×	✓
	manifestly, obviously, clearly	jaang1chat3cheen0	×	×	✓
Factual	really	cing0cing0llxxw3,	✓	×	✓
		cing0cing0	✓	×	✓
Simultaneous	simultaneously	dooj0phr@@m3kan0,	×	×	✓
		jaang1phr@@m3kan0,	×	×	✓
		naj0kha1na1diiaw0kan0	✓	×	×
Temporal: general	before	mvva2k@@n1	✓	×	×
	now	diiaw4nii3	✓	×	✓
	nowadays	diiaw4nii3,	✓	×	×
		sa1maj4nii3,	✓	×	×
		pat1cu1ban0nii3	✓	×	×
	then	naj0t@@n0nan3,	✓	×	✓
		thaa2jaang1nan3	✓	×	×
Temporal 2	once	krang3nvng1	✓	×	×
Durative	long	naan0maa0lxxw3	✓	×	✓
Summation/final	finally	naj0thii2sut1,	✓	×	×
		jaang1sut1thaaj3	✓	×	×
Future: proximate	immediately	jaang1riip2duuan1,	×	×	✓
		jaang1than0thii0,	×	×	✓
		jaang1kra1than0han4	×	×	✓
	soon	naj0maj2chaa3	✓	×	✓
Future: non-proximate	later	lang4caak1nii3,	✓	×	✓
		paaj0lang4	×	×	✓
Preterite: recent	just	phqqng2,	×	✓	×
		phqqng2ca1	×	✓	×
Anterior	already	lxxw3	×	×	✓

Table 5.1 Positions of adjunction of adverbs in Thai (continued)

Semantic category	Sample token in English	Equivalents in Thai	Position		
			Initial	Medial	Final
Irregular	occasionally	jaang1pen0krang3kraaw0,	×	×	✓
		jaang1pen0ra1ja3	×	×	✓
	periodically,	baang0krang3,	✓	×	✓
	sometimes	baang0kraaw0	✓	×	✓
Frequentative	often	b@@j1	×	×	✓
Habitual/general	mostly	dooj0maak2,	✓	×	×
		suuan1jaj1	✓	×	×
	generally	dooj0tuua2paj0,	✓	×	×
		dooj0ruuam0,	✓	×	×
		dooj0pok1ka1ti1,	✓	×	×
		naj0phaap2ruuam0	✓	×	×
	usually	taam0pok1ka1ti1,	✓	×	×
		taam0tham0mai daa0	✓	×	×
Repetitive	again	?iik1krang3nvng1	✓	×	×
Permanent	always	sa1mqq4	✓	×	×
Completive	completely	jaang1som4buun0,	×	×	✓
		jaang1krop3thuuan2	×	×	✓
	entirely	thang3mot1	×	×	✓
Partial	partially, partly	pen0baang0suuan1	×	×	✓
Restrictive	just, merely, only	khxx2,	×	✓	×
		thaw2nan3	×	×	✓
Evaluative	oddly	jaang1pra1laat1	×	×	✓
	unfortunately	chook2maj2dii0	?	?	?
Simultaneous	simultaneously	dooj0phr@@m3kan0,	×	×	✓
		jaang1phr@@m3kan0,	×	×	✓
		naj0kha1na1diiaw0kan0	✓	×	×
VP-related	briefly	jaang1j@@2	×	×	✓
	clearly	jaang1chat3cheen0	×	×	✓
	easily	jaang1ngaaj2daaj0	×	×	✓
	gradually	thii0la3lek3thii0la3-n@@j3,	×	×	✓
		jaang1kh@@j2pen0kh@@j2paj0,			
	honestly	jaang1pqqt1phqqj4,	×	×	✓
		jaang1cing0caj0			
	legitimately	jaang1thuuk1t@@ng2	×	×	✓
	quickly	jaang1ruuat2rew0	×	×	✓
	unexpectedly	jaang1maj2khaat2khit3-maa0k@@n1,	×	×	✓
		jaang1maj2khaat2fan4	×	×	✓
Insignificant degree	hardly	thxxp2ca1maj2,	×	✓	×
		kvvap1ca1maj2	×	✓	×

As an illustration, in Thai, CONSEQUENTIAL adverbs can adjoin only clause-initially or

clause-medially between the subject and the verbal construction, but not in the other positions,

whereas VP-RELATED adverbs can occur in the clause-final position only, as shown in (14).

(14)

a.	**dang0nan3**		pra1den0	maj2chaj2	khxx2	rvvang2
	thus/therefore		issue	not	only	matter
	kh@@ng4	khwaam0suuaj4		txx1	kiiaw1	kap1
	of	beauty		but	involve	with
	khuuam0txxk1taang1	thaang0chaat2phan0				
	difference	racial				

'*Thus*, the issue is not only a matter of beauty but also that of racial differences.'

b.	raw0	**cvng0**		khaw2paj0phuua0phan0	kap1
	we	**thus/therefore**		involve	in/with
	?an0run0rxxng0		taang1taang1	kaan0kra1tham0	
	violent		several	action	

'We are *thus* involved in several violent actions.'

c.	khwaam0pliian1plxxng0	khong4	sang4khom0
	change	of	society
	dam0nqqn0paj0	**jaang1ruuat2rew0**	
	proceed	**quickly**	

'Societal change proceeds *quickly*.'

In (14a), the CONSEQUENTIAL adverb dang0nan3 'thus/therefore' adjoins in the clause-initial

position. In (14b), the CONSEQUENTIAL adverb *cvng0* 'thus/therefore' adjoins between the subject

and the verb. In (14c), the VP-RELATED adverb jaang1ruuat2rew0 'quickly' adjoins clause-finally.

If adverbs in Thai are placed in the positions which do not subcategorise for them,

ungrammaticality arises because the Principle of Full Interpretation is violated (section 2.2.3).

It has been shown that Thai adverbs can generally be placed only in one fixed position

depending on their semantic types. In sharp contrast with this are English adverbs, which, despite

their semantic categories, can adjoin in many positions, particularly when used parenthetically

(cf. Cobb, 2006b; Wyner, 1994, cited in Cobb, 2006b). For instance, English CONSEQUENTIAL

adverbs can adjoin in the clause-initial position, in the various positions within the complex

verbal construction as well as in the clause-final position. Likewise, VP-RELATED adverbs can adjoin in various clause-medial positions as well as clause-initially. This is illustrated in (15) and (16).

(15) CONSEQUENTIAL adverbs
    a.   *Therefore*, … were counted as three tokens and three types.
    b.   R. Ellis or J. Willis *therefore* accepts the need to …
    c.   D could not *therefore* be obtained for …
    d.   … may not *therefore* become available for learning.
    e.   Reliability is crucial, *therefore*, and …

(16) VP-RELATED adverbs
    a.   …; *pragmatically*, the expression has a distinct evaluative slant …
    b.   … which errors *seriously* threaten phonological intelligibility in ILT.
    c.   … as if it might *usefully* be applied.
    d.   … the English used is *radically* recontextualised …
    e.   The initial state of each word is also determined *randomly*, …

In (15), the CONSEQUENTIAL adverb *therefore* adjoins in the clause-initial position, between the subject and the main verb, between a modal auxiliary and a tensed auxiliary, between a modal auxiliary and a main verb, and in the clause-final position, respectively. These positions of adjunction are also used with the VP-RELATED adverbs in (16).

Apparently, the syntactic information with regard to possible positions of adjunction contained in each adverb is more inclusive in English than in Thai, as shown in (17).

(17)
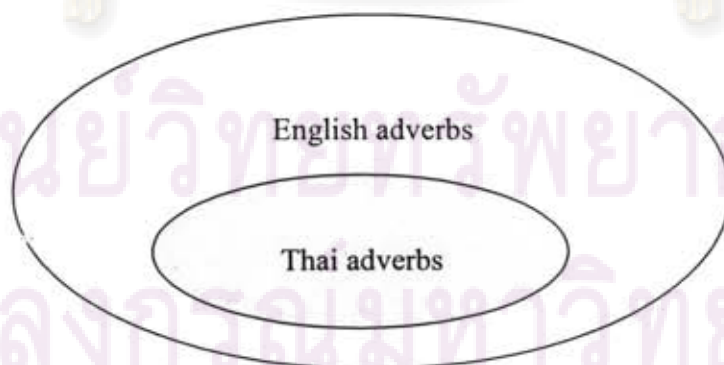
(Adapted from Juffs, 1996: p. 171)

This is where the subset-superset relations again come into play, but on the lexical level rather than on the syntactic level suggested by White (1989a, 1989b). When exposed to positive evidence containing sentences like (15) and (16), Thai learners will discover that the lexical setting of their L1 with respect to positions of adjunction no longer accounts for the L2 data, much in the same way as they find that the syntactic parameter of Thai, [+strict adjacency], does not apply to the English setting, [+/-strict adjacency]. For example, sentences in (15) will tell them that CONSEQUENTIAL adverbs can be placed in more than one position. Then, this kind of knowledge is gradually built on, with their lexical representation being reset to include more information as to the syntactic specification of each semantic class of adverbs. This explains why their interlanguage allows sentences like (18).

Advanced group
(18)
a. *Therefore*, it is probably safe to argue that …
b. … which *thus* facilitates the use and elaboration of this domain …
c. It can *therefore* be said that integrating computers into the …
d. The feature [-NP] is *thus* cancelled …
e. … goals and objectives may have to be revised *accordingly*.

As the examples in (18) and the findings in 4.5 show, the range of positions of adjunction employed by Thai learners is broader than possible in their L1 regardless of both proficiency level and whether group results or individual results are taken into consideration.

However, although Thai learners have access to the knowledge pertaining to the L2 lexical parameter, L1 transfer is still traceable, as shown by the range of positions of adjunction, which is more restrictive in the learner corpora than in the native corpus (section 4.5.1). In addition, L1 transfer seems related to proficiency level since the range used by the advanced learners is wider than that used by the intermediate learners (sections 4.5.1 and 4.5.2). Empirical studies, whether using elicited data or natural data, suggests that when the lexical setting of the

L1 is represented differently in the L2, learners tend to lean on that which bears a close resemblance to their L1 (e.g. Inagaki, 2001, 2002; Jiang, 2000; Juffs, 1996; Slabakova, 2006; Wong, 1983, cited in Juffs, 1996). Using elicited production tasks, Juffs' (1996) research mentioned above demonstrates that Chinese learners of English prefer periphrastic causatives, the only setting available in their L1, to transitive ones, a possible parameter in the L2. Drawing on natural data, Wong (1983, cited in Juffs, 1996) found that Chinese learners of English used periphrastic causatives twice as much as native speakers. In addition, Juffs (1996) showed that advanced learners produced more transitive causatives than intermediate learners. However, periphrastic causatives were still overrepresented in their interlanguage as the frequency of their use of such structures far outnumbered that of native speakers.

5.5.2 Should the adjacency parameter be dismissed altogether?

The discussion in 5.5.1 makes it look as if the adjacency parameter may not provide a correct analysis for the acquisition of adverbs. Contra White's (1989a, 1989b) hypothesis, the Thai learners adjoin adverbs in many possible positions despite the fact that the [+/-strict adjacency] parameter of the L2 is only partially reset, as shown in 4.3.3 and 4.3.4. In addition, adjunction appears in new positions even though the degree of the placement of adverbs in certain positions, particularly I1, M2, and M4, does not change (sections 4.4.1 to 4.4.3). In other words, there is little correlation between development in terms of the adjacency parameter and that with respect to the range of positions of adjunction.

However, it will be too premature at this stage to conclude that the adjacency parameter is totally irrelevant and that it should give way to explanations based on the lexical parameter. For one thing, an interlanguage reorganisation from the [+strict adjacency] setting to the

[+/-strict adjacency] setting may be a necessary condition for triggering the acquisition of the more general lexical parameter of the L2. As Ayoun (2005) and Inagaki (2002) point out, the availability of positive evidence alone is not sufficient for parameter resetting to occur; the L2 data must be frequent and clear enough for L2 learners to make use of. Viewed in this light, the adjacency parameter can still retain its significance due to the following reasons. First, it is more salient than the lexical parameter in the sense that semantic notions need not be taken into account. That is, English adverbs, regardless of semantic types, appearing in, for instance, the positions between the subject and the verb and between two auxiliaries, can at once inform Thai learners that adjunction is possible in many clause-medial positions. On the other hand, for them to learn that adverbs in one semantic type, say, CONSEQUENTIAL adverbs, can adjoin in certain positions, Thai learners have to focus their attention on the adverbs in this semantic category (of which there are around three dozen!) and notice the positions in which they can appear. Further complicating the problem, they have to (be able to) distinguish adverbs in one semantic type from those in another in order to accurately determine their different syntactic behaviours. In short, it is likely that parameter resetting on the syntactic level may be a precursor to that on the lexical level.

In addition, L1 transfer in terms of [+strict adjacency] can still be noticed. It should be mentioned that the findings in 4.5.1 and 4.5.2 do not make reference to the degree of adjunction in different positions since the main concern in those sections is the range of positions. However, when this is taken into consideration, interesting results are revealed. That is, not only is the range of positions of adjunction less inclusive for the intermediate group than for the advanced and the native groups, but the native group also shows the highest extent of adjunction in the

clause-medial positions, followed by the advanced and the intermediate groups. This is shown in

Table 5.2 below.

Table 5.2 **The adjacency condition and the range of positions of adjunction** (CONSEQUENTIAL, ADVERSATIVE, ADDITIVE: SERIAL ORDER, HABITUAL/GENERAL, and VP-RELATED adverbs)

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3
Consequential e.g. accordingly, thus, therefore	Native	50.0	2.7	2.7	26.3	2.4	8.0	1.5	1.5	-	2.1	3.0	-
	Advanced	79.7	-	4.1	12.0	0.3	1.7	0.3	-	-	-	1.7	-
	Intermediate	96.6	-	1.1	1.1	-	1.1	-	-	-	-	-	-
Adversative however	Native	57.5	12.0	5.5	15.7	-	1.6	-	-	-	4.9	2.8	-
	Advanced	90.9	0.4	2.6	4.3	-	-	-	-	-	-	1.7	-
	Intermediate	90.6	1.1	2.8	5.0	-	-	-	-	-	-	0.6	-
Additive: serial order e.g. also, first, second	Native	28.7	-	-	33.5	6.9	23.2	1.3	1.9	-	1.9	1.7	0.8
	Advanced	53.6	-	0.7	23.6	3.5	11.9	0.5	0.7	0.2	0.2	5.3	-
	Intermediate	69.0	-	0.3	17.3	0.3	6.0	-	-	-	0.6	6.5	-
Habitual/ General e.g. generally, usually	Native	12.6	-	1.4	30.8	4.9	39.9	2.1	2.1	-	3.5	2.8	-
	Advanced	7.6	-	0.8	34.7	2.5	50.8	-	0.8	1.7	0.8	-	-
	Intermediate	28.0	-	-	32.0	-	32.0	-	-	-	4.0	4.0	-
VP-related e.g. easily, gradually, quickly	Native	4.1	-	0.6	13.5	1.7	34.5	0.6	1.4	2.9	20.1	18.4	2.2
	Advanced	2.9	-	-	11.9	-	31.4	0.4	0.7	5.4	19.9	27.1	0.4
	Intermediate	3.6	-	-	14.5	0.6	28.5	-	-	1.2	12.7	38.8	-

Figures reported in percentage for each semantic category

The above results suggest that the Thai learners may be experiencing L1 transfer on both

the lexical and the syntactic levels at the same time. Specifically, the former explains why the

lexical representation of Thai learners does not seem as complex as that of native speakers as

well as why the advanced learners' lexical representation appears to contain more syntactic

specification than that of the intermediate learners—central to this account is that the lexical

representation is reflected by the range of positions in which adverbs are placed. Meanwhile, the

latter accounts for the different degrees of adjunction in certain positions: heavy adjunction in the

clause-initial position by the learner groups and a higher extent of the placement of adverbs in the clause-medial position by the native group.

One argument that might arise is that the higher degree of clause-initial adjunction is in fact a manifestation of the L1 lexical parameter since the clause-initial and the clause-final positions are the two default settings of adverbs in Thai. Thus, why Thai learners place a large number of adverbs clause-initially is because they are counting on the lexical parameter of the L1. In other words, transfer occurs on the lexical level in the first place and syntactic transfer in terms of the [+strict adjacency] of the L1 does not play any role. This certainly is one possibility. However, it might as well be equally valid to posit that heavy adjunction in the clause-initial position is due to the fact that Thai learners are being constrained by the L1 syntactic parameter. After all, it is very knotty, if not impossible, to entirely rule out this likelihood from the scenario.

5.6 Markedness and the acquisition of adverbs

Researchers working within linguistic typologies associate markedness with less frequency (section 2.3.7), that is to say external universals, while generative linguists attribute markedness to the properties of language which are more abstract and complex (e.g. overt complementiser is unmarked, whereas empty complementiser is marked), that is to say internal universals. However, this does not mean that they completely disagree on the notion frequency since external universals and internal universals tend to converge at some point. For example, Mazurkewich (1984, 1985, cited in Ellis, 1994) suggests that in dative alternation (e.g. *John baked a cake for Mary* vs *John baked Mary a cake*), the NP+PP+NP structure is unmarked and the NP+NP structure marked because the latter is both less transparent in terms of case assignment and less frequent. Case assignment for the NP+NP construction is not transparent in

that it is difficult to tell from the S-structure which NP receives accusative case and which receives dative case. In addition, it is less productive in English. This is also the case for transitivity alternation (e.g. *The captain marched the soldiers to the tents* vs *The soldiers marched*) in Montrul's (2001) study.

In view of frequency as a determinant of markedness, it can then be inferred that more frequent structures are unmarked, whereas less frequent ones are marked. Thus, it may be further assumed that among the related marked structures in an L2, some constructions will be more marked than others (Eckman, 1977). This idea being applied, English allows, for example, adjunction in all the clause-medial positions, a possibility which does not seem to exist in Thai, and so the structures involving clause-medial adjunction are considered marked. Nevertheless, some of the clause-medial positions in English will be more marked if it can be proved that adjunction in those positions is relatively infrequent in comparision with that in the other clause-medial positions. From the SLA perspective, it should be easier to acquire the less marked positions and more difficult to acquire the more marked ones (section 2.3.7). This is what is suggested by the findings in the present study.

Table 5.3a   Early and late acquired positions

	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Native*	29.5	1.4	2.0	20.2	3.5	27.3	0.9	1.4	1.1	7.5	4.6	0.9	12
Adv 1	44.9	-	1.0	20.7	1.3	20.7	-	-	1.3	3.6	6.1	-	8
Adv 2	47.2	-	0.5	19.0	3.3	21.3	0.3	0.2	1.4	1.7	5.1	-	10
Adv 3	55.9	-	1.9	10.7	1.4	12.1	0.4	0.5	0.2	6.7	9.8	-	10
Adv 4	40.0	0.1	2.9	19.9	2.1	21.1	0.7	0.6	0.9	4.9	6.4	0.4	12
Adv 5	31.1	0.5	2.4	19.9	1.0	25.7	0.5	1.9	1.5	6.8	8.7	0.4	12
Int 1	50.9	-	1.7	15.7	-	13.5	2.6	-	-	3.5	12.2	-	7
Int 2	66.7	0.3	-	6.5	0.3	12.7	-	-	-	2.7	10.7	-	7
Int 3	70.3	-	1.6	7.0	-	11.4	-	-	-	2.7	7.0	-	6
Int 4	69.2	1.2	0.6	5.3	3.0	8.9	-	0.6	2.4	3.0	5.9	-	10
Int 5	43.3	-	2.0	20.1	-	16.7	0.7	-	-	2.7	14.3	-	7

Figures reported in percentage

Table 5.3a depicts the early and late acquired positions of adjunction as far as Thai

learners of English are concerned. The cells with the darkest shading indicate the positions which

are acquired first, whereas those with the lightest shading indicate the positions which are

acquired last. From the table, it can be inferred that adjunction in I1, M2, M4, F1, and F2 should

emerge relatively early in the acquisition process since they are the positions used by all the

intermediate and the advanced learners. That these positions are acquired before the other

positions can also be attributed to the extent to which adjunction in these positions are

instantiated in the language of native speakers of English, i.e. positive evidence to which the

learners have been exposed. From the native corpus, hypothetically representing the language of

the natives, the degrees of adverb placement in I1, M2, M4, F1, and F2 are the highest among the

twelve positions, ranging from 4.6% in F2 to 29.5% in I1. After these five positions, M1 and M3

would be the next two positions acquired by the learners, indicated by the fact that all the

advanced learners and some of the intermediate learners place adverbs in these positions. This

again corresponds with the degrees of adjunction in M1 and M3 found for in the native corpus,

2.0% and 3.5% respectively, the percentages slightly higher than those in the remaining

positions. Next to M1 and M3 are I2, M5, M6, and M7, which should be acquired relatively late

since the majority of the advanced learners place adverbs in these positions, which are used by

only some or even none of the intermediate learners. The last acquired position seems to be F3.

Table 5.3b   **Early and late acquired positions (CONSEQUENTIAL, ADVERSATIVE, ADDITIVE: SERIAL ORDER, HABITUAL/GENERAL, and VP-RELATED adverbs)**

Semantic category	Group	I1	I2	M1	M2	M3	M4	M5	M6	M7	F1	F2	F3	Total number of positions
Consequential e.g. accordingly, thus, therefore	Native	50.0	2.7	2.7	26.3	2.4	8.0	1.5	1.5	-	2.1	3.0	-	10
	Advanced	79.7	-	4.1	12.0	0.3	1.7	0.3	-	-	-	1.7	-	7
	Intermediate	96.6	-	1.1	1.1	-	1.1	-	-	-	-	-	-	4
Adversative however	Native	57.5	12.0	5.5	15.7	-	1.6	-	-	-	4.9	2.8	-	7
	Advanced	90.9	0.4	2.6	4.3	-	-	-	-	-	-	1.7	-	5
	Intermediate	90.6	1.1	2.8	5.0	-	-	-	-	-	-	0.6	-	5
Additive: serial order e.g. also, first, second	Native	28.7	-	-	33.5	6.9	23.2	1.3	1.9	-	1.9	1.7	0.8	9
	Advanced	53.6	-	0.7	23.6	3.5	11.9	0.5	0.7	0.2	0.2	5.3	-	10
	Intermediate	69.0	-	0.3	17.3	0.3	6.0	-	-	-	0.6	6.5	-	7
Habitual/ general e.g. generally, usually	Native	12.6	-	1.4	30.8	4.9	39.9	2.1	2.1	-	3.5	2.8	-	9
	Advanced	7.6	-	0.8	34.7	2.5	50.8	-	0.8	1.7	0.8	-	-	8
	Intermediate	28.0	-	-	32.0	-	32.0	-	-	-	4.0	4.0	-	5
VP-related e.g. easily, gradually, quickly	Native	4.1	-	0.6	12.5	1.7	34.5	0.6	1.4	2.9	20.1	18.4	2.2	11
	Advanced	2.9	-	-	11.9	-	31.4	0.4	0.7	5.4	19.9	27.1	0.4	10
	Intermediate	3.6	-	-	14.5	0.6	28.5	-	-	1.2	17.7	38.8	-	7

Figures reported in percentage for each semantic category

Table 5.3b presents the early and late acquired positions of adjunction, focusing on the

five semantic categories of adverbs with the highest frequencies. The cells with the darkest

shading show the positions which emerge first, and those with the lightest shading the positions

which are acquired last. For CONSEQUENTIAL adverbs, I1, M1, M2, and M4 should be acquired

first as adjunction in these positions is found for both the advanced and the intermediate learners,

followed by M3 and M5, which are used only by the advanced group. Adverb placement in the

other positions should emerge very late, as suggested by the non-occurrence even for the

advanced group. As regards ADVERSATIVE adverbs, the first acquired positions seem to be I1, I2,

M1, M2, and M5, which are used by both the advanced and the intermediate groups. The data

suggest that M4 and F1 should also emerge in later stages of acquisition since the natives also place adverbs in these positions. With respect to ADDITIVE: SERIAL ORDER adverbs, I1, M2, M3, M4, F1, and F2 should emerge relatively early as they are the positions in which adjunction is found for both the advanced and the intermediate learners. This may then be followed by M5 and M6, which are used only by the advanced group. Turning to HABITUAL/GENERAL adverbs, I1, M2, M4, and F1 appear to be acquired early. Only when the learners reach the advanced stage would they place adverbs in M1, M3, and M6. The last category, VP-RELATED adverbs, is assigned to the broadest range of positions by both learner groups, I1, M2, M4, M7, F1, and F2, suggesting that these positions should be acquired quite early. This is probably because VP-RELATED adverbs, mostly manner adverbs, start to become productive in the beginning stage of acquisition, as is reflected by the fact that these adverbs are used to test learners who have just been exposed to the L2 (e.g. White, 1989a, 1991a, 1991b). For this reason, they seem to have a special status in L2 learner's interlanguage development. M5, M6, and F3, which are used only by the advanced learners, should emerge later in the acquisition process. From the findings, it also appears that the early acquired positions are those which are most frequently used in the L2 data.

The discussion thus far supports the claim made by typological and generative researchers that unmarked structures are easier and thus acquired earlier than marked ones (2.3.7). Nevertheless, it partly counters Gass's (1984, cited in Ellis, 1994) contention that marked constructions with great frequencies should be easy to acquire since in this study, even marked positions in which adverbs are not frequently used are acquirable. But one thing must be kept in mind. The intermediate learners are at a quite high proficiency level. Thus, it would be

interesting to see if L2 learners at lower levels of proficiency will be able to get a grip on the marked, rarely used adjunction positions.

5.7 Interlanguage aspects

The discussion in this section focuses on some processes central to interlanguage development proposed by Selinker (1972), namely language transfer, transfer of training, avoidance (one type of strategy of second language communication), and overgeneralisation since they are the most relevant to the findings of the present research.

5.7.1 Language transfer

The results have made it clear that the advanced learners and the intermediate learners are differentially affected by L1 transfer. The advanced group is more on a par with the natives than the intermediate group in terms of both the adjacency condition and the range of positions of adjunction. The degree to which the advanced learners put adverbs in I1 is much lower than that exhibited by the intermediate learners. On the other hand, the former place a lot more adverbs in M2 and M4 than the latter. In other words, the [+strict adjacency] value of Thai has been reset to a greater extent for the advanced learners than for the intermediate learners. With regard to the range of positions, the advanced learners also adjoin adverbs in more positions than their intermediate counterparts. What can be inferred from these findings is that the degree of L1 transfer is stronger for the intermediate group. When the development in the two respects is taken into consideration, the adjacency condition does not change radically in the case of the advanced learners. Although the intermediate learners undergo a more drastic transition, they do not seem to approximate the advanced learners at the end of the period investigated. The change

in terms of the range of positions of adjunction is similar for both groups, with new positions gradually emerging on the whole. Nevertheless, the intermediate group does not resemble the advanced group even in the last stage. This again points to a greater degree of L1 transfer experienced by the intermediate learners. The lexical parameter being considered, the intermediate learners are again more hampered by the syntactic underrepresentation of adverbs in Thai. For the majority of the semantic categories, they are found to adjoin adverbs in fewer positions than the advanced learners.

The differential effects of L1 transfer on the advanced and the intermediate learners are clear. As Ayoun (2005) rightly points out, advanced learners are better off than those at lower proficiency levels for they have been exposed to the L2 for a longer period of time and so the chance is greater for them to have adopted the L2 parameter. Despite these findings, if the two groups of learners are compared, it can be concluded that the effect of L1 transfer is likely to decrease over time, as indicated by the differences between the advanced and the intermediate learners with respect to the adjacency condition and the range of positions of adjunction.

5.7.2 Transfer of training

Transfer of training concerns the way in which L2 learners are taught and its impact on their interlanguage development (Selinker, 1972). Here, the coverage of adverb placement is addressed by reviewing the relevant content of three textbooks. From these, it is apparent that adverbs are treated as if they had one fixed position within the clause. When the possibility of adjunction in more than one position is mentioned, it is often not the focus of the content. Each textbook will be discussed in turn below.

ADJECTIVES AND ADVERBS

Adjectives modify nouns.
a *large* tree
a *pretty* girl

Adverbs modify verbs. They tell *how* we do something.
He speaks *slowly*.
They work *rapidly*.

We can form many adverbs by adding *ly* to an adjective.

Adjective	Adverb
soft	softly
careful	carefully
easy	easily

We can use a few words like fast, hard, late, and low as either adjectives or adverbs without any changes in form.
He is a *hard* worker.　　　　He works *hard*.

Supply the proper form, adjective or adverb, in the following sentences.
1. He always does his home work　　　　(careful).
2. He is a very　　　(careful) student.
3. Come　　　(quick). We need your help.
4. You should drive more　　　(slow).
5. The old man walks very　　　(slow).
6. Helen is a very　　　(slow) student.
7. Her brother, on the other hand, learns　　　(rapid).
8. Mr. Gonsalez has a　　　(permanent) visa.
9. He hopes to remain in this country　　　(permanent).
10. This is an　　(easy) exercise.
11. I can do all of these exercises　　　(easy).
12. Helen words very　　　(hard) in her new job.
13. You walk very　　　(fast).
14. They are both　　　(serious) students.
15. They both study English very　　　(serious).
16. I agree with you　　　(complete) in that matter.
17. This apple is very　　　(soft).
18. She always speaks　　　(soft) to the child.
19. Helen is a　　　(beautiful) girl.
20. Her sister plays the violin　　　(beautiful).

(Dixson, 1971: p. 25, cited in Dissosway, 1984: p. 166)

In Dixson, the emphasis is on the functions of adverbs. The third and four examples might mislead the learners into believing that the clause-final position is the only one in which adverbs can adjoin. This problem will probably be exacerbated by the following exercise in which the learners are required to place adverbs in the clause, and the only position provided is clause-final.

4-2 USING FREQUENCY ADVERBS: ALWAYS, USUALLY, OFTEN, SOMETIMES, SELDOM, RARELY, NEVER

always	usually	often	sometimes	seldom	rarely	never
100%	99-90%	90-75%	75-25%	25-10%	10-1%	0%

(a) Bob	always	comes to class.	*Always, usually, often, sometimes, seldom, rarely,* and *never* are called frequency adverbs.	
(b) Mary	usually	comes to class.		
(c) We	often	watch TV at night.	Frequency adverbs come between the subject and the simple present verb:*	
(d) I	sometimes	drink tea with dinner.		ALWAYS USUALLY
(e) I	seldom	go to movies.		OFTEN
(f) Anna	rarely	makes a mistake.	SUBJECT + { SOMETIMES } + VERB SELDOM
(g) I	never	eat paper.		RARELY NEVER

* Frequency adverbs sometimes come at either the beginning or at the end of a sentence.
For example:

Sometimes I get up at 7:00.
I sometimes get up at 7:00.
I get up at 7:00 sometimes.

EXERCISE 2—ORAL: Add the frequency adverbs in parentheses to the sentences.

1. (always) I eat breakfast. (*I always eat breakfast.*)
2. (usually) I get up at 7:00.
3. (often) I drink two cups of coffee in the morning.
4. (never) I eat bacon.
5. (seldom) I watch TV in the morning.
6. (sometimes) I have tea with dinner.
7. (usually) Bob eats lunch at the cafeteria.
8. (rarely) Ann drinks tea.
9. (always) I do my homework.
10. (often) We listen to music after dinner.
11. (never) John and Sue watch TV in the afternoon.
12. (always) The students speak English in the classroom.

(Azar, 1984: p. 54, cited in Dissosway, 1984: p. 168)

The treatment of adverbs in Azar is elaborated upon more than in Dixon in that clause-medial adjunction between the subject and the verb is introduced. In addition, the mobility of adverbs is pointed out to learners. Nonetheless, it appears in the form of a note, suggesting that less attention be paid to this aspect. It is thus likely that the learners will take their instruction

from both what is provided in the boxes and the following exercise in which adverbs only appear between the subject and the verb.

Time order	Listing
First, ...	First, ...
First of all, ...	First of all, ...
Second, ...	Second, ...
Third, ...	Third, ...
Next, ...	Fourth, ...
After that, ...	Also, ...
Then, ...	... also ...
Finally, ...	In addition, ...

(Hogue, 1996: p. 204)

Hogue focuses on ADDITIVE: SERIAL ORDER adverbs, making it look as if there were only one possible position for them. The only exception is *also* on the right column, which might suggest to the learners that adverbs can be placed clause-medially. They will of course only be able to come to that conclusion if they are successful in guessing what the dots to the left and the right of *also* mean.

It might be argued that the above textbooks have beginner or intermediate learners as their targets and thus are not representative of other textbooks which are oriented towards learners at higher proficiency levels. However, even a very advanced one like that authored by Master (1996), aimed at introducing language teachers to the structure of English, indicates that adverbial adjunction can occur in four positions: clause-initial, clause-medial between the subject and the verb, clause-medial between an auxiliary and the main verb, and clause-final. This does not seem enough given the findings in this study that adjunction is possible in twelve positions relative to the clause. Also, as adverb placement is intertwined with the complexity of the verbal construction (Hoye, 1997), as shown in (19) below, sentences with just the main verb like those

in Dixon, Azar, and Hogue or those with slightly more elaborated verbal structures like those in

Master will not suffice for L2 learners in their acquisition of the category in question.

(19)
  a.   *Possibly*, they may have been sent to London.
  b.   They *possibly* may have been sent to London.
  c.   They may *possibly* have been sent to London.
  d.   They may have *possibly* been sent to London.
  e.   They may have been sent to London, *possibly*.
   (Adapted from Quirk *et al.*, 1985: 490f, cited in Hoye, 1997: p. 148)

Further complicating the problem, most textbooks available in the market categorise

adverbs into only a few broad semantic types, such as frequency, manner, time, degree

(Dissosway, 1984), when they can in fact be divided into much finer classes. Since adverbs in

different semantic categories generally occupy many different, although overlapping, positions,

what confronts L2 learners is that they have to go about acquiring the syntax of adverbs

completely on their own due to the insufficient coverage of these optional modifiers in

instructional materials.

The above discussion points to the likelihood that Thai learners' acquisition of adverbs

may involve transfer of training. That is, they have been taught to put adverbs in certain fixed

positions, explaining why the range of positions of adjunction in their interlanguage grammar is

not as broad as that in the language of native speakers of English. If this view is taken, the

intermediate learners are obviously more troubled by this kind of transfer than the advanced

learners. For example, they put a lot more ADDITIVE: SERIAL ORDER adverbs clause-initially, in

comparison with the advanced learners, exactly reflecting the content in Hogue (1996).

Nevertheless, the fact that the advanced group and the intermediate group perform differently

suggests that transfer of training tends to become less influential over time, with the consequence

that the intermediate learners will be able to master the syntax of adverbs once they reach a

higher level of proficiency. On a final note, since Thai generally permits adjunction in the clause-initial and the clause-final positions, which happens to coincide with the treatment of adverbs in many ESL textbooks, it is very difficult, if not impossible, to tease out language transfer and transfer of training. This issue will not be resolved further and remains one area awaiting further research.

5.7.3 Avoidance

Avoidance, a manifestation of strategies of second language communication, refers to learners' tendency not to produce L2 structures which they feel are too complex, given their levels of linguistic competence (Selinker, 1972). In the present study, what can be suggestive of avoidance is the number of adverbs produced by Thai learners compared to that used by the natives, demonstrated in the tables below.

Table 5.4a　　The frequency of adverbs in the native baseline corpora

Main corpus	*15.82*
	(3,842/242,894)
Sub-corpus	*12.95*
	(655/50,562)

• *Frequency reported per 1,000 words*

Table 5.4b　　The frequency of adverbs in the learner corpora

Learner	Advanced group	Intermediate group
Learner 1	11.84	8.45
Learner 2	12.66	9.09
Learner 3	14.53	6.47
Learner 4	12.80	7.00
Learner 5	9.20	8.23
Average scores	12.56	8.01

• *Frequency reported per 1,000 words*

From the tables, the advanced group used 13 adverbs per 1,000 words on average, more on a par with the natives than the intermediate group, which produced only approximately 8 adverbs per 1,000 words. When the learners are examined individually, intermediate learner 2 resembled advanced learner 5, each using 9.09 and 9.20 adverbs per 1,000 words, respectively. Overall, avoidance seems to affect the intermediate learners to a greater extent than with the advanced learners. Nevertheless, this does not entail that the intermediate learners do not possess the knowledge on adverbs in English since the data in 4.3.2 indicate that these learners, like native speakers and the advanced learners, used adverbs in almost all the semantic categories being explored. Their underproduction of adverbs might be explainable in terms of the difference between receptive knowledge and productive knowledge. According to Jiang (2000), the former is easier to access than the latter, and so what the intermediate learners had acquired might not all be put into use, manifesting itself in the form of avoidance behaviour. Also, that the intermediate learners used much less adverbs than the advanced learners and the natives might be because they had had less exposure to the L2 and thus were not as familiar with the positions which do not exist in their L1.

The above findings support the empirical evidence in Schachter (1974) and Kleinmann (1977) that L2 learners are likely to avoid L2 structures with which they feel uncomfortable. Schachter (1974) found that Chinese and Japanese learners produced only around 70 relative clauses in English, only a half of those produced by Arab and Persian learners. Similar results were reported in Kleinmann (1977). In his study, Arab, Portugese and Spanish learners of English were investigated on four structures: passive voice, infinitive complements, direct object pronouns in sentences containing infinitive complements (e.g. *She told me to finish the work on time*), and present progressive. It was discovered that the numbers of the four structures used by

the Portugese and Spanish learners far outnumbered those produced by the Arab learners. Both Schachter and Kleinmann took underproduction of the L2 structures as a possible indicator of avoidance behaviour. To conclude this section, it is worth noting again that avoidance is not necessarily a conscious process (Selinker, 1972).

5.7.4 Overgeneralisation

Overgeneralisation refers to an extension of an L2 rule to an inappropriate context (Selinker, 1972). The data in this study indicate that syntactic errors in terms of placement are very rarely found. This corresponds with the findings of Dissosway (1984). The data in her research were collected from the assignments, both those done in class and those done at home, in two seven-week intensive writing classes, which ran one hour per day, five days per week. Thus, the corpus size was relatively large. From this, Dissosway found only 20 errors involving misplacement. In the present study, the majority of errors occur in the form of semantic overgeneralisation. The adverb which was misused by almost all the learners, whether advanced or intermediate, is *however*. Errors in the use of other types of adverbs were also identified for some individual learners. Advanced learner 5 seemed to overgeneralise *explicitly* and *obviously*, while intermediate learners 2 and 3 also made errors in using *obviously*, and intermediate learner 5 misused *firstly*. As shown below, *however, explicitly and obviously, and firstly* were used when their close counterparts, *nevertheless, clearly, and first*, should have been (cf. 2.2.1). Unlike the other factors believed to shape L2 learners' interlanguage, overgeneralisation is the category for which no distinction between the advanced and the intermediate groups can be drawn, suggesting that the semantics of adverbs should be fully acquired last in the learning process.

Advanced learner 1

The results show that in all three genres the simple linear pattern was frequently used to organize and develop information in paragraphs. *However*, the frequency of simple linear pattern in journalistic report version was higher than the other genres.

Advanced learner 2

There are about 20 L2 classification systems of the learning strategies, which can be divided into 5 major groups (Oxford, 1993). *However*, details of Oxford's classification shall be thoroughly explored because it is the main focus of this paper, …

Advanced learner 3

…, it allows both the structure consisting of subject-verb-direct object-adverb and the one containing subject-verb-adverb-direct object. *Nevertheless*, English allows the former structure but not the latter.

Advanced learner 4

So, the scores of this part should be able to demonstrate the students' true ability in writing a business report. *However*, this also depends on whether the scoring rubric is appropriately designed and reflects what is taught in class or not.

Advanced learner 5

Many institutions require minimum scores in particular skill areas to suit the demands of particular courses. *However*, they themselves are responsible for determining the IELTS Band Scores appropriate to their particular courses or requirements.

In the case of Thais learning English, unfamiliarity in certain areas of the language are *explicitly* noticed as to the different language system mentioned.

As you can *obviously* see, the problems confronting the bilingual speakers probably seem to arise from the perspective of primarily societal determination.

Intermediate learner 1

The exam adequately measures the objectives provided. This test, *however*, can provide more information in other aspects of its usefulness as follows.

Intermediate learner 2

Addtionally, she mentions that turn is used in literature in two senses: a 'turn at speaking' and a 'turn at holding the floor'. *However*, those literatures use turn and floor interchangeably. As a result, the definitions of turn can be inferred from the concepts of floor.

… agreement, uncertainty, or disagreement with each question on an attitude toward PAS or euthanasia, and then the researcher could analyze such data *obviously*.

Intermediate learner 3

As a reading test, authenticity is not *obviously* shown.

Intermediate learner 4

…, it cannot be clear cut whether the test is reliable since what happened during administration and scoring process is not clearly described. *However*, in order to write a good test, such reliability issues should be taken into account.

Intermediate learner 5

The techniques of developing students' pragmatic competence are suggested by many scholars, *however*, can be classified into three broad groups: …

Austin *firstly* proposed in 1962 that people do not use language to "say" things, but also use to "do" things …

5.8 Summary

This chapter discusses the findings on the syntactic variation of English adverbs in the interlanguage of Thai learners and how they fit in the context of other research addressing related issues. The group results show that the range of positions of adjunction is similar between the native and the advanced groups, whereas the intermediate group place adverbs in fewer positions (sections 4.3.3 and 4.3.4). The findings further reveal more noticeable differences between the three groups in terms of the adjacency condition (sections 4.3.3 and 4.3.4). Specifically, the native group puts adverbs in I1, M2, and M4 to more or less the same extent. On the other hand, the position in which the advanced and the intermediate groups adjoin most adverbs is I1, followed by M2 and M4. These two pieces of evidence illustrate that parameter resetting has occurred, based on the L2 data, resulting in their use of a range of positions wider than that permitted in the L1 (sections 2.3.1 to 2.3.4 and 5.1). However, the learners may still be influenced by the [+strict adjacency] of Thai (sections 2.3.1 to 2.3.4 and 5.1). The reason for the incomplete resetting from the L1 to the L2 value is that the L2 data are not frequent and clear enough (section 5.1). Nevertheless, the fact that the advanced group place more adverbs in M2 and M4 than the intermediate group indicates that increased exposure to the L2 input will probably lead to a higher degree of adoption of the L2 parameter (section 5.1).

From the developmental point of view, the group data demonstrate that the adjacency condition and the range of positions of adjunction do not change drastically where the advanced group is concerned (section 4.4.1). The intermediate group, on the other hand, exhibits relatively more dramatic changes in both aspects (section 4.4.1). In addition, at the end of stage 3, although the advanced group is like the native group in terms of the range of positions, similarities between the two groups with respect to the adjacency condition can hardly be claimed (section

4.4.1). Despite its remarkable development, the intermediate group does not resemble the native group and the advanced group at the end of the learning period being investigated (section 4.4.1). In short, even at stage 3, both the advanced and the intermediate groups are not on a par with the native speakers with regard to the adjacency condition, being hampered by the [+strict adjacency] value associated with Thai. This might superficially be indicative of fossilisation, particularly in the case of the advanced group, whose grammar is presumably at an end state due to its quite stable characteristic and the learners' high proficiency level. However, it cannot be concluded that their interlanguage has fossilised since there might be periods in which development proceeds slowly, and thus change is difficult to detect (sections 5.2 and 5.3). In addition, a high level of proficiency does not invariably inhibit further development (section 5.2).

When the intermediate learners are monitored more closely, it has been found that their interlanguage develops both gradually and drastically (section 4.4.1). That is, new positions of adjunction are tried out slowly over time with the degrees of adjunction, especially in I1, M2, and M4, fluctuating considerably (section 4.4.1). At first glance, this might look unsystematic. In other words, it would not be possible for an interlanguage to exhibit at the same time both continua characterising gradual change and stages featuring drastic development. However, research has shown that this is likely since, for instance, accumulation of gradual change can trigger a dramatic development from one stage to another (section 5.3). Furthermore, the seemingly unpredictable movement associated with the acquisition of adverbs does not have anything to do with their optionality since inconsistencies in interlanguage development can nevertheless be found with obligatory items such as past time morphemes (section 5.3).

The analysis also shows that the descriptions of L2 learners' interlanguage and how it develops are not complete without individual variations being taken into consideration. As the

findings indicate, learners at a certain proficiency level are not equally competent in their knowledge and use of the L2 (section 5.4). With respect to the adjacency condition, a few of the advanced learners are more similar to the intermediate learners than others, and vice versa (section 4.3.4). This also happens to be the case where the range of positions of adjunction is concerned (section 4.3.4). As regards development, the drastic pattern associated with the intermediate learners can be identified for some of the advanced learners while some of the intermediate learners undergo the gradual path characteristic of the advanced learners (section 4.4.2). Indeed, acquiring the L2 grammar is a very individual experience (section 5.4). Furthermore, treating L2 learners as a group according to proficiency level may obscure what is actually going on in the data being analysed, resulting in imprecise interpretations of the results (section 5.4). For example, the similarities between some advanced learners and the natives and between some intermediate learners and the advanced learners will not be revealed should individual differences not be accounted for (sections 4.3.4, 4.4.2, and 5.4). The pitfall of group results is strongly indicated in the literature and should thus be a lesson to be borne in mind (section 5.4).

It seems that the interlanguage of Thai learners can be well explained in terms of the syntactic parameter, i.e. [+/-strict adjacency] setting. However, the data suggest little direct correlation between parameter resetting from the value of Thai to that of English and the acquisition of the range of positions of adjunction (sections 4.5 and 5.5). That is, although the learners are conservative with the setting of the L2, i.e. parameter resetting is only partial, the range of positions of adjunction is comparable between the native and the advanced groups (sections 4.3.3 and 4.3.4). In addition, new positions of adjunction are attempted regardless of the fact that the degree of adjunction in I1, M2, and M4 remains relatively stable (section 4.4).

Thus, the lexical parameter has been taken into the analysis (section 4.5). The findings reveal that the native group places adverbs in the majority of semantic classes in more positions than the advanced and the intermediate learners (section 4.5.1). Again, individual variations can be identified for some in the latter two groups (section 4.5.2).

The reason proposed as accounting for the differences between the three groups is that the lexical parameter associated with adverbs in Thai is less specified syntactically than that of English adverbs (section 5.5.1). That is, in Thai, adverbs in most semantic categories adjoin in only one position, whereas the majority of English adverbs subcategorise for a number of positions (section 5.5.1). However, since resetting from the L1 to the L2 lexical parameter is possible, based on positive evidence, the Thai learners place adverbs in most semantic classes in the positions not allowed in the L1 (section 5.5.1). Despite the parameter resetting, the range of positions of adjunction for adverbs is broadest for the native group, followed by the advanced group and the intermediate group, respectively (section 4.5). In other words, L1 lexical transfer may still constrain the Thai learners and that increased exposure to the L2 has important effects on the degree to which the lexical parameter is reset (section 5.5.1). Although the lexical parameter provides another analysis for the interlanguage of Thai learners, the syntactic parameter cannot be dropped altogether (section 5.5.2). This is due to the fact that parameter resetting on the syntactic level may be a necessary condition for that on the lexical level (section 5.5.2). Also, not only do the Thai learners put adverbs in different semantic classes in fewer positions, but they also place them mostly in I1, suggesting that transfer of the syntactic parameter of Thai may be involved (section 5.5.2).

Markedness theory being applied, the analysis shows that some positions of adjunction seem easier to acquire than others (section 5.6). For example, irrespective of semantic categories,

I1, M2, M4, F1, and F2 are acquired before M1 and M2, which emerge before I2, M5, M6, and M7. F3 appear to become productive last in the acquisition process. When adverbs are divided into their respective semantic types, specific orders of acquisition associated with them are also found. CONSEQUENTIAL adverbs, for instance, firstly occur in I1, M1, M2, and M4. Then, they emerge in M3 and M5. The early acquired positions also correspond with the positions of adjunction frequently used by the natives, suggesting that the frequency of L2 data has got something to do with L2 learners' order of acquisition.

Considerations regarding the processes underlying L2 learners' interlanguage development reveal that the advanced learners and the intermediate learners are differentially affected by language transfer, transfer of training, and avoidance strategy (sections 5.7.1 to 5.7.3). The advanced group is better off than the intermediate group in these respects. Nevertheless, both groups are similarly faced with the task of acquiring the semantics of English adverbs since semantic overgeneralisation is the area in which errors are found for them.

Whether the (syntactic) adjacency parameter or the lexical parameter is being considered, it is evident that the Thai learners in this study can acquire the syntax of English adverbs despite the dissimilarities between English and Thai as well as the extreme dearth and insufficient coverage of these non-obligatory modifiers in instructional L2 input. Where naturalistic L2 data are concerned, adverbs are also underrepresented in that they appear only around twelve to fifteen times per 1,000 words. Furthermore, when semantic types are taken into account, the number of adverbs in each position is severely low, accounting for only a few to several hundred words out of a total of hundreds of thousands (section 4.2 and Appendix). These situations satisfy White's (1989b, 2003) two criteria in providing convincing evidence for the presence of UG: underrepresentation of the L1 grammar and underrepresentation of the L2 input, strongly

suggesting that the parametric settings of English are accessible by L2 learners (to be discussed in greater detail in 5.11.1).

5.9 Answers to the research questions

The research questions are directly answered in relation to the above findings.

1. What is the range of positions of adjunction in the interlanguage of intermediate and advanced Thai learners, in comparison with that in the language of native speakers? What is/are the reason(s) for its occurrence?

The intermediate group placed adverbs in eleven positions, namely I1, I2, M1, M2, M3, M4, M5, M6, M7, F1, and F2, whereas both the advanced and the native groups adjoin adverbs in all the twelve positions (section 4.3.3). However, more differences between the three groups could be identified when the learners were tracked individually (section 4.3.4) and when adverbs were classified according to their semantic categories together with their positions of adjunction (sections 4.5.1 and 4.5.2). Although the advanced learners were not on a par with the natives, they placed adverbs in much more positions than the intermediate learners (section 4.3.4). Also, with the majority of more than thirty semantic classes of adverbs, the range of positions of adjunction was broader for the native group than for the advanced group and the intermediate group, respectively (sections 4.5.1 and 4.5.2). The learners' acquisition of the range of positions of adjunction involved the adjacency parameter and the lexical parameter (sections 5.1 and 5.5). The former operates on the syntactic level while the latter, as its name suggests, functions on the lexical level. Where these two parameters are concerned, Thai is a subset of English, but resetting from the narrower L1 to the wider L2 values is possible, based on positive evidence (sections 5.1 and 5.5). Thus, with more exposure to the L2, the advanced learners fared better

than their intermediate counterparts whether the adjacency parameter or the lexical parameter was taken into consideration (sections 4.3.3, 4.3.4, 4.5.1, 4.5.2, 5.1, and 5.5). However, resetting was partial for both groups and both parameters due to the infrequency and obscurity of the L2 input (section 5.1).

2. How does Thai learners' interlanguage with respect to the range of positions of adjunction develop over a period of two years? What is the extent of L1 transfer in terms of the adjacency condition during this period?

The range of positions of adjunction was acquired slowly, with the advanced learners showing more drastic development than the intermediate learners (section 4.4.3). L1 transfer in terms of the adjacency condition was quite strong across the periods being investigated. Even at the end of stage 3, both groups of learners did not parallel the natives (sections 4.4.1 to 4.4.3). Additionally, the intermediate learners were more influenced by the [+strict adjacency] setting of the L1 than the advanced learners (sections 4.4.1 to 4.4.3). In the light of the literature, however, the findings also suggest that further development is likely, possibly leading to resemblance between the advanced learners and the natives as well as between the intermediate learners and the advanced learners (sections 5.2 and 5.3).

5.10 Suggestions for future research

With regard to the range of positions of adjunction, this dissertation has shown that the intermediate learners were more affected by the adjacency condition of Thai and placed adverbs in fewer positions than the advanced learners (sections 4.3.3 and 4.3.4), suggesting that the former will become similar to the latter once a certain proficiency level has been reached (section 5.2). This further implies that the advanced learners will approximate the natives should their acquisition process still continue (section 5.2). However, to prove that over time the influence of the adjacency parameter really lessens and the range of positions of adjunction indeed gets wider, a longer period of investigation is necessary. Furthermore, instead of having only two groups of subjects as is the case in this study, it is advisable to include participants whose proficiency ranges from the very beginning level in which adverbs start to emerge to the very advanced one. In this way, a more complete picture of how the adjacency condition affects Thai learners along their developmental path and how the range of positions of adjunction evolves can be revealed. Additionally, it may be recalled that the present study has demonstrated that the connection between the adjacency condition and the range of positions of adjunction was quite weak (sections 4.3.3, 4.3.4, and 4.4.1 to 4.4.3). One likely cause of such an insignificant relationship is that the learners being explored were not at the initial stage of acquisition. Thus, incorporating learners from a stage earlier than that in this research will illustrate more clearly if there is any correlation between resetting from the [+strict adjacency] to the [+/-strict adjacency] parameter and the acquisition of the range of positions of adjunction.

Furthermore, the lexical parameters of English and Thai were only roughly described in this dissertation (section 5.5.1). Thus, how adverbs in English and Thai are syntactically specified is another interesting area which deserves detailed cross-linguistic explorations. In fact,

the syntax of adverbs has been a research priority for quite some time (e.g. Aarts, 1997; Biber *et al.*, 1999; Cobb, 2006a, 2006b; Ernst, 2002; Huddleston and Pullum, 2002; Jackendoff, 1972; Ouhalla, 1999; Radford, 1988; Roberts, 1997; Stowell, 1981). For instance, Cobb (2006a) has recently shown that adverbs in different semantic classes have different positions of adjunction[6]. To illustrate, discourse-oriented adverbs such as *thus, consequently* must appear high in the syntactic tree, adjoining in IP or I. As a result, they can adjoin clause-initially, e.g. *Thus he will move into the city*, between the subject and the complex verbal construction, e.g. *He thus will move into the city*, or between an auxiliary and a main verb, e.g. *He will thus move into the city*. Adverbs in this semantic category, however, cannot adjoin in the position following multiple auxiliaries since this will result in VP adjunction, for which they do not subcategorise, e.g. **He will have been thus promoted to an executive position by the end of the year*. Nevertheless, as Cobb (2006a) has considered only six broad semantic classes of adverbs, namely *evaluative, modal, evidential, subject-oriented, and manner*, a more in-depth analysis in which those in other semantic groups are investigated would be enlightening. Accordingly, Thai adverbs can be explored in relation to those in English to identify how Thai learners may be influenced by the different lexical parameters of the two languages.

Finally, in this dissertation, only the syntax of adverbs is dealt with. However, the acquisition of the semantics and pragmatics of adverbs in relation to their positions should also deserve attention. As Cobb (2006a), Ernst (2002), and Jackendoff (1972), for instance, have shown, where adverbs are placed has important consequences on their semantic and pragmatic interpretations. To illustrate, the sentence *John, cleverly, has answered the phone* means that it is clever of John to have answered the phone but the way in which the answer was made may be stupid. On the other hand, the sentence *John has answered the phone cleverly* means that John

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[6] Earlier research along this line includes, for example, Ernst (2002), Greenbaum (1969), Jackendoff (1972).

has answered the phone in a clever manner although it may not be clever of him to have answered it at all. Furthermore, the sentence *John has <u>cleverly</u> answered the phone* is ambiguous between the two interpretations. Thus, it will be thought-provoking to see if L2 learners can distinguish these different readings of adverbs as well as why, when and how they can come up with such knowledge. This line of research has never been conducted.

5.11 Implications of the study

5.11.1 Can the syntax of adverbs be acquired?

The acquisition of the syntax of English adverbs by Thai learners is intriguing in that it satisfies White's (2003) criteria for providing convincing evidence that learners have access to the properties of the L2, namely *underdetermination of the L1 grammar* and *underdetermination of the L2 input* (p. 23). With respect to underdetermination of the L1 grammar, White (2003) notes the differences between L1 and L2 acquisition. In L1 acquisition, learners start from scratch, developing a grammar purely on the basis of the input they receive. As empirical evidence reveals a great mismatch between L1 acquirers' grammar and the input, UG is thus undoubtedly in operation in L1 acquisition. L2 learners, however, are faced with a different sort of learning task. That is, they come to the learning task already equipped with the L1 grammar. This means that if they demonstrate competence in the L2, UG cannot be directly claimed, since they may be only drawing on the resemblance between the L1 and the L2 grammars. Thus, strong evidence of UG would come from a situation when the two systems bear no or little similarities, and yet L2 learners can still arrive at the grammar of the L2. In other words, to show that UG is indeed accessible, the area of linguistic competence investigated must be underdetermined by the L1 grammar.

But L2 learners' internal grammar may develop from the L2 input (White, 1989b, 2003). Unlike L1 acquirers, who receive only naturalistic data, L2 learners receive both instructional and naturalistic data. Thus, if L2 learners appear to have acquired knowledge of the L2 grammar, it may be not be the case that they are constrained by UG, but only that they benefit from the L2 input. Thus, White (1989; see also White, 2003) argues that evidence of UG should come from the situation in which L2 learners can acquire the "abstract, complex and subtle properties of grammar," (p. 22) which cannot be deduced from "statistical inferencing based on frequency of occurrence, on the basis of analogy, or on the basis of instruction" (p. 23). In other words, if L2 learners' interlanguage grammar can be shown to outpace the L2 input received, then, it can be claimed that UG is accessible. White (2003) further adds that difference in the linguistic competence of L2 learners and native speakers should not be taken as indicative of the absence of UG. Rather, as far as L2 learner's grammar reflects the complex and subtle properties which the L2 input cannot account for, UG is automatically implicated.

The situation here can be assumed to truly meet the above two requirements. English and Thai differ markedly with regard to positions of adjunction relative to the clause. While English permits adjunction in up to twelve positions, Thai allows only two. Thus, Thai learners cannot resort to their L1 grammar at all since nothing in the L1 tells them which positions are possible in the L2. With respect to instructional L2 input, it has been shown in 5.7.2 that the treatment of adverbs in ESL textbooks does not seem comprehensive enough to equip the learners with the knowledge which will guide them in acquiring the syntax of English adverbs. Furthermore, the content presented in those textbooks can misguide the learners into thinking that there are a few fixed positions in which adverbs can be placed. If the native corpus in this study is taken to be one source of naturalistic L2 data to which the learners have been exposed, it would not help

much either. This is particularly the case where the lexical parameter is concerned, since the occurrence of adverbs in different semantic classes is far from frequent. For example, although in the native corpus, CONSEQUENTIAL adverbs appear 169 times in I1, they occur only less than ten times in most of the other positions (Appendix). This also applies to adverbs in the other semantic categories because the frequencies associated with them are much lower than that for CONSEQUENTIAL adverbs (Appendix). Note that the corpus is nearly as many as 250,000 words in size. Despite the hindrances in terms of the L1 grammar and the L2 input, the extent to which the Thai learners have acquired the syntax of adverbs in English is surprising, and no more needs to be said.

5.11.2 Promoting L2 learners' acquisition of adverbs

Although the findings in the present study suggest that the syntax of adverbs can be acquired without explicit instruction, it would be provocative to conclude that it should not at all be drawn to L2 learners' attention. To promote L2 learners' acquisition of adverbs, Gass's (1988, cited in Ellis, 1994) cognitive framework can be applied. According to her, L2 input would go into thin air without being noticed, noticed input would not be meaningful without being comprehended, comprehended input would not play its role without being absorbed as intake, intake would not really be useful without being turned into implicit and explicit knowledge, as shown in the following diagram.

```
                                           ┌─────→  explicit
                                           │        knowledge
L2 ----|--→ noticed -----→ comprehended -----→ intake -----→   implicit ------|-→  L2
input       input         input                        knowledge        output
                                                       (IL⁷ system)
```
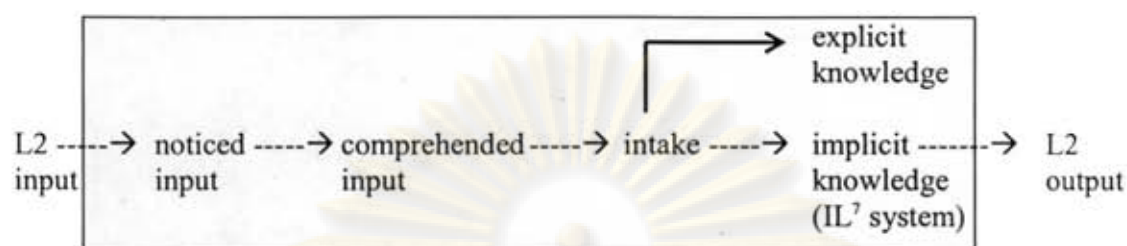
Gass (1988, cited in Ellis, 1994) further elaborates on her idea, saying that the features of

input will be noticed if they are salient and coincide with the learners' existing knowledge of the

L2. The noticed input will be comprehended if the message which goes with it gets across to the

learners. The comprehended input will become intake if the process of mediation occurs between

the input and the learners' internal grammar (Chaudron, 1985, cited in Ellis, 1994). The intake, if

integrated, will turn into implicit knowledge, i.e. part of the learners' interlanguage grammar.

Should integration not occur, the intake will become explicit representation of the L2 grammar,

i.e. the learners are able to recall rules but not be capable of applying them in their speech and

writing. The concept is clear; what remains is how it can be put into practice.

To apply the above framework in promoting L2 learners' acquisition of adverbs,

suggestions are made as follows. First, adverbs should be introduced to those who have been

exposed to English to some degree as empirical research suggests that adverbs are not likely to

become productive in the interlanguage of the learners who are at early stages of acquisition (cf.

Dissosway, 1984; Eubank, 1994; Sauter, 2002). When they seem to be ready, their attention

should be first drawn to FREQUENTATIVE adverbs (e.g. *often, frequently*) and VP-RELATED

adverbs (e.g. *quickly, slowly*) since these semantic categories presumably emerge first in L2

learners' language. This is reflected by the fact that several studies explore the acquisition of

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⁷ IL = interlanguage

these adverbs by learners with limited exposure to the L2 (e.g. White, 1989a, 1991a, 1991b). To make the input noticeable to the learners, form-focused instruction may be applied together with the use of authentic materials containing FREQUENTATIVE and VP-RELATED adverbs which are typographically enhanced (cf. Ellis, 2001; Ellis, 1994). Ideally, such materials should be adapted so that their positions within the clause are varied, and the learners will thus realise that adverbs in a certain group can be placed in more than one position. This should also be accompanied by explanations so that the noticed input is comprehensible. To turn the comprehended input into intake, several series of activities which may aid in the mediation between the input and the learners' grammar are recommended.

First, the learners are to identify from the learning materials where they think FREQUENTATIVE and VP-RELATED adverbs can adjoin. Then, they point out which verbs go with these adverbs. After that, the learners are encouraged to say or write sentences combining the verbs and the adverbs whilst varying adverbial positions. Next, they take turn telling their daily routines using FREQUENTATIVE and VP-RELATED adverbs while being monitored by the teacher. Finally, they are to write down what their friends have told them in the turn-taking activity. These processes can then be adapted in extending the learners' knowledge on adverbs to those in other semantic categories since each has different syntactic behaviours. The suggested guidelines will hopefully lead to absorption of the comprehended input, i.e. intake. The intake, as mentioned earlier, will become part of L2 learners' grammar if integrated. Nevertheless, this does not occur easily and within a short period of time (Ellis, 1994), and the teacher is thus bound to reflect on activities which really result in interlanguage development with respect to positions of adjunction.

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APPENDIX

The semantic categories of adverbs which appear in each position

Position	Semantic category	Native	Advanced	Intermediate
I1	Concessive	20	54	11
	Consequential	169	232	169
	Adversative	283	210	163
	Concessive: continuative	2	7	1
	Additive: contrastive	2	4	1
	Additive/serial order	150	325	232
	Epistemic	35	6	2
	Necessity	9	0	0
	Non-epistemic	14	2	4
	Metalinguistic	32	37	24
	Reinforcing	59	0	0
	Evidential	19	24	1
	Factual	2	3	1
	Temporal: general	17	7	2
	Temporal 2	1	2	0
	Summation/final	57	33	24
	Simultaneous	28	13	8
	Future: proximate	7	0	0
	Future: non-proximate	9	7	6
	Preterite: recent	5	3	2
	Irregular	4	17	5
	Frequentative	5	3	0
	Habitual/general	18	9	7
	Repetitive	34	6	5
	Restrictive	14	10	1
	Evaluative	30	8	2
	VP-related	28	8	6
I2	Concessive	0	0	1
	Consequential	9	0	0
	Adversative	59	1	2
	Additive/serial order	1	0	0
	Evidential	1	0	0
	Simultaneous	1	0	0
	Future: non-proximate	1	0	0
	Irregular	0	3	0
	Completive	1	0	0
	Evaluative	1	0	0
	Amplifier/intensifier	0	1	0

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M1	Concessive	1	0	0
	Consequential	9	12	2
	Adversative	27	6	5
	Concessive: continuative	4	1	0
	Additive/serial order	1	4	1
	Additive: unexpected	0	2	1
	Epistemic	5	3	3
	Necessity	1	0	0
	Non-epistemic	2	2	0
	Metalinguistic	1	1	0
	Reinforcing	1	0	0
	Evidential	3	0	0
	Factual	2	0	0
	Temporal: general	1	1	0
	Future: non-proximate	0	1	0
	Preterite: recent	1	0	0
	Irregular	1	1	2
	Frequentative	6	0	0
	Habitual/general	2	1	0
	Repetitive	0	1	0
	Permanent	2	0	0
	VP-related	4	0	0

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M2	Concessive	4	1	0
	Consequential	89	35	2
	Adversative	77	10	9
	Concessive: continuative	22	13	6
	Additive/serial order	173	143	58
	Additive: unexpected	5	6	3
	Epistemic	18	15	1
	Necessity	17	0	0
	Non-epistemic	8	5	0
	Metalinguistic	30	12	2
	Reinforcing	1	0	0
	Evidential	14	7	0
	Factual	3	5	0
	Temporal: general	55	6	1
	Temporal 2	5	3	0
	Summation/final	9	6	1
	Simultaneous	6	2	1
	Future: proximate	10	0	1
	Future: non-proximate	7	0	0
	Preterite: recent	2	1	0
	Anterior	1	2	5
	Irregular	9	5	2
	Frequentative	51	22	2
	Habitual/general	44	41	8
	Repetitive	9	1	0
	Permanent	8	5	1
	Completive	1	0	1
	Partial	1	0	1
	Restrictive	24	17	3
	Evaluative	8	0	0
	VP-related	93	33	24
	Insignificant degree	6	2	2

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M3	Consequential	8	1	0
	Adversative	2	0	0
	Concessive: continuative	5	1	0
	Additive: contrastive	2	0	0
	Additive/serial order	36	21	1
	Additive: unexpected	4	0	0
	Epistemic	8	0	0
	Necessity	1	0	0
	Non-epistemic	1	0	1
	Metalinguistic	2	0	0
	Reinforcing	3	1	0
	Evidential	3	0	0
	Temporal: general	19	6	0
	Temporal 2	4	0	0
	Durative	2	0	0
	Summation/final	2	0	0
	Future: proximate	0	1	0
	Future: non-proximate	0	1	0
	Preterite: recent	3	0	0
	Anterior	0	1	0
	Irregular	0	1	0
	Frequentative	6	1	1
	Habitual/general	7	3	0
	Repetitive	0	3	0
	Permanent	1	2	0
	Restrictive	9	4	0
	VP-related	12	0	1
	Insignificant degree	0	0	1

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M4	Concessive	1	0	0
	Consequential	27	5	2
	Adversative	6	0	0
	Concessive: continuative	25	9	6
	Additive: contrastive	2	0	3
	Additive/serial order	121	72	20
	Additive: unexpected	9	4	5
	Epistemic	39	7	2
	Necessity	18	5	0
	Non-epistemic	9	1	2
	Metalinguistic	31	3	3
	Reinforcing	9	0	0
	Evidential	11	4	4
	Factual	1	4	1
	Temporal: general	57	28	2
	Temporal 2	16	17	3
	Durative	3	0	1
	Summation/final	7	4	0
	Simultaneous	2	1	0
	Future: proximate	11	1	0
	Future: non-proximate	5	5	0
	Preterite: recent	19	0	2
	Anterior	5	21	13
	Irregular	15	12	4
	Frequentative	75	31	6
	Habitual/general	57	60	8
	Repetitive	2	6	0
	Permanent	37	7	5
	Completive	7	5	2
	Partial	3	0	0
	Restrictive	35	11	1
	Evaluative	5	1	0
	VP-related	238	87	47
	Insignificant degree	14	0	3

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M5	Consequential	5	1	0
	Concessive: continuative	0	1	3
	Additive/serial order	7	3	0
	Additive: unexpected	0	0	1
	Non-epistemic	1	0	0
	Temporal: general	2	1	0
	Irregular	0	1	1
	Frequentative	1	0	0
	Habitual/general	3	0	0
	Restrictive	1	0	0
	VP-related	4	1	0
M6	Consequential	5	0	0
	Concessive: continuative	2	0	1
	Additive/serial order	10	4	0
	Additive: unexpected	1	0	0
	Epistemic	3	0	0
	Necessity	0	1	0
	Non-epistemic	1	0	0
	Evidential	0	1	0
	Temporal: general	2	1	0
	Future: non-proximate	0	2	0
	Preterite: recent	1	0	0
	Irregular	1	0	0
	Frequentative	2	0	0
	Habitual/general	3	1	0
	Permanent	0	1	0
	Partial	1	0	0
	Evaluative	1	0	0
	VP-related	10	2	0

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
M7	Adversative	1	0	0
	Additive/serial order	1	1	0
	Additive: unexpected	1	0	0
	Metalinguistic	1	1	0
	Evidential	1	0	0
	Factual	1	0	0
	Simultaneous	1	0	0
	Future: proximate	2	0	0
	Future: non-proximate	1	0	0
	Habitual/general	0	2	0
	Permanent	1	0	0
	Completive	3	1	2
	VP-related	20	15	2

The semantic categories of adverbs which appear in each position (continued)

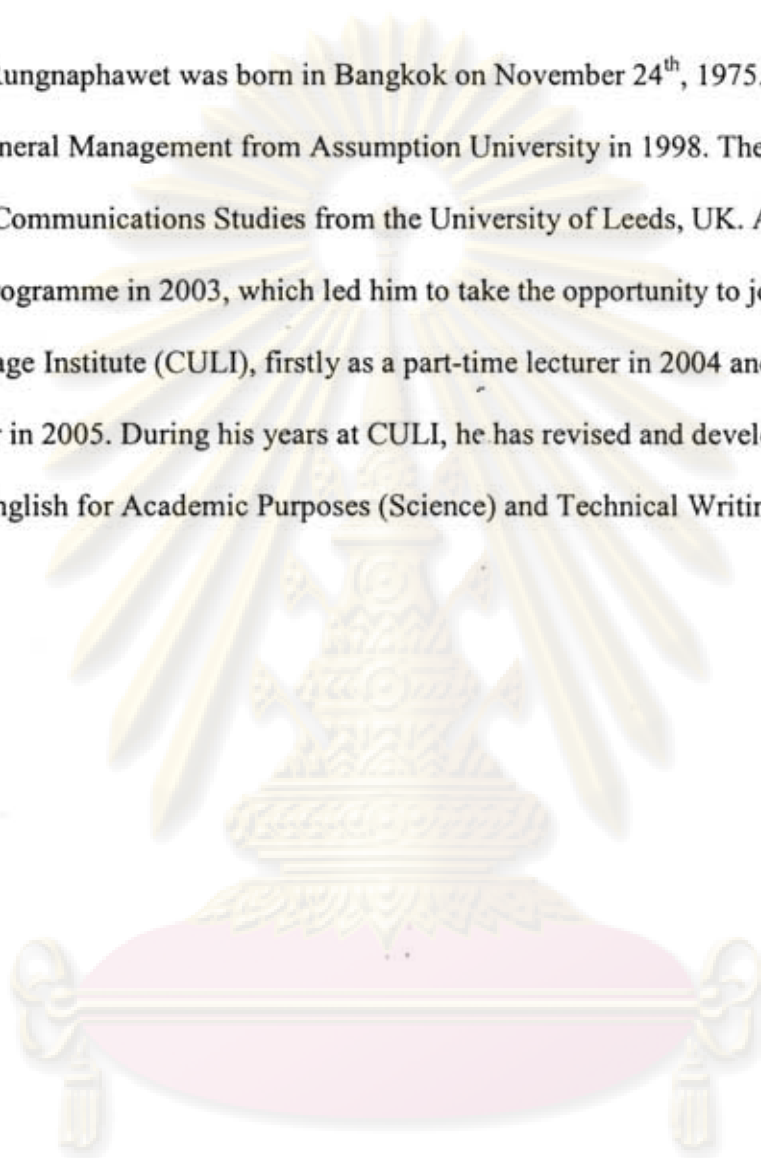| Position	Semantic category	Native	Advanced	Intermediate
F1	Concessive	2	0	0
	Consequential	7	0	0
	Adversative	23	0	0
	Additive/serial order	9	1	2
	Epistemic	8	0	0
	Non-epistemic	1	0	0
	Metalinguistic	0	3	0
	Evidential	2	0	0
	Temporal: general	2	0	0
	Temporal 2	0	1	0
	Summation/final	2	0	0
	Simultaneous	0	2	1
	Future: proximate	13	0	0
	Future: non-proximate	9	3	1
	Preterite: recent	2	0	0
	Frequentative	8	8	2
	Habitual/general	5	1	1
	Repetitive	5	3	0
	Completive	6	2	0
	Partial	4	0	0
	Restrictive	1	1	0
	VP-related	139	55	21
	Insignificant degree	1	0	0

The semantic categories of adverbs which appear in each position (continued)

Position	Semantic category	Native	Advanced	Intermediate
F2	Concessive	1	0	0
	Consequential	10	5	0
	Adversative	14	4	1
	Additive/serial order	9	32	22
	Epistemic	4	1	0
	Reinforcing	1	1	0
	Evidential	0	0	1
	Factual	0	1	0
	Temporal: general	3	0	0
	Temporal 2	1	5	3
	Summation/final	0	2	1
	Simultaneous	4	7	2
	Future: proximate	2	2	0
	Future: non-proximate	13	4	4
	Preterite: recent	1	0	0
	Irregular	1	0	0
	Frequentative	6	3	9
	Habitual/general	4	0	1
	Repetitive	4	1	1
	Completive	1	2	0
	VP-related	127	75	64
	Insignificant degree	0	1	1
F3	Additive/serial order	4	0	0
	Future: proximate	2	0	0
	Completive	1	0	0
	VP-related	15	1	0
	Insignificant degree	0	4	0

BIOGRAPHY

Rananda Rungnaphawet was born in Bangkok on November 24th, 1975. He qualified with a BBA in General Management from Assumption University in 1998. Then in 2001, he earned an MA in Communications Studies from the University of Leeds, UK. After that, he entered the EIL programme in 2003, which led him to take the opportunity to join Chulalongkorn University Language Institute (CULI), firstly as a part-time lecturer in 2004 and then as a full-time staff member in 2005. During his years at CULI, he has revised and developed a number of courses such as English for Academic Purposes (Science) and Technical Writing for Engineering.