

AN INTERLANGUAGE STUDY OF ENGLISH DISCOURSE CONNECTORS IN  
ARGUMENTATIVE ESSAYS BY THAI UNIVERSITY STUDENTS.

Miss Kamolphan Jangarun



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การศึกษาภาษาในระหว่างของหน่วยเชื่อมโยงปริเฉทของภาษาอังกฤษในการเขียนเรียงความเชิง  
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By Miss Kamolphan Jangarun

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Thesis Advisor Assistant Professor Sudaporn Luksaneeyanawin, Ph.D.

---

Accepted by the Graduate School, Chulalongkorn University in Partial Fulfillment of the Requirements for the Doctoral Degree

..... Dean of the Graduate School  
(Associate Professor Sunait Chutintaranond, Ph.D.)

#### THESIS COMMITTEE

..... Chairman  
(Associate Professor Nattama Pongpairoj, Ph.D.)

..... Thesis Advisor  
(Assistant Professor Sudaporn Luksaneeyanawin, Ph.D.)

..... Examiner  
(Associate Professor Wirote Aroonmanakun, Ph.D.)

..... Examiner  
(Assistant Professor Raksangob Wijitsopon, Ph.D.)

..... External Examiner  
(Associate Professor Jirapa Vitayapirak, Ph.D.)

กมลพรรณ แจ่มอรุณ : การศึกษาภาษาในระหว่างของหน่วยเชื่อมโยงปริเฉทของภาษาอังกฤษในการเขียนเรียงความเชิงโต้แย้งในนิสิตไทยระดับมหาวิทยาลัย (AN INTERLANGUAGE STUDY OF ENGLISH DISCOURSE CONNECTORS IN ARGUMENTATIVE ESSAYS BY THAI UNIVERSITY STUDENTS.) อ.ที่ปริกษาวิทยานิพนธ์หลัก: ศศ. ดร. สุดาพร ถักนิช นาวิน, 219 หน้า.

การศึกษาค้นคว้าครั้งนี้มีวัตถุประสงค์เพื่อศึกษาการใช้หน่วยเชื่อมโยงปริเฉทของภาษาอังกฤษในเรียงความเชิงโต้แย้งโดยกลุ่มเจ้าของภาษาและกลุ่มนิสิตไทยซึ่งไม่ได้พูดภาษาอังกฤษเป็นภาษาแม่ ในสามแง่มุม คือ การเขียนและการใช้เครื่องหมายวรรคตอน วากยสัมพันธ์ และอรรถศาสตร์และวัจนปฏิบัติศาสตร์ โดยศึกษาปริมาณและข้อคิดในการใช้หน่วยเชื่อมโยงปริเฉท ข้อมูลในการวิจัยประกอบด้วยเรียงความ 20 ชิ้นของผู้เขียนที่เป็นเจ้าของภาษาโดยเลือกมาจากเรียงความจำนวน 43 ชิ้นในคลังข้อมูลล็อกเนส (LOCNESS) สำหรับข้อมูลของกลุ่มนิสิตไทย สุ่มตัวอย่างจากเรียงความซึ่งเขียนโดยนิสิตไทยจำนวน 300 คนจากหลากหลายมหาวิทยาลัยในกรุงเทพมหานครและปริมณฑลรอบนอกกรุงเทพมหานคร โดยกำหนดเกณฑ์การเลือกสุ่ม โดยเลือกเรียงความของกลุ่มที่มีคะแนนประสบการณ์การสัมผัสภาษาอังกฤษสูงสุดจำนวน 20 ชิ้น และกลุ่มที่มีประสบการณ์การสัมผัสภาษาอังกฤษต่ำสุดจำนวน 20 ชิ้น รวมข้อมูลเรียงความเชิงโต้แย้งทั้งหมด 60 ชิ้น สำหรับการวิเคราะห์หน่วยเชื่อมโยงปริเฉท ใช้แนวความคิดของ ฮาลิดย์และฮาซาน (Halliday & Hasan, 1976) ไบเบอร์และคิมเบอร์ (Biber et al., 1999) และ โควาน (Cowan, 2008) มาสร้างกรอบการวิเคราะห์ในการวิจัยนี้ จุดประสงค์ของการศึกษาค้นคว้าครั้งนี้คือ (1) เพื่ออธิบายการใช้หน่วยเชื่อมโยงปริเฉทของภาษาอังกฤษในเรียงความเชิงโต้แย้งของกลุ่มเจ้าของภาษา กลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษสูง และ กลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษต่ำ (2) เพื่อเปรียบเทียบความเหมือนและความต่างของการใช้หน่วยเชื่อมโยงปริเฉทในเรียงความเชิงโต้แย้งของกลุ่มตัวอย่างทั้งสามพร้อมทั้งระบุปัญหาของการใช้หน่วยเชื่อมโยงปริเฉทในเรียงความเชิงโต้แย้งในกลุ่มนิสิตไทยซึ่งไม่ได้พูดภาษาอังกฤษเป็นภาษาแม่ทั้งสองกลุ่ม และ (3) เพื่อวิเคราะห์รูปแบบและปัญหาของการใช้หน่วยเชื่อมโยงปริเฉทในเรียงความเชิงโต้แย้งระหว่างกลุ่มนิสิตไทยที่มีประสบการณ์ทางภาษาต่างกัน ในแนวทางของการศึกษาในระหว่าง การศึกษาค้นคว้าครั้งนี้มีการใช้ทั้งสถิติเชิงพรรณนา และ สถิติเชิงอนุมานในการพรรณนาข้อคิดและทดสอบว่าความแตกต่างที่พบในกลุ่มตัวอย่างทั้งสามมีความต่างอย่างมีนัยสำคัญหรือไม่

การวิจัยได้ผลดังนี้ (1) ความถี่ของการใช้หน่วยเชื่อมโยงปริเฉทภาษาอังกฤษในสามกลุ่มตัวอย่างมีความแตกต่างกันอย่างมีนัยสำคัญในประเภทของความเป็นเหตุและผล และประเภทเวลาระหว่างกลุ่มเจ้าของภาษาและกลุ่มนิสิตไทยซึ่งไม่ได้พูดภาษาอังกฤษเป็นภาษาแม่ทั้งสองกลุ่ม (2) ในแง่ของข้อคิดในการสะกดคำและการใช้เครื่องหมายวรรคตอน มีการใช้หน่วยเชื่อมโยงปริเฉทที่แตกต่างกันระหว่างกลุ่มเจ้าของภาษาและกลุ่มนิสิตไทย อธิบายได้ว่าเกิดจากการถ่ายโอนทางภาษา จากข้อสรุปเกินเหตุ และจากการขาดความรู้การใช้เครื่องหมายวรรคตอนในภาษาอังกฤษ (3) ในแง่ของวากยสัมพันธ์ กลุ่มเจ้าของภาษา และกลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษสูงมีปัญหาในการใช้หน่วยเชื่อมโยงปริเฉทเหมือนกันในรูปประโยคทั้งสามแบบรวมทั้งตำแหน่งที่เกิดของหน่วย ในขณะที่กลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษต่ำมีความแตกต่างกับกลุ่มตัวอย่างอื่นอย่างมีนัยสำคัญ ความแตกต่างในการใช้หน่วยเชื่อมโยงปริเฉทของกลุ่มตัวอย่างทั้งสามอาจมาจากผลกระทบของปัจจัยทั้งห้าข้อซึ่งเป็นผลมาจากกระบวนการพัฒนาของภาษาในระหว่างของผู้เรียนภาษาที่สอง ได้แก่ การโอนถ่ายโอนทางภาษา การถ่ายโอนจากการสอน กลยุทธ์การสื่อสารภาษาที่สอง กลยุทธ์การเรียนรู้ภาษาที่สอง และ การสร้างข้อสรุปเกินเหตุ (4) ในแง่ของอรรถศาสตร์และวัจนปฏิบัติศาสตร์ พบว่ากลุ่มตัวอย่างมีการใช้หน่วยเชื่อมโยงปริเฉททั้งสิ้น 62 หน่วย โดยมีปริมาณคำที่ใช้ทั้งสิ้น 865 คำ มีหน่วยเชื่อมโยงปริเฉท 2 หน่วยที่ทำหน้าที่ที่หลากหลายในทางวัจนปฏิบัติศาสตร์ คือ “and” ซึ่งนับความถี่รายคำได้ 22 ครั้ง และ “finally” ซึ่งนับความถี่รายคำได้ 3 ครั้ง หน่วยเชื่อมโยงปริเฉททั้งสองนี้ไม่ได้ถูกใช้ในลักษณะที่ความหมายทางอรรถศาสตร์และหน้าที่ทางวัจนปฏิบัติศาสตร์ตรงกัน ทั้งนี้พบว่า “and” ไม่ได้นำมาใช้ในหน้าที่ของการเพิ่มเติมความเท่านั้นแต่ยังนำมาใช้กับการแสดงความขัดแย้ง และการแสดงเหตุและผล ในขณะที่ “finally” ซึ่งในทางอรรถศาสตร์อยู่ในประเภทการลำดับ พบว่ามีนำมาใช้ในการแสดงเหตุและผล และการสรุป ส่วนกลุ่มเจ้าของภาษาและกลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษสูงมีรูปแบบการใช้ “and” และ “finally” ที่คล้ายกัน ในทางกลับกันกลุ่มนิสิตไทยที่มีการสัมผัสภาษาอังกฤษต่ำมีการใช้หน่วยเชื่อมโยงปริเฉทอยู่ในลักษณะที่ต่างออกไป ผลการศึกษาสามารถนำไปเป็นแนวทางในการศึกษาวิจัยและประยุกต์ใช้กับการเรียนการสอนหน่วยเชื่อมโยงปริเฉทต่อไป

# # 5487751820 : MAJOR ENGLISH AS AN INTERNATIONAL LANGUAGE

KEYWORDS: ARGUMENTATIVE ESSAYS / DISCOURSE CONNECTORS / INTERLANGUAGE / SEMANTICS-PRAGMATICS

KAMOLPHAN JANGARUN: AN INTERLANGUAGE STUDY OF ENGLISH DISCOURSE CONNECTORS IN ARGUMENTATIVE ESSAYS BY THAI UNIVERSITY STUDENTS..  
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The study examined the use of English discourse connectors (DCs) in three main aspects: Orthography, Syntax, and Semantics and Pragmatics including the frequency of use and errors of DC lexis in argumentative essays written by native speakers of English (NSs), and non-native speakers of English (NNSs). For the NSs, 20 essays out of 43 essays from English native speaker undergraduate corpus, LOCNESS, was employed in this study. For the NNSs, the data were drawn from the essays written by 300 students from various universities in and around Bangkok. The 40 essays of the NNSs were selected: 20 from the top high English exposure (NNSHs), and 20 from the bottom low English exposure (NNSLs) by using English Language Exposure Questionnaire scores. Altogether, there were 60 argumentative essays randomly specified and selected for this study. For the DCs analysis, the frameworks proposed by Halliday & Hasan (1976), Biber *et al* (1999), and Cowan (2008) were adopted and employed. The aims of the study were (1) to describe the use of English DCs of NSs, NNSHs, and NNSLs, (2) to compare and contrast the DCs used in argumentative essays among NSs, NNSHs, and NNSLs, and identify the problems of the DCs used in the two NNS groups, and (3) to analyze the patterns and problems of DC usage in argumentative essays between NNSHs and NNSLs. The clarification was based on interlanguage study. Both descriptive statistic, and inferential statistic were used to describe the data and to test whether the differences found among the sample groups were significant or not.

The following findings were found, (1) the frequency of the use of English discourse connectors among the three sample groups was significant difference in the Causal and Temporal types between the NSs and both of the NNSs., (2) in terms of the Orthography, the use of DCs were different between the NSs and the NNSs due to negative L1 transfer, overgeneralization, and insufficient knowledge in punctuation usage, (3) in terms of Syntax, the NSs and the NNSHs showed the similarity in the use of all the three sentence types and the sentential positions, whereas the NNSLs showed significant differences in the use of all three sentence types, and the sentence initial position. The differences in the use of DCs in the NSs and both groups of the NNSs could be the effect of all the five factors caused by interlanguage development i.e. Language Transfer, Transfer of training, Strategies of second language communication, Strategies of second language learning and Overgeneralized, and (4) in terms of Semantics and Pragmatics, It was found that out of the 62 DCs lexis with a total of 865 tokens that were used, the 2 DCs lexis “and” with 22 tokens, and “finally” with 3 tokens exhibited their multi pragmatic functions, i.e., there were not a one-to-one relationship between their semantic functions and the pragmatic uses. “and” was found used not only as “additive” but also as “adversative” and “causal”. “finally” in the “ordering” semantic category was found used as “ordering” as well as “causal” and “summation”. The NSs and the NNSHs had similar patterns of the use of “and” and “finally”. Conversely, the NNSLs showed the differences in the use of DCs in this aspect. Based on the findings of the study, recommendations for further research and pedagogical implications are given in order to develop the way in which discourse connectors should be investigated and taught.

Field of Study: English as an International Language    Student's Signature .....

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# CHAPTER I

## INTRODUCTION

### **1.1 Background of the study**

Due to the fact that English is now one of the most important international languages and it is also the most significant foreign language in the world (Crystal, 2003), the Thai government and the Ministry of Education introduced English as a subject in the curriculum for Thai students. Moreover, Southeast Asian countries have been bonded together in partnership as the ASEAN Economic Community (AEC) since 2015. Thailand has to prepare herself for both being a good member and supporting the growth of ASEAN as a whole (Office of the Higher Education Commission, 2010). It is the fact that language is one of many mechanisms that plays an important role in AEC and from Charter of the Association of Southeast Asian Nations, Article 34 mentions that the working language of ASEAN shall be English.

Although English has become more and more important in Thailand, the assessment and evaluations of the average English level of Thai students have revealed unsuccessful and unsatisfactory results. Firstly, the result of English Proficiency Index 2014 by Education First which published on the website revealed that the proficiency index of Thai is at the very low proficiency level lower than Malaysia, Singapore, Indonesia and Vietnam. Table 1.1 showed that Thailand had very low English proficiency.

Table1. 1: English Proficiency Index by Country/Region (2014)

English Proficiency Index by Country/Region (2014)		
Country	Rating (out of 63 countries)	Proficiency Level
Malaysia	12	High Proficiency
Singapore	13	High Proficiency
Indonesia	28	Moderate Proficiency
Vietnam	33	Low Proficiency
Thailand	48	Very Low Proficiency
Cambodia	61	Very Low Proficiency

Source: <http://media2.ef.com/~/media/centraleftcom/epi/downloads/full-reports/v4/ef-epi-2014-english.pdf> Date Accessed: 21 April 2016.

The result of English proficiency showed not only in English First website, but also in the official ETS website. According to ETS website, on the 2014 Test of English for International Communication (TOEIC), Thailand ranked third, below the Philippines, Malaysia (see Table1.2). From the standardize test scores, it showed again that Thailand had a very low proficiency level both in listening skill and reading skill as well as the total test scores.

Table1. 2: TOEIC Performance by Country/Region (2014)

Country/Region	Listening Mean	Reading Mean	TOTAL Mean
Philippines	384	325	710
Malaysia	362	294	656
Thailand	274	207	481
Vietnam	249	229	478
Indonesia	234	188	421

Source: [https://www.ets.org/s/toEIC/pdf/ww\\_data\\_report\\_unlweb.pdf](https://www.ets.org/s/toEIC/pdf/ww_data_report_unlweb.pdf) Date Accessed: 21 April 2016

Moreover, referring to ETS website, on the 2015 Test of English as a Foreign Language (TOEFL) among Asian countries Thailand ranked 7<sup>th</sup> out of 9 countries. The total score of Internet-based of Thai candidates was better than Cambodia, and Laos, but was left behind Singapore, Philippines, Malaysia, Indonesia, Myanmar, and Vietnam (see Table 1.3). The results of the two standardize tests: TOEIC and TOEFL

suggested that Thai students needed to improve their English communicative competence in order to live, work, and meet the expectations of AEC.

Table 1. 3: TOEFL iBT Total and Section Score Means (2015)

No.	Countries	Reading	Listening	Speaking	Writing	Total
1	Singapore	24	25	23	25	97
2	Philippines	21	22	23	23	89
3	Malaysia	22	22	21	23	88
4	Indonesia	21	21	21	22	85
5	Myanmar	19	20	20	21	80
6	Vietnam	20	19	19	21	79
7	Thailand	19	19	19	20	77
8	Cambodia	15	16	19	18	68
9	Lao, People's Democratic Republic	14	16	19	18	67

Source: [https://www.ets.org/s/toefl/pdf/94227\\_unlweb.pdf](https://www.ets.org/s/toefl/pdf/94227_unlweb.pdf) Date Accessed: 21 April 2016

Writing is considered important as it expresses thoughts and opinions (Watcharapunyawong & Usaha, 2013). Writing has been proven to be the most difficult language skill for ESL and EFL students, and even for native speakers of English (Norrish, 1983; Hinkel, 2002; Jun, 2008; Watcharapunyawong & Usaha, 2013).

People do not communicate in a single word or a single sentence. They communicate in continuous sentences or phrases called discourse (Yodsirajinda, 2002). A discourse comprises more than one sentence connected by cohesion which refers to explicit links (Todd *et al.*, 2007). According to Halliday and Hasan (1976), and Sinicrope (2007), cohesion is a means for combining sequences of sentences together in order to form meaning as a whole. In order to be cohesion, the use of cohesive devices is employed to the text. As mentioned in Sinicrope (2007), some researchers (Witte & Faigley, 1981; Jin, 2001; Liu & Braine, 2005) have found a correlation between cohesive devices and a successful writing.

Furthermore, Dik (1997) suggested that discourse connectors were one of the main factors which showed the degree of coherence of a discourse. Connectors or discourse connectors are words and expressions that join one sentence to another sentence or one paragraph to another paragraph within a text. (Kalajahi *et al.*, 2012).

Previous studies showed that the use of conjunctions, linking adverbials or discourse connectors is one of the significant problems in ESL and EFL students' essay (S. R. Goldman & J. D. Murray, 1992; Milton & Tsang, 1993; Narita *et al.*, 2004; Fei,

2006; Bennui, 2008; Prommas & Sinwongsuwat, 2011; Watcharapunyawong & Usaha, 2013). Granger and Tyson (1996, p. 24) stated clearly that “connectors are difficult to master”. Crewe (1990, p. 320) also addressed that “Discourse connectives are difficult to process”.

Some researchers found that discourse connectors were likely to be embedded much more prominently in argumentative essays because writers needed to mark explicit relationships between ideas in order to develop the argument of the text (Granger & Tyson, 1996; Fei, 2006; Patanasorn, 2010; Rahimi & Qannadzadeh, 2010; Prommas & Sinwongsuwat, 2011).

This research focuses on discourse connectors (DCs) both structurally and semantically. There have been the interest of language researchers especially those who focus on language in use (Camiciottoli, 2010). For example, the DCs “although” and “but” are in adversative category (Halliday & Hasan, 1976), concession and contrast category (Biber et al., 1999), contrast category (Cowan, 2008), and contrastive category (Kalajahi *et al.*, 2012), which mean that “although” and “but” have the same semantic orientation, but in terms of structural orientation, they are different as “but” rarely occurs in the initial position in an academic writing.

The use of DCs in argumentative essays is investigated in this research because this writing genre has been proven by researchers (Richards & Schmidt, 1992; Gleason, 1999; Ferretti et al., 2007; W. Yang & Sun, 2012) Yang & Sun, 2012) to be the hardest writing type comparing with description, narration, and exposition both in L1 and L2 writing. In addition, Yang and Sun (2012) stated that discourse features were concerned in argumentative tasks; Yu and Atkinson (1988) reported in their work that when they compared L1 and L2 argumentative essays, L2 writers used less effective linking of arguments in English written text. In the work of Yang and Sun (2012, p.34), they stated:

“argumentative writing can be used as an effective tool that indexes the writers’ pragmatic sensitivity and written discourse competence in the second/foreign language by shedding light on their ability to produce linguistically and culturally appropriate discourse in that language.”

In this study, the interlanguage (IL) aspect of DCs in Thai university students is also investigated. IL refers to the linguistic system evidenced when second or foreign language learners try to present meanings in the target language (Selinker, 1992). It can

be said that interlanguage is the study of language learners' language (Corder, 1981). It is considered that an interlanguage system happened by the learners during their second language acquisition. It is different from both learners' native language (NL) and learners' target language (TL), but learners' perception links them together. Previous studies suggested that in EFL and ESL writing contexts, L1 characteristics were found in the writing of language learners who were in interlanguage stages (Kohro, 2009; Prommas & Sinwongsuwat, 2011; Watcharapunyawong & Usaha, 2013). Studying interlanguage among EFL students is necessary because it can explore the problems of second language acquisition stages.

In a nutshell, my research focuses on the usage of DCs in argumentative essays as their usages can create problems for foreign language learners in writing genre. In addition, this study includes the investigation and explanation for the differences in usage of DCs among native speakers of English (NSs), non-native speakers of English with high-English exposure (NNSHs) and non-native speakers of English with low-English exposure (NNSLs). The two Thai groups were divided by using the English Language Exposure Questionnaire (Centre for Research in Speech and Language Processing (CRSLP), 2002, 2011). The clarification is based on interlanguage study which makes it different from previous studies as it does not only compare and contrast the use of English discourse connectors among NSs, NNSHs, and NNSLs, but also analyze the use of DCs to find out the interlanguage stages.

## **1.2 Significance of the study**

1. In order to conduct this research, NNSs language corpus will be created and will be used for other educational purposes.
2. It will be useful for Thai EFL teachers and students to understand the problems of English DCs in interlanguage stages in argumentative essays.
3. It can be beneficial for Thai EFL students in learning how to write good English argumentative essays.
4. It can be a guideline for developing teaching materials on English writing skill, especially for argumentative essays.

### **1.3 Research questions**

1. What are the patterns of English discourse connector (DC) usage of native speakers of English (NSs), non-native speakers of English with high-English exposure (NNSHs) and non-native speakers of English with low-English exposure (NNSLs) in the argumentative essays?

2. Do the patterns and problems in the use of DCs in the two NNS sample groups differ from NS, and how?

3. What are the differences of the patterns and problems of DC usage in NNS argumentative essays between NNSHs, and NNSLs?

### **1.4 Research objectives**

Based on the research questions, the purposes of the study are:

1. To describe the use of English DCs of NSs, NNSHs and NNSLs in argumentative essays.

2. To compare and contrast the DCs used in argumentative essays among NSs, NNSHs, and NNSLs, and identify the problems of the DCs used in the two NNS groups.

3. To analyze the patterns and problems of DCs usage in argumentative essays between NNSHs, and NNSLs.

### **1.5 Research hypotheses**

To accomplish the objectives of the study, the following hypotheses were set:

1. NNSHs use DCs in argumentative essays in a more target like manner, whereas NNSLs use DCs in argumentative essays differently from NSs.

2. The problems of using DCs in NNSHs and NNSLs lie in not only interlingual factors: L1 transfer, but also other factors: transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization

3. NNSHs will have problems in structural orientation while NNSLs will have problems in the use of DCs usage involving both semantic orientation and structural orientation.

### **1.6 Scope of the study**

1. The theoretical semantic framework of DCs use in this study is adopted from Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008), whereas the theoretical syntactic framework is adopted from Biber *et al.* (1999), Bauer-Ramazani (2013), and Lenker (2011).

2. NNSHs and NNSLs are university students from different universities in and around Bangkok. (NNS corpus could be created).

3. English-native speakers' essays are from the Louvain Corpus of Native English Essays (LOCNESS) and the corpus in this study is from the University of Michigan.

### **1.7 Definition of terms**

The terms used in this study are as follows:

#### **1 Argumentative essay**

Argumentative essay is a genre of writing which writers have to prove their opinion, theory or hypothesis about an issue whether it is correct or more truthful than those of others. The objective of this kind of writing is to convince the readers of the acceptability of the standpoint taken (Oostdam, 2005).

#### **2 Coherence**

Coherence is the grammatical and semantic interconnectedness between sentences that form a text. It is the semantic structure which creates coherence. (Bussmann, 1996).

#### **3. Cohesion**

Cohesion is a means for combining sequences of sentences together which can be divided into two groups: grammatical cohesion and lexical cohesion in order to form a text (Halliday & Hasan, 1976). In order to be cohesion, the use of cohesive devices is employed to the text.



#### **4. Cohesive Devices**

Cohesive devices are basically single words or phrases that link different parts of the text. There are five types: (1) reference, (2) substitution, (3) ellipsis, (4) lexical cohesion, and (5) conjunction. This study focuses on only conjunction, and uses the term “discourse connectors” instead.

#### **5. Contrastive Analysis**

Contrastive analysis is a traditional approach based on a comparative study of the native language (NL) with the target language (TL) in order to investigate similarities and differences between the two languages so that problematic areas for the learner can be predicted (Pongsiriwet, 2001).

#### **6. Corpus**

Corpus is a collection of electronic texts which has been compiled for a particular reason based on a set of design, or criteria for linguistic research (Cheng, 2011).

#### **7. Discourse connectors**

Discourse connectors are words and phrases used to bridge or connect ideas within sentences to link two or more points together, or connect ideas in separate sentences or paragraphs.

#### **8. Error analysis**

Error analysis is a term used to investigate the errors which appear in learner’s language in order to determine whether errors are systematic, and try to explain what caused them (Center for Advanced Research on Language Acquisition, 2016).

#### **9. Interlanguage**

Interlanguage is a linguistic system constructed by learners when they attempt to communicate in the target language. The language in interlanguage stages are different from the native language and the target language (Selinker, 1988).

#### **10. Token**

Token refers to each word in a corpus irrespective of whether or not it is repeated (Cheng, 2011). For example, “My car is the most beautiful car in the world.” contains ten tokens.

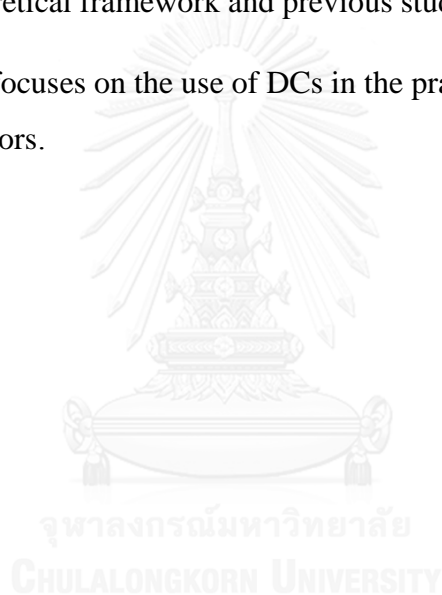
### **1.8 Limitation of the study**

This study was designed to gain more knowledge in the use of DCs in argumentative essays among the NSs, NNSHs, and NNSLs; however, there are some limitations in conducting the research.

1. The 300 Thai participants in this study were from universities in and around Bangkok from various faculties. The findings from this study may not be generalizable to most Thai university students in Thailand.

2. There is no interview section in this study, so the findings have to be interpreted from theoretical framework and previous studies.

3. This study focuses on the use of DCs in the pragmatic ways; therefore, there is no mark of DCs errors.



## CHAPTER II

### LITERATURE REVIEW

In this chapter, some theoretical frameworks related to this study are presented. They include: (1) argumentative essay, (2) cohesive devices in English, (3) cohesive devices in Thai, (4) the concept of interlanguage and (5) previous studies of discourse connectors.

#### **2.1 Argumentative essay**

Argumentative essay is a genre of writing which requires students to investigate a topic, collect and evaluate information, and set a position as pro or con on the topic (Baker, Brizee, & Angeli., 2013). It is the most common type of writing which undergraduate students have to write, especially students who are in the arts, humanities and social sciences (Mei, 2006; Hewings, 2010; Wingate, 2012). Argumentative essay is believed to be the most difficult type of academic writing both in L1 and L2 (Ferretti et al., 2007; Yang & Sun, 2012). In universities, students are required to collect data through interviews, surveys, observation, or experiments, so that students have enough details to side their positions as pro or con, and present their evidence to support the positions (Baker, Brizee, & Angeli., 2013). From what students are required to do in argumentative essays, many students have problems with this kind of writing as they do not have a clear picture of what argument is (Bacha, 2010).

According to Toulmin and Rieke (1984, cited in Wingate, 2012, p. 146), argument is “the sequence of interlinked claims and reasons that, between them, establish content and force of a position for which a particular speaker/writer is arguing”. Saito (2010) proposed that argument was the process in which writers or speakers thought clearly in what position they defended their ideas in writing or speech. From these scholars’ definitions of argument, it raises an awareness of how to develop a position and present the position with clear evidence.

Basically, argumentative essay genre takes five paragraphs format. The genre consists of introduction, statement of claim, three supporting paragraphs, and a concluding paragraph (Bacha, 2010). However, some researchers (Connor, 1987; Saito, 2010) stated that the process of written argumentation had four structural units: (1)

situation, (2) problem, (3) solution, and (4) evaluation. In argumentative writing, the writers state their position, give supporting reasons for the position, introduce a counter-argument and oppose it with further reasons, and restate the position (Hirose, 2003; Chin *et al.*, 2012). Other scholars, such as Hyland (1990) characterized argumentative structure into three stages: Thesis, Argument and Conclusion. In the thesis stage, there are four moves which are Gambit, Information, Evaluation, and Marker; all four moves introduce the proposition to be argued. Then, the argument stage consists of three moves: Marker, Claim and Support, their functions are to discuss and support thesis stage. The conclusion is the last stage which involves four moves: Marker, Consolidation, Affirmation and Close. Table 2.1 shows elements of structure of the argumentative essay.

Table 2. 1: Elements of structure of the argumentative essay (Hyland, 1990)

Hyland's framework	
<b>1. <u>Thesis Stage</u></b>	
1.1 <b>Gambit:</b>	to capture the reader's attention
1.2 <b>Informing moves:</b>	to present background material for topic contextualization
1.3 <b>Evaluation:</b>	to support proposition
1.4 <b>Marker:</b>	to identify a list
<b>2. <u>Argument Stage</u></b>	
2.1 <b>Marker:</b>	to signal the introduction of a claim
2.1.1	listing signals
2.1.2	transition signals
2.2 <b>Claim</b>	
2.2.1	strength of perceived shared assumptions
2.2.2	a generalization based on data or evidence
2.2.3	force of conviction to state reason for acceptance of the proposition
2.3 <b>Support:</b>	to support the claim
<b>3. <u>Conclusion Stage</u></b>	
3.1 <b>Marker:</b>	to signal conclusion boundary by using "thus", "therefore", "to conclude" etc.
3.2 <b>Consolidation:</b>	to refer back to previous content of the argument
3.3 <b>Affirmation:</b>	to restatement of the proposition
3.4 <b>Close:</b>	to widen context or perspective of proposition

From the Hyland's model, discourse connectors (DCs) or markers (Hyland's term) are factors which appear in all stages. His structure of argumentative essays supports the idea in which DCs are likely to be used the most in argumentative essays (Granger & Tyson, 1996; Fei, 2006; Patanasorn, 2010; Rahimi & Qannadzadeh, 2010; Prommas & Sinwongsuwat, 2011).

Another framework which is widely used is proposed by Purdue University Online Writing lab (Baker, Brizee, & Angeli, 2013). Based on the Purdue University Online Writing lab, the argumentative writing requires writers to investigate the topic, collect and generate information, evaluate evidence, and establish a position on the topic in a concise manner. To be an effective argumentative essay, there are five structures to follow as shown in Table 2.2 below.

Table2. 2: Elements of structure of the argumentative essay (Baker, Brizee, & Angeli, 2013)

Purdue OWL's framework
<ol style="list-style-type: none"> <li>1. A clear, concise and defined thesis statement in the first paragraph.</li> <li>2. Clear and logical transitions between the introduction, body and conclusion.</li> <li>3. Body paragraphs that include evidence support.               <ol style="list-style-type: none"> <li>3.1 It should be limited to discuss of one general idea.</li> <li>3.2 Each paragraph in the body must have some logical connection to the thesis statement in the opening paragraph</li> </ol> </li> <li>4. Evidential support</li> <li>5. A conclusion that does not simply restate the thesis, but readdresses it in light of the evidence provided               <ol style="list-style-type: none"> <li>5.1 Do not introduce any new information into the conclusion</li> <li>5.2 Restate the topic, review the main points, and review your thesis</li> </ol> </li> </ol>

Purdue's argumentative essays framework is explained by general explanation without any technical terms, so that any learners can read and understand it. This framework simplifies the complex explanation of argument in many frameworks. Argumentative essay has been approved by researchers (Richards & Schmidt, 1992; Gleason, 1999; Ferretti et al., 2007; W. Yang & Sun, 2012) to be the hardest writing type comparing with description, narration, and exposition both in L1 and L2 writing. As mentioned in Sinicrope (2007), some researchers (Witte & Faigley, 1981; Jin, 2001; Liu & Braine, 2005) have found a correlation between cohesive devices and successful

writing. In Halliday and Hasan's work (1976), the use of discourse connectors is one of the cohesive devices.

## **2.2 Cohesive devices in English**

According to Halliday and Hasan (1976), and Sinicrope (2007), cohesion is a means for combining sequences of sentences together in order to form meaning as a whole. Cohesion provides connectedness of a word in one sentence to another element in the text related to the semantic ties within the text (Todd *et al.*, 2007; Hameed, 2008; Xi, 2010). As mentioned in Todd *et al.* (2007), cohesion is the explicit linguistic devices which bridge sentences in a text, and due to the fact that these devices are clearly used at the surface level of a text, they are easily identified.

In order to be cohesion, the use of cohesive devices is employed to the text. Halliday and Hasan (1976) proposed that the use of cohesive devices helped texts achieve their status and communicative events. In Halliday and Hasan's work (1976), cohesive devices are distinguished between grammatical and lexical cohesion. There are five types of cohesive devices: (1) reference, (2) substitution, (3) ellipsis, (4) lexical cohesion, and (5) conjunction. Grammatical cohesion includes reference, substitution, ellipsis, and conjunction, whereas the lexical cohesion definitely is in the lexical cohesion part. The details of each cohesive device are as follows:

### **1. Reference**

Reference which relates one element of the text to another for its interpretation can be presented as endophoric or exophoric reference. The reference is divided into three subtypes, and all subtypes involve presupposition.

#### **1.1 Personal reference**

Personal reference refers to the category of person which includes personal pronouns, possessive adjectives and possessive pronouns. For example:

(1) Three blind mice, three blind mice.

See how they run! See how they run!

(Halliday & Hasan, 1976, p. 31)

In (1), “they” referred to “three blind mice”. Therefore, “they” was a personal reference.

### 1.2 Demonstrative reference

Demonstrative reference is a form of verbal pointing which shows a scale of proximity, and it is reference by means of location.

(2) I like the lions, and I like the polar bears. These are my favourites.

(Halliday & Hasan, 1976, p. 60)

In (2), the demonstrative reference “these” was used to refer back to “the lions” and “the polar bears” in the first sentence.

### 1.3 Comparative reference

Comparative reference is divided into two subtypes as follows:

#### 1.3.1 General comparison

General comparison is the comparison in terms of likeness and unlikeness. It is represented by a certain class of adjectives and adverbs. The likeness may take the form of (1) identity which means two things are the same thing or (2) similarity which means two things are like each other.

(3.1) It's the same cat as the one we saw yesterday.

(3.2) It's a similar cat to the one we saw yesterday.

(Halliday & Hasan, 1976, p. 78)

(3.1) showed the form of identity where two things were the same thing. The likeness in (3.1) was addressed by the adjective “same”, and in (3.2) the adjective “similar” was used to show similarity.

#### 1.3.2. Particular comparison

Particular comparison is the comparison in terms of quantity or quality. If the comparison is in terms of quantity, numerative element is used. However, if it is in quality, a comparative adjective is used.

(4.1) There were twice as many people there as last time.

(4.2) He's a better man than I am.

(Halliday & Hasan, 1976, p. 82)

In (4.1), “twice” was a numerative element which was used in the example as a comparative, and in (4.2), “better” was a comparative adjective which was shown the quality comparison.

## 2. Substitution

Substitution is the replacement of one item by another. Moreover, it is a relation in the wording not in the meaning. It is simply said that it is a relation between linguistic items, i.e., words or phrases. Substitution represents at the syntactic level, so the substitute item has the same structural function as for it substitutes. There are three subtypes of substitution: (1) nominal, (2) verbal, and (3) clausal.

### 2.1 Nominal substitution

Nominal substitution includes “one”, “ones”, and “same”. For one and ones, they always function as head of a nominal group, so they could substitute only for an item which is a noun. The nominal substitution “same” is basically accompanied by “the”. The same is a bit different from one and ones as it presupposes an entire nominal group including any modifying elements (Halliday & Hasan 1976). For example:

(5) Cherry ripe, cherry ripe, ripe I cry.

Full and fair ones – come and buy.

(Halliday & Hasan, 1976, p. 91)

(5) showed the use of nominal substitution: “ones” to replace cherry. Halliday and Hasan (1976) explained more that the substitute may be different from the presupposed item in number; as we could see from the example that cherry was singular, whereas “ones” was plural.

### 2.2 Verbal substitution

Verbal substitution is only one word: “do” in this category. “Do” as a verbal substitution acts as head of a verbal group which comes by the lexical verb, and its position is always final in the group.

(6) I don’t know the meaning of half those long words, and, what’s more, I don’t believe you do either!.

(Halliday & Hasan, 1976, p. 112)

(6) showed the use of verbal substitution. “do” is used to substitute for “know the meaning of half those long words”.



### 2.3 Clausal substitution

Clausal substitution can take place in three environments: report, condition, and modality. There are two words: “so” and “not” for the clausal substitution. “so” is used to express positive assertion, whereas “not” is used to express negative assertion.

(7) Everyone seems to think he’s guilty. If so, no doubt he’ll offer to resign.

(8) We should recognize the place when we come to it. – Yes, but supposing not: then what do we do?

(Halliday & Hasan, 1976, p. 134)

In (7), “so” is used to substitute for “he is guilty”, whereas in (8), “not” is used to substitute for “we don’t recognize the place when we come to it”.

### (3) Ellipsis

Ellipsis means the omission of an item. According to Halliday and Hasan (1976), ellipsis is very similar to substitution as it is simply called substitution by zero because in ellipsis nothing is inserted into the slot. Moreover, ellipsis also refers to a presupposed anaphoric item through structural link (Haratyan, 2011). Ellipsis is a relation between parts of a text, words or groups or clauses. It represents at the syntactic level. There are three subtypes: (1) nominal, (2) verbal, and (3) clausal.

#### 3.1 Nominal ellipsis

Nominal ellipsis is an ellipsis within the nominal group

(9) Would you like to hear another verse? I know twelve more.

(Halliday & Hasan, 1976, p. 143)

In (9), it showed that the second sentence had only a numerative “twelve more” as a head noun “verse” was omitted.

#### 3.2 Verbal ellipsis

Verbal ellipsis can be both operator and lexical ellipsis as they are the omitted parts within the verbal group.

(10) Joan brought some carnations, and Catherine some sweet peas.

(Halliday & Hasan, 1976, p. 143)

In (10), it showed the verbal ellipsis as the verb “brought” was omitted from the second part of the sentence.

### 3.3 Clausal ellipsis

Clausal ellipsis represents the omission of a part of the clause. It consists of two parts: modal and propositional. The ellipsis is typically used in a response to a Wh-question.

(11) What were they doing? – Holding hands.

(Halliday & Hasan, 1976, p.198)

(11) was a modal ellipsis which showed the omission of “they were”.

## 4. Lexical cohesion

Lexical cohesion is the cohesive effect achieved by the selection of vocabulary (Halliday & Hasan 1976). Lexical cohesion is divided into two types: (1) Reiteration, and (2) Collocation.

### 4.1 Reiteration

Reiteration is divided into four subtypes: (1) repetition, (2) synonym, (3) superordinate, and (4) general words.

#### 4.1.1 Repetition

Repetition is a cohesion which occurs through repeating the same word or phrase.

(12) There was a large mushroom growing near her, about the same height as herself; and, when she had looked under it, it occurred to her that she might as well look and see what was on the top of it. She stretched herself up on tiptoe, and peeped over the edge of the mushroom, ...

(Halliday & Hasan, 1976, p. 278)

In (12), “mushroom” is stated twice to show the repetition as mushroom referred back to mushroom.

#### 4.1.2 Synonym:

Synonym uses a word or phrase which has exactly or nearly the same meaning as another word or phrase in the same language interchangeably.

(13) Accordingly... I took leave, and turned to the ascent of the peak. The climb is perfectly easy...

(Halliday & Hasan, 1976, p. 278)

In (13), it showed that “climb” was used to refer back to “ascent”

#### 4.1.3 Superordinate

Superordinate occurs between elements by pointing to the original referent with a different lexical form (Sinicrope, 2007).

(14) Henry's bought himself a new Jaguar. He practically lives in the car.

(Halliday & Hasan, 1976, p. 278)

In (14), "car" referred back to Jaguar as "car" was a superordinate of Jaguar. A name for a more general class was considered to be a superordinate.

#### 4.1.4 General words

General words correspond to major classes of lexical items. This category is between lexical cohesion and substitution. This group has a high degree of generality.

(15) There's a boy climbing the old elm.

(15.1) That elm isn't very safe.

(15.2) That tree isn't very safe.

(15.3) That old thing isn't very safe.

(Halliday & Hasan, 1976, p. 280)

In (15), there were many ways to restate "elm". For example, in (15.1) "elm" was repeated, whereas in (15.2), "tree" was used instead of "elm" which showed the superordinate. In (15.3), "thing" was used to show the general word which had a high degree of generality.

#### 4.2 Collocation

Collocation is lexical items that are likely to be found together within the same text. For lexical cohesion, they use both semantic and syntactic criteria, for repetition, synonyms, superordinate. Collocations are semantically-oriented while general nouns can be syntactically-oriented.

(16) There's a boy climbing that tree.

(16.1) The boy's going to fall if he doesn't take care.

(16.2) The lad's going to fall if he doesn't take care.

(16.3) The child's going to fall if he doesn't take care.

(16.4) The idiot's going to fall if he doesn't take care.

(Halliday & Hasan, 1976, p. 280)

The example above showed the use of lexical cohesion in the four subtypes as “the boy” in (16.1) showed repetition, “the lad” in (16.2) expressed synonym, “the child” in (16.3) explained the use of superordinate, and “the idiot” in (16.4) presented general word.

## 5. Conjunction

According to Halliday and Hasan (1976), the conjunction is described as “expressing certain meanings which presuppose the presence of other components in the discourse”. Conjunction in their framework is moved into a different type of semantic relation because the specific way to follow is systematically connected to what has gone before. Therefore, the attention to describe conjunction as a cohesive device is not on semantic relations, but rather on function. One aspect of them, which relates to each other linguistic elements occurs in continuously, but not structural means. The term “conjunctive relations” is used to refer to the relationship by the conjunction. Conjunction is studied and referred to by many different terms, for example, conjunctions (Halliday & Hasan, 1976; LaPalombara, 1976), conjuncts (Zamel, 1984; Quirk et al., 1985), connectives (Huddleston & Pullum, 2002), connectors (Granger & Tyson, 1996), discourse markers (Fraser, 1999; Parrot, 2000), discourse connectors (Cowan, 2008; Kalajahi *et al.*, 2012), logical connectors (Milton & Tsang, 1993; Celce-Murcia & Larsen-Freeman, 1999; Pichastor, 2005), logical connectives (Crewe, 1990), linking adverbials (Biber *et al.*, 1999). The differences are in the referent terms, and their perspectives of the use, particularly in the position. Basically, their functional categories are similar.

Halliday and Hasan (1976) grouped conjunction by its semantics function. Conjunction can be divided into five subtypes: (1) additive, (2) adversative, (3) causal, (4) temporal conjunctions, and (5) continuatives.

### 5.1 Additive conjunction

Additive conjunction shows addition or similarity between elements such as “and”, “or”, “in addition to”, “furthermore”. Halliday and Hasan (1976) also puts “similarly”, “likewise”, and “in the same way” as additive conjunctions because of their semantic similarity. Additive conjunction may also act to negate the presupposed item and are identified by “nor, and ...not”

### 5.2 Adversative conjunction:

Adversative conjunction shows unexpected relation or “contrary to expectation” (Halliday & Hasan, 1976) such as “however”, “on the other hand”, “instead”, “though”, and “yet”. The source of expectation can be the content of what is being said, the communication process, or the speaker-hearer situation. The cohesion is on the external if it is the former, whereas if it is on the latter, the cohesion is on the internal. An external adversative relation can be simply expressed by “yet” (Hameed, 2008).

### 5.3 Causal conjunction

Causal conjunction shows the relationship of result, purpose or reason between sentences. According to Halliday and Hasan (1976), the expression forms of causal conjunction are “so”, “thus”, “hence”, “therefore”, “consequently”, “as a result”, “in consequence”. In this category, Halliday and Hasan (1976) present their opinion that it is difficult to separate external and internal cohesion because of speakers’ interpretation. They also suggest more that the causal conjunction like “thus”, “hence”, and “therefore” are normally in an internal cohesion because they imply the reason from an assumption.

### 5.4 Temporal conjunction:

Temporal conjunction shows the sequences in a text such as “then”, “and then”, “afterwards”, “after that”, “firstly”, “finally” etc. Halliday and Hasan (1976) suggest that the presence of an additional component can make more specific to temporal conjunction. For example, the temporal conjunction can be emphasized by using “then + a specific time” such as yesterday, tomorrow, in the next 10 minutes (Hameed, 2008).

### 5.5 Continuatives conjunction

For this conjunction, Halliday and Hasan (1976, p. 267) state “we bring together a number of individual items which, although they do not express any particular one of the conjunctive relations identified above, are nevertheless used with a cohesive force in the text”. There are 6 items in this group: “now”, “of course”, “well”, “anyway”, “surely”, “after all”.

Halliday and Hasan (1996)’s conjunction framework is shown in Table 2.3.

Table 2. 3: Five categories of conjunction (Halliday & Hasan, 1976)

No	Categories	Examples of Conjunctions
1	Additive	and, or, also, in addition, furthermore, besides, similarly, likewise, by contrast, for instance
2	Adversative	but, yet, however, instead, on the other hand, nevertheless, at any rate, as a matter of fact
3	Causal	so, consequently, for, because, under the circumstances, for this reason
4	Temporal	then, next, after that, finally, at last, soon, next day, at this moment, until then
5	Continuatives	now, of course, well, anyway, surely, after all

Though there are five types of cohesive devices which make a text unified, in this study, only the use of conjunction or discourse connector (Cowan's term) is investigated. According to Dik (1997), connectors are one of the main factors that show the degree of coherence of a discourse as conjunction. They are a word or word group that connect components of two sentences (LaPalombara, 1976).

Not only Halliday and Hasan (1976) grouped conjunctions by using semantic functions, but also Biber *et al.* (1999) re-categorized conjunctions (Halliday and Hasan's term) by the functions as well, and they used the new term "linking adverbials". The primary function of linking adverbials is to signal the connections between passages of text, and to state the perception of the speaker or writer between two units of discourse. Linking adverbials are important devices for creating textual cohesion, parallel to coordinators and subordinators. There are six categories of linking adverbials (Biber *et al.*, 1999):

#### 1. Enumeration and addition

The speakers or writers use linking adverbials in this category by enumeration of information in order which include ordinal numbers e.g., "first", "second" or adverbs i.e., "firstly", "secondly" and for addition of items of discourse to one another e.g., "in addition", "further", "similarly".

## 2. Summation

Linking adverbials in this category show that a unit of discourse is intended to conclude or sum up the information in the preceding discourse, i.e., “in a nutshell”, “to conclude”, “to sum”.

## 3. Apposition

Apposition shows that the second unit of a text is to be treated as a restatement of the first unit, reformulating the information it expresses in some way or stating it in more explicit terms unit e.g., “in other words”, “which is to say”.

## 4. Result/ inference

This category shows that the second unit of a discourse states the result or consequence of the preceding discourse, i.e., “consequently”, “therefore”.

## 5. Contrast/ concession

The category is broad. It can mark contrasts, alternatives, differences, incompatibility between information in different discourse units or show concessive relationships e.g., “anyway”, “instead”, “on the other hand”.

## 6. Transition

These linking adverbials mark the insertion of an item that does not follow directly from the previous discourse, and they can mark the transition to another topic, i.e., “by the way”, “by the by”, “incidentally”.

Biber *et al* (1999)’s conjunction framework contributes to the study of discourse as shown in Table 2.4

Table 2. 4: Six categories of conjunction (Biber et al., 1999)

No	Categories	Subcategories	Examples of Linking Adverbials
1	Enumeration/ Addition	Enumeration	First, second, third, fourth, secondly, thirdly, fourthly, in the first/second/third place, first of all, for one thing, for another thing, to begin with, to start with, next, lastly
		Addition	In addition, further, furthermore, moreover, similarly, also, by the same token, likewise, at the same time, what is more, as well, too
2	Summation		In sum, to conclude, all in all, in conclusion, overall, to summarize, in a nutshell
3	Apposition	Restatement	Which is to say, in other words, i.e., that is, namely, specifically
		Example	For example, for instance, e.g.
4	Result/inference		Therefore, thus, consequently, as a result, hence, in consequence, so
5	Contrast/ concession	Contrast	On the one hand, on the other hand, in contrast, alternatively, conversely, instead, on the contrary, by comparison
		Concession	Though, anyway, however, yet, nevertheless, still, in any case, at any rate, in spite of, after all
6	Transition		By the way, incidentally

Though there are six categories proposed by Biber *et al.* (1999), these categories are quite similar to the main theme of conjunctions proposed by Halliday and Hasan (1976). For example, the categories of addition, restatement, and example are new terms coined by Biber *et al.* (1999), but all of them are under the main theme “Additive” by Halliday and Hasan (1976). In Biber *et al.* (1999), they proposed the categories of contrast and concession which both of them are similar to Halliday and Hasan (1976)’s adversative category. For the category of result/inference in Biber *et al.*, it is also similar to the causal category by Halliday and Hasan (1976). The category of enumeration and summation (Biber *et al.*, 1999) is also similar to the category of temporal in Halliday and Hasan (1976). The category of transition in Biber *et al.* is quite similar to the category of continuatives in Halliday and Hasan (1976). The similarities between conjunction and linking adverbials can be seen in Table 2.5 below.



Table2. 5: The similarity of conjunction (Halliday & Hasan, 1976), and linking adverbials (Biber et al., 1999)

Conjunction (Halliday and Hasan 1976)	Linking Adverbials (Biber et al. 1999)
1. Additive	- Addition - Restatement - Example
2. Adversative	- Contrast - Concession
3. Causal	- Result/inference
4. Temporal	- Enumeration - Summation
5. Continuatives	- Transition

Cowan (2008) also adapts the framework of Halliday and Hasan (1976), and Biber *et al.* (1999). He prefers to use the term discourse connectors (DCs) as he explains that DCs are “words and phrases that, typically, connect information in one sentence to information in previous sentences”. According to Cowan (2008, p. 615), “DCs are connectives like subordinators and coordinators, but they are different from these other connectives not only in their ability to link a sentence to a larger piece of discourse, but also because they are less restricted in terms of where they may occur in a sentence.” DCs can be at the beginning of a sentence, within it, and at sentence final position. Cowan (2008, p.615) also cited examples from Halliday & Hasan (1976, p. 251):

- (17) Sonja was discouraged when the committee vetoed her plan.  
 (17.1) However, this time she was not going to let herself be beaten.  
 (17.2) This time, however, she was not going to let herself be beaten.  
 (17.3) She was not going to let herself be beaten this time, however.”  
 (Halliday & Hasan 1976: 251)

(17) reflected the function of DCs to link ideas across sentences while the meaning of (17.1), (17.2), and (17.3) cannot be understood without the idea in (1). In this case, DC like “however” linked across sentences to show the contrast with the preceding sentence.

As mentioned above, DCs are important in writing as they contribute to the cohesion of a discourse. According to Cowan (2008), DCs in his framework are subcategorized into seven types using semantics function:

### 1. Ordering

This type of DCs identifies and orders the main points that speakers or writers want to communicate. The examples of DCs in the categories are all as follows: “first”, “firstly”, “second”, “secondly”, “third”, “thirdly”, “in the first place”, “in the second place”, “first of all”, “for a start”, “for one thing”, “for another thing”, “to begin with”, “then”, “next”, “finally”, “last”, “lastly”, “last of all”.

### 2. Summary

DCs in this type provide a summary or conclusion to previous information. DCs are “all in all”, “in conclusion”, “overall”, “to conclude”, “finally”, “in sum”, “in summary”, “to summarize”, and “to sum up”.

### 3. Additive

For this type, DCs present details as parallel to and building for what comes before such as “also”, “in addition”, “further”, “furthermore”, “moreover”, and “too”.

### 4. Exemplification and Restatement

DCs in this category show that information following in some way explains the information that preceded. Some examples for the category are “for example”, “for instance”, “that is”, “in other words”, “more precisely”, “which is to say”, “that is to say”, and “namely”.

### 5. Result

This type of DCs presents information that is a consequence of preceding information such as “accordingly”, “consequently”, “hence”, “therefore”, “thus”, “as a consequence”, “as a result”, and “so”.

### 6. Concession

The DCs are used to introduce information that is surprising or unexpected from the previous information. The DCs in this type included “nevertheless”, “nonetheless”, “in spite of that”, “despite that”, “still”.

### 7. Contrast

DCs in this type link information that shows contrast or different idea. The DCs include “in contrast”, “by way of contrast”, “conversely”, “by comparison”, “however”, “instead”, “on the contrary”, and “on the other hand”.

The summary of seven categories of DCs proposed by Cowan (2008) is concluded in Table 2.6.

Table2. 6: Seven categories of Discourse Connectors (Cowan 2008: 616-620)

No	Categories	Subcategories	Examples of Linking Adverbials
1	Ordering		first, firstly, second, secondly, third, thirdly, in the first place, in the second place, first of all, for a start, for one thing, for another thing, to begin with, then, next, finally, last, lastly, last of all
2	Summary		all in all, in conclusion, overall, to conclude, finally, in sum, in summary, to summarize, to sum up
3	Addition		also, in addition, further, furthermore, moreover, too
4	Exemplification and restatement	Exemplification	for example, for instance, that
		Restatement	that is, in other words, more precisely, which is to say, that is to say, namely
5	Result		accordingly, consequently, hence, therefore, thus, as a consequence, as a result, so
6	Concession		nevertheless, nonetheless, in spite of that, despite that, still
7	Contrast		in contrast, by way of contrast, conversely, by comparison, however, instead, on the contrary, on the other hand

The terms in these seven categories of DCs are slightly different from the conjunction terms by Halliday and Hasan (1976), and linking adverbials by Biber *et al.* (1999) as Cowan (2008) re-categorizes the terms. For example, Biber *et al.* (1999) propose the first category as Enumeration and Addition to signal the order, and add more information whereas Cowan separates them into two categories as Ordering, and Addition in order to show specific functions for each category. However, the categories of ordering and addition are in the main theme of Temporal and Additive proposed by Halliday and Hasan (1976). Moreover, Biber *et al.* (1999) put contrast and concession in the same category, but Cowan (2008) divides them into two types as mentioned in his work that concessive connectors do not make sense in the context of this straight contrast that do not involve surprise as in the following examples:

(18) In terms of annual mean temperature, Alaska is cold. However/ By contrast, Rio is clearly hot.

(19) In terms of annual mean temperature, Alaska is cold. Nevertheless/ Despite that/ Still, Rio is clearly hot.

(Cowan, 2008, p. 619)

In (18), concession connectors are used to show surprising or unexpected of previous information (Cowan, 2008) while in (19) contrast connectors do not show any surprise. When we look closely, both categories of concession and contrast are in the main theme of “Adversative” in Halliday and Hasan’s work in 1976.

Remarkably, there is no continuatives (Halliday & Hasan’s term) or transition (Biber *et al.*’s term) in Cowan’s framework. However, in Cowan’s work, he mentions about discourse markers which are “words that were not an integral part of a sentence” (Cowan, 2008, p. 628). Cowan (2008) proposes that discourse markers have several functions and are mostly used in a spoken language. One of discourse markers in Cowan (2008) is “well” which is in continuatives category in Halliday & Hasan (1976). It is found that Schiffrin *et al.* (2008) also stated that “well” is one of discourse markers in their work too.

In order to have a clear picture of the three frameworks: Conjunction (Halliday & Hasan, 1976), Linking Adverbials (Biber *et al.*, 1999) and Discourse Connectors (Cowan, 2008), Table 2.7 is provided as follows:

Table 2. 7: The relationship among the three frameworks: Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008)

<b>Biber <i>et al.</i> (1999)</b>	<b>Halliday &amp; Hasan (1976)</b>	<b>Cowan (2008)</b>
Addition		Addition
Example	Additive	Exemplification
Restatement		Restatement
Contrast		Contrast
Concession	Adversative	Concession
Result/Inference	Causal	Result
Enumeration		Ordering
Summation	Temporal	Summary
Transition	Continuatives	-

It can be seen that all the three frameworks: Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008) can be integrated into one theoretical framework which was used for semantic analysis in this study. This theoretical framework has five main

categories: (1) additive, (2) adversative, (3) causal, (4) temporal, and (5) continuatives. Each main category also has sub-categories. The category of additive is separated into three sub-categories: (1) addition, (2) exemplification, and (3) restatement. The category of adversative is divided into two sub-categories, contrast and concession. For the category of causal, there is only one sub-category which is “result/inference”. The category of temporal is also divided into two sub-categories as “ordering”, and “summation”. For the continuatives, “transition” is the only one sub-category. The theoretical framework is presented in Table 2.8 including the lexis of all DCs found in the literature.

Table 2. 8: The semantic theoretical framework including all DCs lexis (Halliday & Hasan, 1976; Quirk et al., 1985; Biber et al., 1999; Cowan, 2008)

No	Main Category	Sub Category	DCs
1	Additive	Addition	additionally, also, and, as well, at the same time, besides, further, furthermore, in addition, likewise, meanwhile, moreover, or, similarly, what is more
		Exemplification	e.g., for example, for instance, such as, to illustrate
		Restatement	i.e., in other words, namely, specifically, that is, that is to say
2	Adversative	Contrast	alternatively, but, by comparison, by way of contrast, conversely, in contrast, instead, nor, on the contrary, on the one hand, on the other hand
		Concession	although, at any rate, despite that, even though, however, in any case, in spite of, nevertheless, nonetheless, though, yet
3	Causal	Result/inference	accordingly, as a consequence, as a result, because, consequence, due to, due to the fact that, for, hence, so, then, therefore, thus
4	Temporal	Ordering	at last, finally, first, first of all, firstly, for a start, for another thing, for one thing, fourth, fourthly, in the first/second/third place, last but not least, last of all, lastly, next, second, secondly, then, third, to begin with, to start with
		Summation	all in all, as we have seen, in a nutshell, in conclusion, in short, in sum, in summary, overall, to conclude, to sum up, to summarize

5	Continuatives	Transition	after all, anyway, by the way, now, of course, surely, well
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The role of discourse connectors in writing is important because they maximize logical relationships in texts. Logical relationships between clauses, sentences, paragraphs can be presented by discourse connectors (Kalajahi *et al.*, 2012). In addition, discourse connectors can signal logical relations in a written text and increase the readability of it (Geva, 1992; Heino, 2010; Hamed, 2014). In writing, the use of punctuation and layout also helps readers to understand the text, but DCs still plays the most important part as they connect sentences to form a paragraph, from a paragraph to form paragraphs, from paragraphs to form a coherent text (Dulger, 2007; Kalajahi *et al.*, 2012). Therefore, it is necessary for all English language learners to learn the use of the English discourse connectors. The above explanation of conjunctions is from the semantic view, which is categorized by the function. The following explanation is from the view of syntax or the form of the DCs.

For syntactic forms, the frameworks of DCs in this study are analyzed through two criteria, (1) sentence types, the framework adopted from Bauer-Ramazani (2013), and Lenker (2011), and (2) the DCs position, the framework adopted from Biber *et al.* (1999).

#### 1. The occurrence of DCs in 3 sentence types:

##### 1.1 Simple sentence

Simple sentence is a sentence with one independent clause. The clause may have one or compound subjects with one or compound verbs. The use of punctuation mark is a full stop or a period (.). For example:

(20) We missed the bus. Therefore, we were late for the appointment.

##### 1.2 Compound sentence

Compound sentence is a sentence with two independent clauses which are linked by DCs. The use of punctuation marks: a comma (,), and a semicolon (;) is also used. The use of punctuation is different depending on the position of DCs. For example:

(21) We missed the bus; therefore, we were late for the appointment.

(22) We missed the bus, so we were late for the appointment.

### 1.3 Complex sentence

Complex sentence is a sentence with two clauses, a dependent clause and an independent clause. The two clauses are joined by the use of DCs. The use of a period (.) is an optional depending on the position of DCs. For example:

(23) We were late for the appointment because we missed the bus.

(24) Because we missed the bus, we were late for the appointment.

2. The position of DCs: (1) initial, (2) medial, and (3) final in the sentences.

#### 2.1 Initial position:

DC is placed at the beginning of the second clause. For example:

(25) However, my life isn't always perfect.

#### 2.2 Medial position

DC is positioned in (1) the middle of the second clause, usually between subject and verb or (2) between the two clauses. For example:

(26.1) My life, however, isn't always perfect.

(26.2) I am from a rich family; however, my life isn't always perfect.

#### 2.3 Final position

DC is placed at the end of the second clause. For example:

(27) My life isn't always perfect, however.

The theoretical framework for analyzing DCs in Syntactic terms, i.e., the sentence types and structures, and the DCs position in the sentence are shown in the following table including the lexis of all DCs in each category.

Table 2. 9: The syntactic framework for analysis (Biber et al., 1999; Lenker, 2011; Bauer-Ramazani, 2013)

Main category	Sub category	DCs Type	Sentence Type			Position			
			S	CP	CX	IN	ME	FI	
Additive	Addition	additionally	/			/			
		also	/			/	/		
		and	/	/		/	/		
		as well	/					/	
		at the same time	/			/			
		besides	/			/		/	
		furthermore	/			/			
		in addition	/			/			
		likewise	/			/			
		meanwhile	/			/			
		moreover	/			/			
		or		/				/	
		similarly	/			/			
		what is more	/			/			
		Exemplification	e.g.	e.g.		/			/
				for example		/		/	/
				for instance		/		/	/
such as				/			/		
to illustrate	/			/		/	/		
Restatement	i.e.	i.e.		/			/		
		in other words	/			/			
		namely	/			/			
		specifically	/			/			
		that is	/			/			
		that is to say	/			/			
		Adversative	Contrast	alternatively	/			/	
but	/			/		/	/		
by comparison	/			/		/	/		
by way of contrast	/					/			
conversely	/					/			
in contrast	/					/			
instead	/					/			
nor	/					/			
on the contrary	/					/			



		on the one hand	/	/	
		on the other hand	/	/	
	Concession	although		/	/ /
		at any rate	/	/	
		despite (the fact) that		/	/ /
		even though		/	/ /
		however	/	/	/ /
		in any case	/	/	
		in spite of	/	/	
		nevertheless	/	/	
		nonetheless	/	/	
		still	/	/	
		though		/	/ /
		yet	/ /	/	/
Causal	Result/inference	accordingly	/	/	
		as a consequence	/	/	
		as a result	/	/	
		because	/	/	/
		consequently	/	/	
		due to	/	/	
		due to the fact that		/	/
		for	/	/	/
		hence	/	/	
		in consequence	/	/	
		so	/ /	/	/
		then	/	/	
		therefore	/	/	
		thus	/	/	
Temporal	Ordering	first	/	/	
		first of all	/	/	
		firstly	/	/	
		for a start	/	/	
		for another thing	/	/	
		for one thing	/	/	
		fourth	/	/	
		fourthly	/	/	
		in the first	/	/	
		in the second	/	/	
		in the third place	/	/	

		last	/	/
		last of all	/	/
		lastly	/	/
		next	/	/
		second	/	/
		secondly	/	/
		then	/	/
		third	/	/
		thirdly	/	/
		to begin with	/	/
		to start with	/	/
	summation	all in all	/	/
		as we have seen	/	/
		in a nutshell	/	/
		in conclusion	/	/
		in short	/	/
		in sum	/	/
		in summary	/	/
		overall	/	/
		to conclude	/	/
		to sum up	/	/
		to summarize	/	/
Continuatives	Transition	after all	/	/
		anyway	/	/ /
		by the way	/	/
		now	/	/ /
		of course	/	/
		surely	/	/
		well	/	/

In this study, the frameworks of Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008) were used to analyze the semantic properties of the discourse connectors, whereas to analyze the syntactic properties of the discourse connectors, the framework of Bauer-Ramazani (2013), and Lenker (2011) were used to analyze the sentence types and structures, and for the DCs position, Biber *et al.* (1999) was employed.

This study attempts to conduct interlanguage study of the use of discourse connectors, one of the cohesive devices in writing. To find out whether learners have interlanguage stages, one of the five principal processes to focus is Language transfer (First language interference). Therefore, cohesive devices in Thai are also explored.

### 2.3 Cohesive Devices in Thai

It has been reported in Chanawangsa (1986) that there are six types of cohesive devices in Thai which are quite similar to cohesive devices in English. For the Thai cohesive devices, it is found that (1) reference, (2) substitution, (3) ellipsis, (4) repetition, (5) lexical cohesion and (6) conjunctions are cohesive devices in the Thai language. For English cohesive devices, “repetition” is under “lexical cohesion” which is different from the Thai language. It can be seen that the categories of cohesive devices in English and Thai are quite similar, but the uses are different (Chanawangsa, 1986). Only conjunctions are elaborated in this study.

As mentioned previously, Halliday and Hasan (1976) grouped English conjunctions into five types: additive, adversative, causal, temporal, and continuatives. Chanawangsa (1986) found that it was too broad to identify Thai conjunctions using the 5 types like English conjunctions. Therefore, it was suggested that the Thai conjunctive relations are classified into 16 types: additive, enumerative, alternative, comparative, contrastive, concessive, exemplificatory, reformulatory, causal, purposive, resultative, conditional, inferential, temporal, transitional, and continuative. The details of each category are explained as follows:

#### 1. Additive relation

This category is counted as additive in English conjunctions (Halliday & Hasan, 1976) because it adds what has been said before. This type is represented by และ /lɛ/ ('and') (see Appendix C), ก็ /kʰ/ ('also'), ('too'), รวมทั้ง /ruam-tháŋ/ ('including'), อีกประการหนึ่ง /iig-prakaan-nỳŋ/ ('moreover'), นอกจากนี้...ยัง /nʷɔŋ-càag...jaŋ/, นอกจากนี้...ยัง /nʷɔŋ-càag-níi...jaŋ/, นอกจากนี้...แล้ว...ยัง /nʷɔŋ-càag-níi...lɛw...jaŋ/ ('besides'), etc (Chanawangsa, 1986). For example, in the following statement, in Thai และ /lɛ/

(‘and’) is used to signal the following information which is added to the previous part of the text:

- (28) ผม จะเรียน หนังสือ และ ฟัง แผ่นเสียง  
 /phǒm carian nǎŋ-sǎy, lé faj phèen-sǎŋ/  
 (I will study book and listen to record)  
 ‘I’m going to study, and listen to some records.’

(Noss, 1964, p. 169)

## 2. Enumerative relation

This category shows the orders, sequences or a series of items. This category is counted as temporal conjunction in Halliday and Hasan’s work (1976). The expressions in this group are ประการแรก /prakaan rĕɛg/ (‘first’), ประการที่สอง /prakaan thĭi- sǎwŋ/ (‘second’), ประการสุดท้าย /prakaan sùd-tháaj/ (‘finally’), หนึ่ง /nĭyŋ/ (‘one’), สอง /sǎwŋ/ (‘two’), สาม /sǎam/ (‘three’) etc... (Chanawangsa 1986). For example, in the following sentence when the first thing of the list is presented, ประการแรก /prakaan rĕɛg/ (‘first’) is used in the sentence:

- (29) ประการแรก ผม คิด ว่า ถ้า ผม ได้ พูด  
 /prakaan rĕɛg phǒm khid wǎa thǎa phǒm dǎj phŭud/  
 (First I think that if I can speak)  
 ภาษา ไทย ผม สามารถ บรรยาย  
 /phaasǎa thaj phǒm saamaad banjaaj/  
 (language Thai I can describe)  
 ความ รู้สึก ได้ ดี กว่า ที่ จะ ใช้  
 /khwaam-rúusŷg daj dii-kwàa thĭi ø cà cháj/  
 (feeling can better that will use)  
 ภาษา ต่างประเทศ  
 /phaasǎa tàaŋ-prathêd/  
 (language foreign)

‘First, I think if I am allowed to speak Thai, I can express my feelings better than in a foreign language.’

(Chanawangsa, 1986, p. 179)

### 3. Alternative relation

This group signals the alternate of what being said earlier. According to Chanawangsa (1986), this category is expressed by หรือ /rÿy/ and หรือว่า /rÿy wâa/ (‘or’, ‘alternatively’). Interestingly, in English conjunctions “or” is considered as additive conjunctions in Halliday and Hasan’s work (1976). For example, in the following statement when giving a choice or an alternative, in Thai, หรือ /rÿy/ and หรือว่า /rÿy wâa/ (‘or, alternatively’) is used:

- (30) ผม จะเรียน หนังสือ หรือว่า ฟัง แผ่นเสียง  
 /phǒm carian nǎŋ-sÿy, rÿy faŋ phèen-sǎaŋ/  
 (I will study book or listen to record)  
 ‘I’m going to study, or maybe listen to some records.’

(Noss, 1964, p. 169)

### 4. Comparative relation

This category shows that the following detail is similar or comparable to what has been mentioned earlier. The conjunctive elements in this group are เปรียบเสมือน /priab- samÿan / (‘analogous to’), ในทำนองเดียวกัน /naj-thamnawŋ-diaw-kan/ (‘in the same way’), ราวกับ /raw-kàb/, เหมือนกับ /mÿan-kab/, เช่นเดียวกับ /chên-diaw-kàb/, อย่างกับ /jàaŋ-kàb/ (‘like’), เหมือนหนึ่งว่า /mÿan-nÿŋ-wâa/, เสมือนหนึ่ง /samÿan- nÿŋ/ (‘as if’), etc (Chanawangsa, 1986). According to Halliday and Hasan (1976), they do not have this category in English conjunctions. For example, in the following statement in order to compare things, เหมือนกับ /mÿan-kab/ is one choice that can be used for showing comparison:

- (31) เขา มอง อะไร ไม่เห็น เหมือนกับ ตาบอด  
 /khǎw mowŋ araj mâj-hěn, mÿan-kab taa bòod/  
 (he see thing not see, just as blind)

‘He can’t see a thing, just as if he were blind.’

(Noss, 1964, p. 175)

### 5. Contrastive relation

This group shows the contrast between what follows and what has preceded. The expressions in this group are ส่วน /sùan/, ขณะที่ /khanà-thîi/ (‘whereas’), ในทางตรงกันข้าม /naj-thaan-tron-kan-khâam/ (‘on the contrary’), ในขณะที่ /naj-khanà-thîi/ (‘while’), แต่ทว่า /tèe-thawâa/, แต่...ก็ /tèe...kô/, แต่ว่า /tèe-wâa/ (‘but’, ‘on the other hand’), etc... (Chanawangsa 1986). In English conjunction, this group is considered as adversative conjunction (Halliday and Hasan 1976). For example, in the following sentence แต่ทว่า /tèe-wâa/ is used in Thai context to show the contrast between the first part and the second part of the text:

- (32) แต่ ทว่า เขา เป็น นัก เรียน นี้ ครับ เขา ไม่ ได้ เป็น ครู  
 /tèe-wâa, khāw pen nág-rian: nî khráb. khāw māj-dāj-pen khruu/  
 (but he is student he not is teacher)  
 ‘But he’s a student, you see. He’s not a teacher.’

(Noss, 1964, p. 170)

### 6. Concessive relation

This category shows that “what follows is surprising in the view of what has preceded” (Chanawangsa, 1986, p. 187). This group deals with pragmatics as it is interpreted the relationship between the speaker and his or her reaction. This group is expressed by แม้...ก็ตาม /mèe...kô-taam/ (‘even though’), ถึงกระนั้น /thýn-kranán/ (‘nevertheless’), แม้ว่า /mèe-wâa/, ถึงแม้ว่า /thýn-mèe-wâa/ (‘although’), ทั้งทั้งที่ /thánj-thánj-thîi/ (‘despite’). In English conjunction, this group is considered as adversative conjunction (Halliday and Hasan 1976). For example, แม้...ก็ตาม /mèe...kô-taam/ (‘even though’) is used in the following statement to show that the fact is surprising to the author:

- (33) แม้ เขา จะ พุด ไทย ไม่ ได้ ก็ ตาม เขา ก็ ยัง สนุก ได้  
 /mèe kao ja phoot Thai mai dai kô-taam, kao kô-yang sa-nook dai/

(even he speak Thai cannot though, he still a good time have)

‘Even though he can’t speak Thai, he can still have a good time.’

(Higbie & Thinsan, 2003, p. 150)

### 7. Exemplificatory relation

This group shows that what follows is an exemplification of what has gone before. เช่น /chên/ (‘for example’ or ‘for instance’) is the only expression to indicate the exemplificatory relation. In English conjunction, this group is considered as additive conjunction (Halliday and Hasan 1976). For example, in the following statement เช่น /chên/ is used to add more examples of the previous information, and it is sometime followed by a complementive เป็นต้น /pen-tôn/ at the end of the clause:

- (34) เขา ทำ อะไรอะไร ผิด หมด เช่น  
 /khǎw tham araj-araj phid: mòd, chên/  
 (she does thing wrong all for example  
 เอา เหล้า ไป ให้ เด็ก กิน เป็นต้น  
 aw- lǎw paj-hāj dèg kin: pen-tôn.  
 (bring alcohol give children eat )

‘She does everything wrong, like giving whisky to babies.’

(Noss, 1964, p. 180)

### 8. Reformulatory relation

The conjunctive element shows that the succeeding information is the reformulation of the previous information of the text. In Thai conjunctions, คือ /khyy/, คือว่า /khy-wāa/, ก็คือ /kô-khyy/ (‘or in other words’, ‘that is to say’) are the expressions in this group. In English conjunction, this group is considered as addition conjunction (Halliday and Hasan 1976). For example, คือ /khyy/ (‘namely’) is used in the following sentence to show that what follows is the reformulation of what precedes (Chanawangsa, 1986, p. 189):

- (35) คือ เขา เป็น นักเรียน นี้ ครับ เขา ไม่ ได้ เป็น ครู  
 /khyy, khǎw pen nág-rian: nī khráb. khǎw māj-dāj-pen khruu/

(that is to say he is student he not is teacher)

‘What I meant to say was he’s a student, you see. He’s not a teacher.’

(Noss, 1964, p. 170)

### 9. Causal relation

This category indicates that what follows is the cause of what has preceded (Chanawangsa 1986 p. 190). The expression in this group are เนื่องจาก /n<sup>h</sup>yaŋ-càag/ (‘owing to the fact that’, ‘this is because’), เพราะ /phr<sup>h</sup>ó/, ด้วย /d<sup>h</sup>uaj/ (‘because’). In English conjunction, this group is considered as causal conjunction (Halliday and Hasan 1976). For example, in the following statement เนื่องจาก /n<sup>h</sup>yaŋ-càag/ is used in order to show that what is being said is the cause of what comes previously:

(36) เนื่อง จาก จำนวน ครู ยัง ไม่ พอ

/n<sup>h</sup>yaŋ-càag cam-nuan khru jaŋ mâj-phoo/,

(because amount teacher yet insufficient

โรงเรียน ใหม่ เปิด ไม่ ได้ ปีนี้

/rooŋ-rian màj p<sup>h</sup>èod mâj-dâj pii-nii/

( school new open not this year)

‘Owing to the fact that the number of teachers is still insufficient the new school can’t open this year.’

(Noss, 1964, p. 175)

### 10. Relation of purpose

This category is used to show the purpose of what has previously said. These expressions include เพื่อ /ph<sup>h</sup>ya/, เพื่อว่า /ph<sup>h</sup>ya-wâa/, เพื่อจะเป็น /ph<sup>h</sup>ya capen/ (‘in order to’, ‘for the purpose of’). For example, in the following sentence, เพื่อจะเป็น /ph<sup>h</sup>ya capen/ is used in order to show the purpose:

(37) เพื่อ จะเป็น สมาชิก นั้น คุณ ต้อง หา ผู้ รับ รong สอง คน ให้ ได้

/ph<sup>h</sup>ya capen samaa-chíg: nân, khun t<sup>h</sup>oŋ hãa ph<sup>h</sup>uu-ráb-r<sup>h</sup>ooŋ s<sup>h</sup>ooŋ khon hãj-dâj/

(in order to member you have to find sponsors two )

‘In order to become a member, you have to find two sponsors.’

(Noss, 1964, p. 175)



### 11. Relation of result

This group is used for indicating that what follows is a consequence or result of what has preceded. These expressions include *จึง* /cyŋ/, *ก็* /kô/, *ดังนั้น* /daŋ-nán/, *ดังนั้น...* *จึง* /daŋ-nán...cyŋ/, *เลย* /ləj/, *ก็...เลย* /kô-ləj/, *เพราะฉะนั้น* /phrô-čanán/, *เพราะฉะนั้น...จึง* /phrô-čanán ... cyŋ/ ('therefore', 'as a result', 'so', 'as a consequence'). In English conjunction, this group is considered as causal conjunction (Halliday and Hasan 1976). For example, in the following sentence *เลย* /ləj/ is used to show the consequence of the previous information:

- (38) เมื่อ เห็น ว่า เพื่อน ไม่อยู่ เขา เลย กลับ บ้าน  
 /m̄yá h̄en w̄áa, ph̄yán m̄áj-j̄ùu, kh̄āw ləj klàb b̄āan/  
 (when friend not is he return home)  
 'When he saw his friend was not there, he (for that reason) went home.'  
 (Noss, 1964, p. 181)

### 12. Conditional relation

This category is used to show the condition between two clauses. The conjunctive elements in this group are *ต่อเมื่อ* /t̄òw-m̄yá/ ('on condition that'), *ตราบใดที่* /tr̄aab-daj-th̄i/ ('as long as'), *ถ้า* /th̄āa/, *หาก* /h̄àag/, *ถ้าหาก* /th̄āa- h̄àag/, *หากว่า* /h̄àag-w̄āa/, *ถ้าหากว่า* /th̄āa- h̄àag-w̄āa/ ('if'). According to Chanawangsa (1986), the last five words are synonymous, so they are used interchangeably. For example, in the following sentence *ถ้า* /th̄āa/ ('if') is used to show the condition between two clauses:

- (39) แต่ ถ้า คุณ ไม่ ไป ผม จะไป ได้ อย่างไร  
 /t̄èε th̄āa khun m̄áj-paj, ph̄ǒm capaj-d̄áj j̄àaŋ-raj/  
 (but if you not go he go can how)  
 'But if you don't go, how can I go?'  
 (Noss, 1964, p. 172)

### 13. Inferential relation

This category is used for showing that what follows is the inference made due to the condition specified in the preceding part of the text (Chanawangsa 1984). This



(Noss, 1964, p.169)

## 15. Transitional relation

This category shows “a change from what has been said before to a related subject, a new subject, a new point, or a new attitude while implying continuity with what has preceded” (Chanawangsa, 1986, p. 202). Words in this group are expressed by แล้ว /léew/ (‘then’), ที่นี่ /thii-níi/ (‘now’), and another three more words which do not have any meanings that were /əə/, /v̂v̂/, and /é/. In English conjunction, this group is considered as both additive and continuatives conjunction (Halliday and Hasan 1976). For example, in the following sentence ที่นี่ /thii-níi/ is used to indicate a change to a new attitude of the same subject:

- (42) ที่แรก            ไม่    อยาก    อยู่            ที่นี่            เพราะว่า  
 /tɔɔn-rêɛg      māj   jàag   jùu   thii-níi   phrɔ́-waa/  
 (at first          not   want   live   here          because  
 อยู่มา            แล้ว    สอง    ปี            ที่นี่          คิด    ไป  
 /jùu maa      léew   sɔ́wŋ   pii   thii-níi   khíd   paj/  
 (be            already   two   year   now          think   go  
 คิด            มา            แล้ว            อยู่ที่นี่       ดี    กว่า  
 /khíd        maa      léew            jùu thii-níi    dii-kwàa/  
 (think       come    already    be   here          better)

‘At first, I didn’t want to stay here anymore because I had been here for two years already. Now, after thinking back and forth, I’d better stay here.’

(Chanawangsa, 1986, p. 204)

## 16. Continuative relation

This category shows the link between two parts of the text without indicating any specific type of relationship. There are only two words: ซึ่ง /sîn/ (‘which’, ‘that’), and ก็ /kô/ (‘then’, ‘consequently’, ‘also’, ‘and’, ‘too’). For example, in the following statement ซึ่ง /sîn/ is used to signal a link between the two parts of the text:

- (43) ศาสตราจารย์ ด็อกเตอร์ วิชิต ได้ กล่าวปราศรัย  
 /sàadsatraacaan dǔgtǎ wícid dâj klàaw-praasǎj/  
 (professor doctor wichit PAST give a speech)  
 แก่ ข้าราชการ ที่ เข้า ประชุม ณ  
 /kèe khâa-râadchakaan thii khâw prachum ná/  
 (to government official that attend meeting at)  
 หอประชุม โรงพยาบาลสงฆ์ กอ ทอ มอ  
 /hǎw-prachum roon-phajaabaan sǎn koo-thoo-moo/  
 (auditorium hospital Sangha Bangkok)  
 ซึ่ง ผู้ จัด ทำ เห็น สมควร เผยแพร่  
 /sýŋ phûu-càd-tham hěn sǎm-khuan phǎj-phrêe/  
 (which producer deem appropriate disseminate)  
 คำ ปราศรัย ของ ท่าน แก่ ข้าราชการ  
 /kham-praasaj khǎw thâan kèe khâa-râadchakaan/  
 (speech of he to government official)  
 ทุก คน ทราบ อีก ครั้ง หนึ่ง  
 /thúg khon sâab ïig khráŋ nýŋ/  
 (every CL know again time one)

‘Professor Dr. Wichit gave a speech to government officials at a meeting help at the Sangha Hospital, Bangkok. The producers (of the newsletter) deem it appropriate to disseminate the speech to all the government officials (of this agency) once again.’

(Chanawangsa, 1986, p. 207)

In conclusion, Thai conjunctions are grouped into 16 categories, and all of them help texts to be more cohesive. Most 16 Thai conjunction categories do not have any subcategories. But, as mentioned earlier in cohesive devices in English, section 2.2. English conjunctions are divided into five categories (Halliday and Hasan, 1976), and each category can be divided into subcategories using Biber *et al.* (1999) and (Cowan, 2008). After reviewing both Thai conjunctions and English DCs, it was found that some

Thai conjunctions could be matched into English DCs categories; therefore, the relationship between Thai conjunction categories and English DCs categories could be grouped and shown in Table 2.10.

Table 2. 10: The relationship between Thai conjunction categories and English discourse connectors categories (Halliday & Hasan, 1976; Chanawangsa, 1986; Biber et al., 1999; Cowan, 2008)

No.	Thai Conjunctions categories	English Discourse Connectors categories
1	Additive relation	Additive: addition
2	Enumeration relation	Temporal: ordering
3	Alternative relation	Additive: addition
4	Comparative relation	-
5	Contrastive relation	Adversative: contrast
6	Concessive relation	Adversative: concession
7	Exemplificatory relation	Additive: exemplification
8	Reformulatory relation	Additive: restatement
9	Causal relation	Causal: Result/inference
10	Relation of purpose	-
11	Relation of result	Causal: Result/inference
12	Conditional relation	-
13	Inferential relation	-
14	Temporal relation	
	sequential	Additive: addition
	simultaneous	-
	precedent	-
15	Transitional relation	Additive: addition, Continuatives: transition
16	Continuative relation	-

As shown in Table 2.10, 10 Thai conjunctions categories could be matched to five English DCs categories. In addition, it was found that the six Thai conjunction categories, which could not be matched to English DCs categories, could be matched to another English word class, i.e., adverbs.

#### 2.4 Interlanguage (IL)

Interlanguage has played an important role in second language acquisition for decades because many researchers believe that it is the answer to the understanding of errors in learners' target language. Interlanguage is the term that was coined by Selinker

(1972) in the belief that the language learner's language was between the first language (FL) or native language (NL) and the target language (TL). Richards *et al.* (1985) stated that interlanguage is a type of language that is created by the language learner who is in the process of learning a second language.

Before the introduction of the notion of interlanguage, the two theoretical backgrounds, Contrastive Analysis and Error Analysis, underlining the interlanguage theory were reviewed.

Contrastive Analysis (CA) is a traditional approach used to study L1 interference. It is the study of two different languages, the first language and the second language explained by grammarians, and it also aims to analyze hypothetical problems. James (1985) suggested that CA was concerned with the way in which the native language (NL) had an influence on the target language (TL) learning. To clarify, CA is a comparative study of the NL with the TL in order to investigate the similarities and the differences between the two languages so that the problematic areas for the learner can be predicted (Pongsiriwet, 2001). During the 1940s up to the early 1960s, there was a hypothesis about language learning that differentiated between L1 and L2 learning. The assumption inspires the theory of CA which was originated by Fries (1945). As cited in Lennon (2008), Lado (1957) proposed the main idea of CA which could have a way to identify the difficulties of a particular target language for native speakers of another language by systematically comparing the two languages and cultures. He also stated that the hypothesis for CA was learners' difficulties in acquiring a new language which were derived from the differences between learners' native language and the new language they have learnt. That is, if two languages, NL and TL, and cultures share some similar features, learners should not have much learning difficulties as a result of positive transfer from NL. On the contrary, if two languages and cultures are different, learning difficulties should be expected as a result of negative transfer from NL. The CA theory is based on the idea that L1 transfer is the main cause of the errors found in L2 learners; L2 learners tend to transfer the formal features of their L1 to their L2 usage. It is believed that "the systematic L1-L2 comparisons would eventually allow researchers and teachers to predict when negative transfer will occur and what errors will be produced by particular L1 background groups of L2 learners" (Ortega, 2009, p. 31).

Due to the fact that there are some differences between NL and TL, CA is claimed to be able to accurately predict all the difficulties that learners would have when they learn TL (Ellis, 1987; Tarone, 2006; Lennon, 2008; Phoocharoensil, 2009). CA focuses on a surface comparison of languages, starting with the sounds, then the grammar and the vocabulary. This concept is influenced by structural linguists as they also focus on the analysis and comparison of surface structure across languages (Yang, 1992; Pongsiriwet, 2001; Lennon, 2008). In addition, CA is involved with behaviorist psychology, especially on audiolingual language teaching. Behaviorism theory considers language learning as habit formation which means the use of NL can be a problem or a help to the TL learning (Pongsiriwet, 2001; Lennon, 2008). According to Selinker and Gass (2008), CA is interested in studying the relationship between NL and TL in order to predict the problematic areas for learners. CA predicts and describes learners' errors which are assumed and caused by the influence from NL, but Lennon (2008, p. 53) stated "it has since been found that intralingual and interlingual factors often combine to produce error". However, the predictive ability of CA is questioned by researchers in the field. It is found that errors predicted by CA do not occur, and many actual errors are not predicted (Corder, 1981). Mizuno (1991, p. 115) addressed some criticisms on CA as follows:

1. It too much emphasized "the effect of interference".
2. It neglected the intralingual transfer.
3. It regarded errors as negative elements that hinder the development of language learning.
4. It is impossible to predict precisely the learner's proficiency from the results of CA studies.

(Mizuno, 1991, p. 115)

In addition, there are some more researchers who addressed the weaknesses of CA. For example, Pongsiriwet (2001, p. 22), Towell and Hawkins (1994) raised three main weaknesses of CA:

1. Not all areas of differences between L1 and L2 lead to negative transfer.
2. Not all areas of similarities between L1 and L2 lead to positive transfer.

3. Only a relatively small proportion of errors in the speech and writing of second language learners could be attributed to different properties between L1 and L2.

(Pongsiriwet, 2001, p. 22)

Lennon (2008) concludes that CA makes appropriate predictions concerning phonological errors, but imperfectly predicts errors of morphology, syntax, lexis and discourse. Therefore, the failure of CA in predictive ability gives rise to error analysis in the early 1960's.

Error Analysis (EA) is a term used to investigate the errors which appear in learner's language in order to determine whether errors are systematic, and try to explain what caused them (Center for Advanced Research on Language Acquisition, 2016). EA is developed, and largely used in second language acquisition (Corder, 1967), and the finding from empirical research shows that learning difficulties are not always predicted by CA (Odlin, 1989). Scholars who work on EA are interested in actual problems. In the early period, EA is only the teachers' collections of students' common errors and linguistic expression to support their teaching (Sridhar, 1981). EA in the 1970s and 1980s is a result from the attempt to find an alternative for CA. In addition, EA can explain errors which cannot be explained by CA because in EA collections of learners' errors, for instance, L1 transfer, the strategies of communication, and quality of second language instruction are taken into consideration (Pongsiriwet, 2001; James, 2013; Sompong, 2014).

According to Corder (1981), EA is the investigation of the language of second language learners, and it is what teachers have always done for practical reasons. The errors that learners make are a major element in the feedback system of the process in language teaching and learning. EA confirms the predictions of the theory lying behind bilingual comparison. It has been claimed that error analysis is an experimental technique for validating the theory of transfer. Corder (1981) also adds that one of the EA goals can tell the psycholinguistic processes of language learning as the conclusion can be shown the learners' strategies. His longitudinal studies of L2 learners found that those L2 learners produced languages which were similar to a child learning his or her L1; the errors L2 learners made would be the most important source of information about their linguistic development. Moreover, Corder (1981) proposed that there are



two functions in EA which are a theoretical function and a practical function. For the theoretical function, the learners' knowledge of the target language is described in order to relate the knowledge to the lessons they are taught. On the other hand, the practical function is a guideline for correcting an unsatisfactory state of affairs for learners or teachers.

Touchie (1986) and Pongsiriwet (2001) stated that there are two main errors' sources in second language learning. The first source of errors is interlingual, L1 interference or L1 transfer. These can be found in written text or spoken mode in the target language (Richards, 1971). There are various studies conducted on this source of errors. Kaweera (2013) reviewed the theoretical concepts of interlingual and intralingual interference in EFL context in order to define the existence of errors due to their sources. It was found that Thai student writing were influenced by interlingual, especially in lexical, syntactic and discourse interference. As stated in Jiang (1995), the study investigated Taiwanese EFL learners' errors in English prepositions, and found that plenty of errors were from L1 transfer. Likewise, Koosha and Jafarpour (2006) analyzed Iranian EFL learners' knowledge of collocation, and the findings revealed that learners employed their L1 collocational patterns to the L2 production. Sersen (2011) conducted a study by raising the awareness of student-participants in specific aspects of L1 interference in their English writing, and the finding revealed that ten types of L1 to L2 transfer, for instance, avoidance of use of "be", avoidance of articles: "a" and "an" and misuse of possessive and reflexive pronouns were found. The study of Wang (2009) in negative transfer on English learning showed that Chinese students had a problem with using subject omission. In Chinese, a subject can be omitted, but this rule could not apply for English. The study found that participants missed subjects in English sentences. From previous studies, it could be said that interlingual error played an important role in second language learning as it was a negative transfer from learners' mother tongue.

The second source of errors is intralingual and developmental factors. These errors reflect natural stages of development which are similar to the way children learnt their NL (Dulay et al., 1982; Sompong, 2014). It is the fact that these errors are from the difficulties in TL (Touchie, 1986). That is, intralingual and developmental factors are from learners' limited knowledge in TL. It can be elaborated that these errors occur

when learners cannot acquire the knowledge in the target language because of the problem of the language itself, not the learners' incompetence to differentiate between NL and TL (Pongsiriwet, 2001; Heydari & Bagheri, 2012). Intralingual and developmental factors are a significant source of errors in second language acquisition as they include the general characteristics, for example, simplification, overgeneralization, hypercorrection, faulty teaching, incomplete application of rules, ignorance of rule restrictions, false concepts hypothesized, and avoidance (Richards, 1971; Touchie, 1986; Pongsiriwet, 2001; Khansir, 2012; Kaweera, 2013).

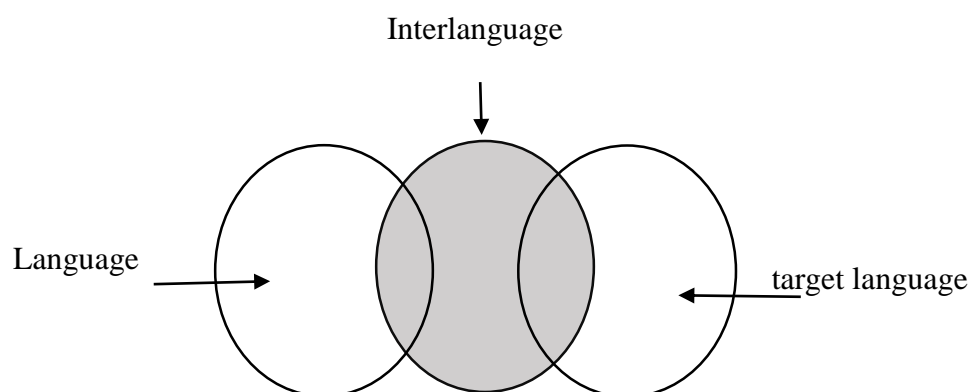
Collins (2007) mentioned in language acquisition research that learners with different L1 would have similar types of errors in the target language which could support the belief that errors from learners were not only from the negative L1 transfer, but also from the negative target language transfer. There were some studies conducted on error analysis which focused on the source of errors. As mentioned in Sattayatham and Honsa (2007), the top-ten errors found in Thai students were: (1) order of adjectives, (2) there is/are, (3) subject-verb agreement, (4) direct/indirect object, (5) verbs of feeling, (6) past tense, (7) present perfect, (8) reported speech, (9) passive voice, and (10) question tag. The errors made by 237 Thai medical students were caused by intralingual factors more than the interlingual ones. Also, Kim (1987) cited in Heydari and Bagheri (2012) investigated 12<sup>th</sup> grade Korean EFL learners in their English compositions. It was found that errors on the use of "be", "auxiliaries" and "prepositions" were from intralingual errors more than interlingual errors. Tabatabai (1985) found the errors in written text by 20 Iranian students were mostly from the intralingual factors. It can be suggested that intralingual factors could be the common source of EFL learners' errors when learners acquired more knowledge in TL (Heydari & Bagheri, 2012). Although EA could explain errors found in learners' language, the weaknesses of EA were mentioned in Schachter and Celce-Murcia (1977, p. 441) who proposed six areas in EA: "(1) the analysis of errors in isolation; (2) the classification of identified errors; (3) statement of error frequency; (4) the identification of points of difficulty; (5) the ascription of causes to systematic errors; (6) the biased nature of sampling procedures". They elaborated that these six aspects limited the advantages of EA in explaining the acquisition process of second language learners. Mizuno (1991) also suggested that EA focused on products, so it tended to ignore the learning process

and the non-errors, i.e., avoidance errors. To support this claim, Ellis (2008, p. 67) addressed the limitations of EA as “weaknesses in methodological procedures, theoretical problems, and limitations in scope”.

By the late 1970’s, interlanguage (IL) was coined by Selinker (1972) in the belief that the language learner’s language was between the first language and the target language. That is, IL is a type of language that is created by second or foreign language learners who are in the process of learning a target language (Richards *et al.*, 1985). Other names for learners’ language have been proposed such as “interlingua” (James, 1980), “approximative linguistic systems” (Nemser, 1971), “transitional competence” (Corder, 1981). According to Corder (1981), each term focuses on different aspects. Nemser (1971) suggested that approximative linguistic system drew attention to the development of the learner’s language towards the target language system, whereas researchers who coined the term transitional competence believed that the learner possessed some knowledge which controlled the utterance the learner made. Interlanguage focused on the developmental aspect of learner’s language. Each learner has different problems which can be from different language experiences in schools, or his or her own language exposure. The language in an interlanguage stage is the language at a certain point of time (Barron, 2003; Tarone, 2006).

As cited in Barron (2003) and Pallotti (2010), IL is systematic and rule-governed. IL is in the transitional stage between NL and TL in which IL have a partial overlapping area between the two languages (Pongprairat, 2011). It can be concluded that IL is the mixed language system which shows systematic features of both first language and target language as shown in Figure 2.1.

Figure2. 1: Corder’s interlanguage diagram (Corder, 1981)



(Corder, 1981, p. 17)

According to Ellis (1987, cited in Samana, 2005) , there are three important characteristics of interlanguage. First, interlanguage is permeable as the rules are not fixed. Second, the learners' language is dynamic because the learners revise their own rules to accommodate the target language. Last, interlanguage is systematic as the rules can be predicted. Therefore, interlanguage can support evidence for developmental sequences of the second language, and the influence of learners' first language.

Interlanguage study focuses on idiosyncratic dialect of a learner. Researchers in this field conduct a longitudinal study in which a learner as a case study is followed to see his or her use of language in terms of developmental aspects or a cross-sectional study in which the analysis of data collected from a population or a representative of the group at one specific point in time in order to see language use whether they are in a more target like manner. They can see what problems each learner have in studying or acquiring a language. Interlanguage analysis concerns an analysis of the linguistic systems of L1 and L2 in relation to the transitional competence of second language learners (Corder, 1981). It can be mentioned that interlanguage refers to the language that learners use before they understand the target language.

There are five principal processes of interlanguage proposed by Selinker (1988):

1. Language transfer (First language interference)

Language transfer is the process where learners use some features from their first language in their second language. There are many terms to refer to language transfer like language interference, linguistic interference, cross-linguistic interference.

2. Transfer of training

Transfer of training is the situation where errors are influenced by what learners have been trained or taught in the second language classroom from instructors or textbooks (Tarone, 2006).

3. Strategies of second language learning

Strategies of second language learning are strategies that the individual learner used in an attempt to master TL. For example, the use of mnemonics to remember vocabulary or dialogues in TL (Tarone, 2006).

#### 4. Strategies of second language communication

Strategies of second language communication are strategies that an individual learner uses in his or her communication. It can be said that they are strategies or approach which learners use to communicate with native speakers of TL and to overcome the inadequacies of their interlanguage resources (Ellis, 1987).

#### 5. Overgeneralization

Overgeneralization clearly shows evidence of progress in which the learner has mastered a target language rule, but it also shows what the learner has not learned yet. (Tarone, 2006). For example, in this process, learners may use the past tense marker-ed for all verbs, regular and irregular, such as, walked, wanted, \*putted, \*drinked, \*hitted, \*goed.

Ortega (2009) also suggested that learners' internal knowledge systems engaged in processes of building, revising, expanding and refining L2 representations. He proposed that there are four important interlanguage ways:

##### 1. Simplification

Simplification is a process when simple language is used to convey messages. It happens at very early stages of L2 development and among naturalistic learners. For example, Sugaya and Shirai (2007) found that the Japanese marker "te i-ru" could have both a progressive meaning and a resultative meaning, but at first L2 Japanese learners used it to express the progressive meaning only (Ortega, 2009).

##### 2. Overgeneralization

Overgeneralization is the application of a form or rule for both contexts where it applies and other contexts where it does not apply. For example, learners begin using the -ing form from a very beginning stage, but they also overgeneralize it to many non-target-like contexts such as the work of Schmidt (1983) cited in (Ortega, 2009)

(44) \*I don't know why people always talking me.

(45) \*so yesterday I didn't painting.

##### 3. Restructuring

Restructuring is the process of self-reorganization of grammar knowledge representations. It involves knowledge changes which can be large or small, abrupt or gradual, but it is always qualitative and relates to development or progress. To put it simply, the changes make to internalize representations as a result of new learning.

#### 4. U-shaped behaviour

U-shaped behaviour is typically a part of restructuring. It is defined by Sharwood Smith and Kellerman (1989) as the appearance of correct forms at an early stage of development underwent a process of attrition. Ortega (2009) elaborated more in U-shaped behaviour, the linguistic products of the final phase could not be distinguished from those of the first phase as both of them seemed to be error-free. For example, Lightbown (1983) showed that a group of English language learners moved from the correct usage of the –ing form to the incorrect usage, and back to the correct one again. In addition, Selinker and Gass (2008) suggested that the system of interlanguage was composed of numerous elements as they could be from NL, TL and also from IL which did not have in both NL and TL. They were new forms and empirical essence of interlanguage.

As mentioned previously about the concept of interlanguage, some previous studies should be reviewed.

#### **2.5 Previous studies on discourse connectors**

It was found that there were some studies compared their sample groups with a large well-known corpus. For example, Milton and Tsang (1993) conducted a research on a corpus-based study of logical connectors in EFL students. They compared NS and NNS writing essays by using corpus. For NS essays, three NS corpora were used: the American Brown Corpus, the LOB Corpus, and the HKUST Corpus, whereas the NNS essay were from 800 first year HK undergraduates (4,084,000 words). In this study, the researchers used the logical connectors framework from Celce-Murcia & Larsen Freeman (1999); four logical connectors: (1) additive, (2) adversative, (3) causal, (4) sequential were used to analyze. The results revealed that HK first year students overused logical connectors. Likewise, Bolton et al. (2003) conducted a corpus-based study of the use of connectors in student writing. They focused on connector usage in the writing of university students in HK and in Great Britain, and presented results based on the comparison of data from the International Corpus of English (ICE). The study investigated the analysis of underuse and overuse of connectors. The researchers found that both NS and NNS overuse a wide range of connectors. For example, NNSs overused the connectors like “so”, “and”, “also”, “thus”, “but”, whereas NSs overused

the items “however”, “so”, “therefore”, “thus”, and “furthermore”. However, in this study, the researchers mentioned that there was no significant evidence for underuse.

Not only the LOB corpus and the ICE corpus were used, some researchers used the LOCNESS corpus or the International Corpus of Learner English (ICLE) corpus to compare with their advanced learners’ corpus. For example, in the work of Granger and Tyson (1996), connectors between native English speakers and non-native, were investigated to test the hypothesis of the overuse of connectors by learners. The ICLE was used in the study. It was found that no overall overuse of connectors by learners. They conducted more in qualitative study, and it was revealed that there were overuse and underuse of individual connectors, and it was found the misuse of connectors in semantic, stylistic and syntactic. The researchers suggested that connectors must be taught through authentic texts in order to see semantic, stylistic and syntactic of each connector. Similarly, Altenberg and Tapper (1998) studied the use of adverbial connectors in advanced Swedish learners’ writing. They compared advanced EFL learners with a native student corpus to determine overuse and underuse of linking adverbials. The learner corpus was taken from the Swedish ICLE Corpus (86 untimed essay), and the control corpus was contributed by 70 native speakers. The result showed that the Swedish learners overused certain linking adverbials like “moreover”, “for instance”, and “on the other hand”, while the result showed the underused of “hence”, “therefore”, “thus”, and “however”.

Narita *et al.* (2004) also studied the connector usage in the English essay writing of Japanese EFL Learners. They compared 25 logical connectors in advanced Japanese university students’ essay writing with the use of native English writing. The data was selected from two-sub-corpora of the ICLE project: (1) the Japanese component of the ICLE corpus; and (2) the Louvain Corpus of Native English (LOCNESS). The finding showed that Japanese EFL learners significantly overused these logical connectors in sentence-initial position, and they also overused connectors as “for example”, “of course”, and “first”. Moreover, they underused such connectors as “then”, “yet”, and “instead”.

In addition, Chen (2006) investigated the use of linking adverbials in EFL advanced learners. 23 Taiwanese corpus of academic papers were compared with his constructed corpus of 10 published journal papers. The result revealed that Taiwanese

learners used slightly more linking adverbials than the researcher's corpus. Some inappropriate use of linking adverbials was reported. For example, "besides", an oral communication signal word, was used as an additive in learners' academic writing.

There was one study conducting on writing quality and the use of adverbial connectors. Tankó (2004) did a research on the use of adverbial connectors in Hungarian university students' argumentative essays. The researcher investigated writing quality of essays as one factor in her analysis of learners' linking adverbial use. Only highly rated argumentative essays were included in her learner corpus. The participants were foreign language learners who were studying in a master's program in English. The learner corpus consisted of 21 argumentative essays produced by Hungarian university students and it was compared with a native student corpus. The results showed that Hungarian learners' writing had some similar features to those of native speakers' writing (e.g., positions of adverbial connectors, and stylistic requirements), but the types of used linking adverbials in Hungarian learners' writing were more restricted than native speakers as they used a lot more linking adverbials in the additive category.

Moreover, some studies created their own corpus. For example, Feng (2010) collected articles from 38 students which their majors were tourism management and English, and created a corpus from those data in order to investigate the use of discourse markers. It was found that there was an inappropriate use of discourse marker and an avoidance of use. He suggested that teachers should teach discourse markers' role and function in cohesion and coherence of discourse. Also, Carrió-Pastor (2013), carried out a contrastive study of the variation of sentence connectors in academic English. She created her own corpora from scientific papers in the field of engineering. There were 20 academic papers written by English native writers, and 20 academic papers written by Spanish native writers. 79 DCs from Biber *et al*'s framework were analyzed through Wordsmith Tools in order to find out whether English native writers and Spanish native writers employed the same categories of sentence connectors. It was found that even in academic papers in the same field, the two groups of writers may use the same categories, but did not use the same sentence connectors in the sections of the research paper: abstract, introduction, methodology, results, conclusion and discussion. She



suggested that this variation may occur as the interpersonal style of writers when their linguistic background was different.

Ong (2011) conducted a research using both quantitative and qualitative analysis in examining the use of cohesive devices in expository essays written by a group of 20 Chinese EFL learners in Singapore. It was found that in qualitative study simple additive conjunctions, e.g., “and”, “in addition”, and “moreover” were used without the function of adding new information. For quantitative study, errors were found in the inappropriate use of adversative and additive conjunctions.

The study of discourse connector usage was also an interesting topic in Thailand. There was some research conducted in this field. Prommas and Sinwongsuwat (2011) undertook a research of discourse connectors in argumentative compositions between Thai and American undergraduate students. They found that in terms of semantics both groups used similar DCs, but with the different degree of occurrence. However, in terms of syntactic distribution, the Americans used DCs as conjunctive adverbials in sentence-initial, medial and final positions, followed by coordinators and subordinators. For the Thais, they used coordinators the most, followed by conjunctive adverbials and subordinators.

Patanasorn (2010) explored the use of linking adverbials in a Thai EFL learner corpus by comparing it with a US student corpus, and also focused on occurrences of linking adverbials in different writing quality. The data consisted of 163 argumentative essays by third and fourth year Thai students, and 12 US student corpus; both corpus are reference untimed essay. In this study, a concordancing software MonoConc was used to analyze the writing essay. The result showed that Thai learner corpus and the US student corpus shared three similar features in the usage patterns. Firstly, both native and nonnative speakers presented the frequencies of semantic categories in a similar way. To put it simply, adverbials in the group of result/inference were used in the high proportion both in NS and NNS, followed by enumeration/addition/summation, and contrast/concession, apposition, and transition. Secondly, the researcher found a similar result in distribution of syntactic forms in both groups. Both Thai learners and US students corpus showed that single adverbials were accounted for the highest proportion of syntactic forms, followed by prepositional phrases. Lastly, the top five most frequent words that were found in both NS and NNS were quite similar as Thai learners used

“so”, “moreover”, “for example”, “however”, “therefore” while US students employed “also”, “so”, “however”, “then”, “therefore”. It revealed that both groups produced a small set of linking adverbials in the writing. For the point of writing quality, higher quality essays had more linking adverbials than weaker ones.

Lastly, Sitthirak (2013) investigated the use of contrastive discourse markers between 79 Thai university students and 28 English speakers using a set of questionnaires. The result showed that Thai students could differentiate the use of contrast and non-contrast relation between two utterances at a more considerable rate than English speakers for the given contexts because of the differences in pragmatic use.

According to the previous results, second language learners, i.e., Spanish, Swedish, Taiwanese, Chinese, Hungarian, Hong Kong and Thai produced discourse connectors, discourse markers, logical connectors or linking adverbials pretty much the same way. For example, they overused “and”, “moreover”, “furthermore” which were in an additive category. However, in the work of Thai EFL, the researcher compared not only native and non-native essays, but also high and low proficiency of learners as well. The previous works varied in the criteria of the data such as a timed and untimed essay, with or without reference tools, the proportion of native and non-native speakers, and the genre of the writing.

Many previous studies mentioned the use of cohesive devices as an essential tool to help learners write well; therefore, my study paid attention to discourse connectors, one of cohesive devices (Halliday & Hasan, 1976), as they were one of the significant problems in the writing. Even though there were various studies on DCs, there was no DCs study in term of interlanguage. Studying DCs in term of interlanguage is challenging and interesting because the patterns and problems of DC usage among EFL learners with different English language exposure could be revealed. Moreover, it was an attempt to explain the problem in using English DCs by looking at Thai conjunctions categories. In addition, from the previous studies, there were many variables which did not control, and it may effect to the result of the study. Therefore, in my study, I controlled the environment, especially the topic of the essays.

## 2.6 Summary

This chapter reviewed argumentative essays which included important elements structure of the essay from the two frameworks. Cohesive devices both in English and Thai were explained in order to see the similarities and differences of the two languages. The notion of interlanguage and the two theoretical backgrounds: Contrastive Analysis and Error Analysis were discussed. Previous studies of discourse connectors were also reviewed. Chapter 3 presented the research methodology of the study.



## CHAPTER III

### RESEARCH METHODOLOGY

This chapter introduces the research design and methodology which is separated into four main sections. The first section describes the population and sample groups. In the second section, data collection procedures are discussed. The next section explains data analysis, and the last section clarifies the pilot study.

#### **3.1 Population and sample groups**

The population in this study was divided into 2 groups: Thai undergraduate students and native English speaking undergraduate students' corpus. For the Thai undergraduate students, they were drawn from various faculties, e.g., Faculty of Education, Faculty of Liberal Arts and Science, Faculty of Arts, and Faculty of Humanities, of a selection of public and private universities in and around Bangkok. At the time of this study, these Thai undergraduate students were third and fourth year students aged 19-21 years old and majoring in English or Teaching English. Their first language was Thai.

In order to select the sample for this research, an English Language Exposure Questionnaire, which was adopted from the (Centre for Research in Speech and Language Processing (CRSLP), 2002, 2011), was distributed to 300 Thai students. Since this questionnaire was first compiled in 2002 and developed in 2011, it has been used by many researchers from 2002 until the present time (Sudasna Na Ayudhya, 2002; Modehiran, 2005; Pongprairat, 2011; Thavorn, 2011; Wong-aram, 2011). The questionnaire has 333 points. Based on the completed questionnaires from this study, the 20 students who recorded the highest scores were classed as non-native speakers of English with high-English exposure (NNSHs), while the 20 students who recorded the lowest scores were classed as non-native speakers of English with low-English exposure (NNSLs). The 40 students from these two groups were selected as the sample for this research.

For the corpus taken from native English speaking undergraduate students, the Louvain Corpus of Native English Essays (LOCNESS) was employed in this study. LOCNESS was compiled by the Centre for English Corpus Linguistics of the

Université Catholique de Louvain (Belgium) under the direction of Professor Sylviane Granger. The total number of words at the time of conducting this study was 324,304 words. Though it was quite a small dataset, in some cases, a small corpus can be valuable. As mentioned in McCarthy and Carter (2001, p. 339), “what matters is not wholly or simply how big a corpus is but rather the way in which the data are collected and classified and the kinds of questions that the researcher asks of it.” The corpus was made up of three main collections of essays: British pupils’ A level essays (60,209 words), British university students’ essays (95,695 words), and American university students’ essays (168,400 words).

### **3.2. Data collection procedures**

#### **3.2.1 Native Speakers of English (NSs) data**

For NSs, the corpus was taken from the LOCNESS corpus. As mentioned earlier, the corpus was made up of three main collections of essays; this NSs data took American university students essays into account because it compiled argumentative essays from various universities, for example, Marquette University; Indiana University at Indianapolis; Presbyterian College, South Carolina; University of South Carolina; and University of Michigan. Only the corpus from the University of Michigan was analysed because it matched the criteria: (1) timed essay, (2) no reference tools, and (3) the topic. There were 43 essays in this corpus, but only 20 essays were purposively used in the main study. The approximate length of each essay was 250-500 words; the total number of words in the 20 essays was 3,884 words. The topic of the NSs argumentative essay was “Great inventions and discoveries of the 20<sup>th</sup> century and their impact on people’s lives (one invention per essay from computer, television, etc.)”. All of the students were native English speakers aged between 19 – 23 years old. There was no record of the students’ genders.

#### **3.2.2 Non -native speakers of English (NNSs) data**

For NNSs, with both high and low English exposure, the data, comprised of the English Language Exposure Questionnaire and argumentative essays, were collected through their writing tasks during their English courses. A total of 300 students were given the questionnaire to fill out and return to the researcher. The approximate time taken to fill out the form was about 15-20 minutes. After returning the questionnaire,

each student was asked to write one argumentative essay on the topic “The computer and its impact on people’s lives. Discuss both advantages and disadvantages”. Students had to finish their essays within 90 minutes, and the use of all reference tools such as grammar books or dictionaries was not allowed. The length of the essays was approximately 250-500 words.

As mentioned previously, there were 300 students from various universities in and around Bangkok. Thus, to categorise the samples into the High and Low groups by using standard English language proficiency test, e.g., TOEIC, IELTS or TOEFL, was not a good option because of the high expenses involved in taking these tests. In addition, the use of their English grades could not be considered as the standard of each university varies. Based on the limitations of the two factors mentioned, the English Language Exposure questionnaire was considered the best option to be used for dividing the NNSs data into two groups: High and Low. As cited in Pongprairat (2011), the questionnaire has proven that learners with different language exposure are significantly different in all aspects of their language performance, i.e., pronunciation, lexical access, word formation, pragmatic, etc.

The questionnaire was developed by CRSLP (2002, 2011). It was used as a research tool for categorising EFL learners according to the amount of English language exposure in their daily lives and was adopted in many interlanguage research works, for instance, lexical access (Sudasna Na Ayudhya, 2002), pragmatics (Modehiran, 2005), syntactic ambiguity (Thavorn, 2011), word formation (Wong-aram, 2011) and intonation (Pongprairat, 2011).

There were 3 sections in the questionnaire: the amount of English language exposure at home and at school including English language proficiency from past to present (116 points); the amount of time spent on all kinds of learning methods: formal education, extra curriculum and English self-practice activities (100 points); and intensive English language exposure such as intensive courses and overseas experience (117 points). The total questionnaire score was 333 points.

The scores from the questionnaire were ranked from the highest to the lowest. The 20 students who recorded the highest scores, ranked top twenty from 1 to 20, were classed as non-native speakers of English with high-English exposure (NNSHs). In contrast, the 20 students who recorded the lowest scores, ranked from 280 to 300, were

classified as non-native speakers of English with low-English exposure (NNSLs). The English Language Exposure scores of all 40 samples (H:20, L:20) are shown in Table 3.1.

Table3. 1: The English Language Exposure Scores (Total scores = 333 points)

Sample	Scores	Sample	Scores
NNSH1	182	NNSL1	99
NNSH2	180	NNSL2	99
NNSH3	175	NNSL3	99
NNSH4	174	NNSL4	98
NNSH5	173	NNSL5	98
NNSH6	170	NNSL6	98
NNSH7	170	NNSL7	98
NNSH8	167	NNSL8	96
NNSH9	165	NNSL9	96
NNSH10	165	NNSL10	95
NNSH11	164	NNSL11	92
NNSH12	164	NNSL12	88
NNSH13	162	NNSL13	85
NNSH14	161	NNSL14	83
NNSH15	160	NNSL15	81
NNSH16	160	NNSL16	80
NNSH17	159	NNSL17	78
NNSH18	157	NNSL18	77
NNSH19	156	NNSL19	70
NNSH20	156	NNSL20	64

Table 3.1 shows that the maximum score in the High group was 182 points, and the minimum score was 156 points. On the other hand, for the Low group, the maximum score was 99 points, and the minimum score was 64 points. All of the scores from the all 40 students in both of the High and Low groups are summarized and their distributions shown in Table 3.2.

Table 3. 2: The English Language Exposure Scores and Distribution

Samples	N	Max	Min	Mean	Range	%	S.D.
NNSHs	20	182	156	166	26	49.85	7.71
NNSLs	20	99	64	88.7	35	26.64	10.79

The result in Table 3.2 shows that the scores of the NNSHs ranged from 182–156 (49.85%) while the scores of the NNSLs ranged from 99–64 (26.64%). It could be said that the NNSLs had a higher standard deviation which showed a wider range of English language exposure. The percentage of the English exposure scores of the NNSHs was nearly twice as high as that of the NNSLs.

The questionnaire is divided into three sections. It can be noted that the scores did not show much difference between the two groups in Part I, which is concerned with information about English language experience and the amount of exposure to the language at home and school, including English language proficiency from the past until the present. However, the scores of each group were dramatically different in Part II, which indicates the opportunities to be exposed to English language in various situations outside their English classroom. There were also some significant differences between the NNSHs and NNSLs in Part III, which covers information about intensive courses in Thailand, and students' experience of using English in foreign countries, both English speaking countries, including America, England, Canada, New Zealand, and Australia, and non-English speaking countries, such as Malaysia, Singapore, Japan and South Korea.

### 3.2.3 Argumentative task

The argumentative essay is a genre of writing in which writers are required to prove that their opinion, theory or hypothesis about an issue is correct or more truthful than those of others (Damm, 2008). The objective of this kind of writing is to convince the reader of the acceptability of the standpoint taken (Oostdam, 2005). In argumentative writing, the writer states their position, gives supporting reasons for the position, introduces a counter-argument and opposes it with further reasons, and restates their own position (Hirose, 2003; Chin et al., 2012).



In this study, the topics of the argumentative essays for the NSs and NNSs had the same general theme, albeit with slightly different focuses, as the NSs corpus topic was “Great inventions and discoveries of the 20<sup>th</sup> century and their impact on people’s lives (one invention per essay – e.g., computer, television, etc.)”, whereas the NNSs’ topic was “The computer and its impact on people’s lives. Discuss both advantages and disadvantages”. One of the main reasons that the two groups had different topics was to help NNSs feel more comfortable in writing as computers are now used in their daily lives. In this study, all 60 essays were evaluated to identify the degree of argumentation.

Grading argumentative essays was also one factor to take into account in this study. As it was addressed that DCs were used more in argumentative essays than in other types of essays, and in order to prove our hypothesis, all of the essays in this study were evaluated based on the structure of Baker, Brizee, and Angeli (2013) who proposed their argumentative essay structure in Purdue Online Writing Lab (POWL) as shown in Table 3.3.

Table 3.3: The five elements of structure of the argumentative essay (Baker, Brizee, & Angeli, 2013)

Purdue OWL’s framework
1. A clear, concise and defined thesis statement in the first paragraph.
2. Clear and logical transitions between the introduction, body and conclusion.
3. Body paragraphs that include evidential support. <ul style="list-style-type: none"> <li>3.1 It should be limited to discussing one general idea.</li> <li>3.2 Each paragraph in the body must have some logical connection to the thesis statement in the opening paragraph</li> </ul>
4. Evidential support
5. A conclusion that does not simply restate the thesis, but readdresses it in light of the evidence provided

5.1 Do not introduce any new information into the conclusion

5.2 Restate the topic, review the main points, and review your thesis

The structure of Baker, Brizee, and Angeli (2013) was considered appropriate to use for determining the grades of argumentative essays in the three sample groups. In this study, because the sample groups were drawn from various universities and it was, therefore, impossible to expect that they had all been trained to write argumentative essays in the same way, this framework from POWL was considered more applicable as it did not contain any technical terms.

### 3.2.3.1 Grading argumentative essays in the 3 groups

Each essay was marked based on the POWL's framework (Table 3.3), which had 5 main elements. For each element, a maximum of 2 points was awarded for a maximum total score of 10 points. The highest score in each of the three groups was 7, but the lowest score was 3, which was found in the NNSL group. The grades for the argumentative essays in all 3 groups are shown in Table 3.4

Table 3.4: The argumentative essay grades in all three groups (Total scores = 10 points)

Number	Grades of NSs	Grades of NNSHs	Grades of NNSLs
1	7	5	6
2	7	6	5
3	5	6	4
4	7	7	7
5	7	6	7
6	5	5	6
7	6	7	4
8	5	5	7
9	6	7	7
10	6	7	4
11	6	5	7
12	7	4	7
13	7	5	7
14	6	5	7
15	5	7	7
16	5	6	5
17	5	7	6

18	5	7	7
19	5	5	3
20	5	6	7

The highest score in each of the three groups was 7, but the lowest score varied among the three groups (5 in the NSs, 4 in the NNSHs, and 3 in the NNSLs). All scores from all 60 essays are summarized and their distribution shown in Table 3.5.

Table3. 5: The argumentative essay grades and distribution  
(Maximum available score = 10 points)

<b>Samples</b>	<b>N</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Range</b>	<b>%</b>	<b>S.D.</b>
NSs	20	7	5	5.85	2	58.5	0.87
NNSHs	20	7	4	5.9	3	59.00	0.96
NNSLs	20	7	3	6	4	60.00	1.33

For the NSs, the range in the grades of their argumentative essay was 2 points which did not show much differences within the group, and its value of standard deviation was 0.87 (58.5%). In the NNSs, the range in the High group was 3 points which did not show any significant differences in the group, whereas the Low group had a wider grade range than the High group of 4 points. From Table 3.5, we can conclude that the NNSLs had a higher standard deviation showing a wider range within the group, whereas the NSs and NNSHs had a lower standard deviation showing a narrower range within the two groups.

### 3.3 Data analysis

#### 3.3.1 Data Structure

For the framework of analysis, the selection of DCs for this study was based on the list of DCs in Halliday and Hasan (1976), Quirk et al. (1985), Biber et al. (1999), and Cowan (2008). The final list contained 103 DCs. Details of the DCs' lexis for the analysis are shown in Table 3.6.

Table3. 6: The DCs lexis for analysis (Halliday & Hasan, 1976; Quirk et al., 1985; Biber et al., 1999; Cowan, 2008)

No	Main Category	Sub Category	DCs
1	Additive	Addition	additionally, also, and, as well, at the same time, besides, further, furthermore, in addition, likewise, meanwhile, moreover, or, similarly, what is more
		Exemplification	e.g., for example, for instance, such as, to illustrate
		Restatement	i.e., in other words, namely, specifically, that is, that is to say
2	Adversative	Contrast	alternatively, but, by comparison, by way of contrast, conversely, in contrast, instead, nor, on the contrary, on the one hand, on the other hand
		Concession	although, at any rate, despite that, even though, however, in any case, in spite of, nevertheless, nonetheless, though, yet
3	Causal	Result/inference	accordingly, as a consequence, as a result, because, consequently due to, due to the fact that, for, hence, so, then, therefore, thus
4	Temporal	Ordering	at last, finally, first, first of all, firstly, for a start, for another thing, for one thing, fourth, fourthly, in the first/second/third place, last but not least, last of all, lastly, next, second, secondly, then, third, to begin with, to start with
		Summation	all in all, as we have seen, in a nutshell, in conclusion, in short, in sum, in summary, overall, to conclude, to sum up, to summarize
5	Continuatives	Transition	after all, anyway, by the way, now, of course, surely, well

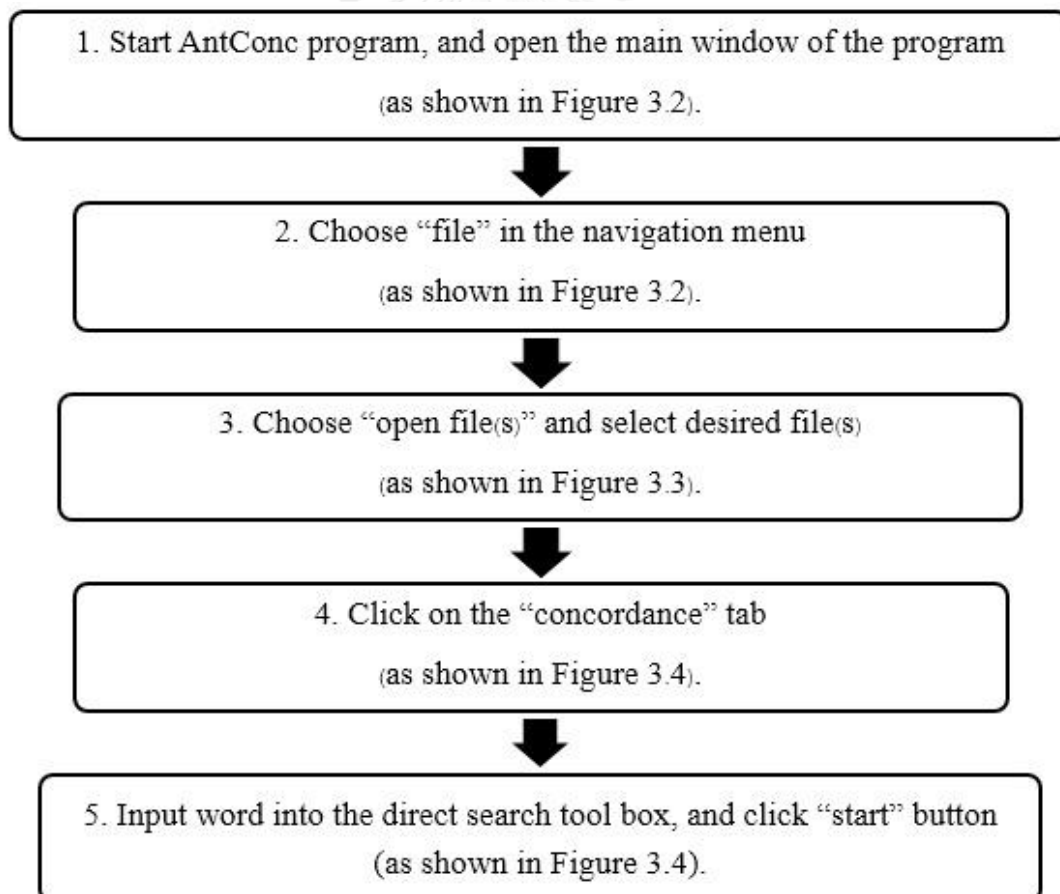
### 3.3.2 Identification of DCs

In the identification of DCs, two steps were employed: (1) identification of the DC lexis by AntConc and (2) the manual linguistic identification of DCs.

#### 3.3.2.1 The identification of DCs using AntConc program

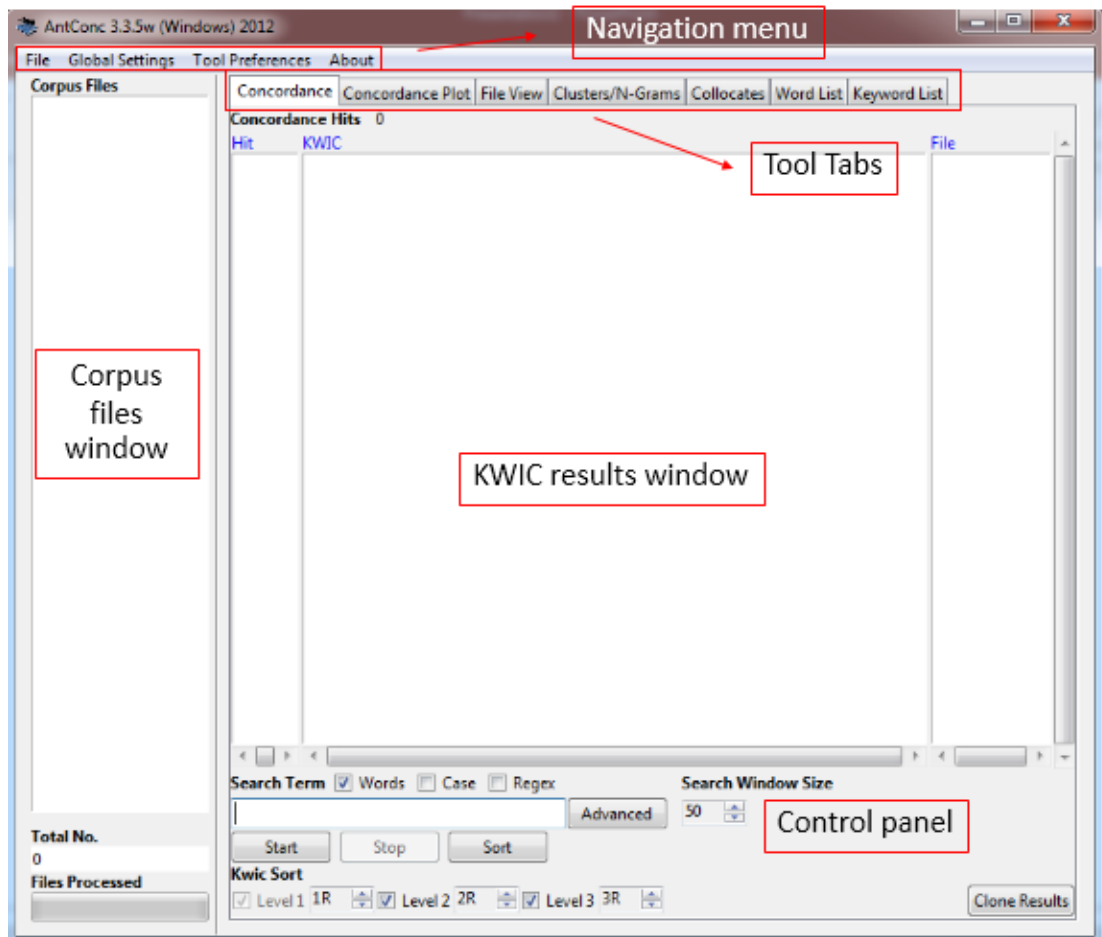
AntConc is a freeware concordance program, which can be downloaded from the internet. It is compatible with Windows, Macintosh and Linux/Unix systems and was developed by Professor Laurence Anthony at Waseda University in Japan. In addition to English, this program can also analyse Chinese, Japanese and Korean. The AntConc program used in this study was version 3.3.5. The program can be used well with plain text files (.txt files), and can concord more than one file at a time.

The steps followed for using the AntConc in this study are shown in Figure 3.1: Figure3. 1: Steps in the use of AntConc



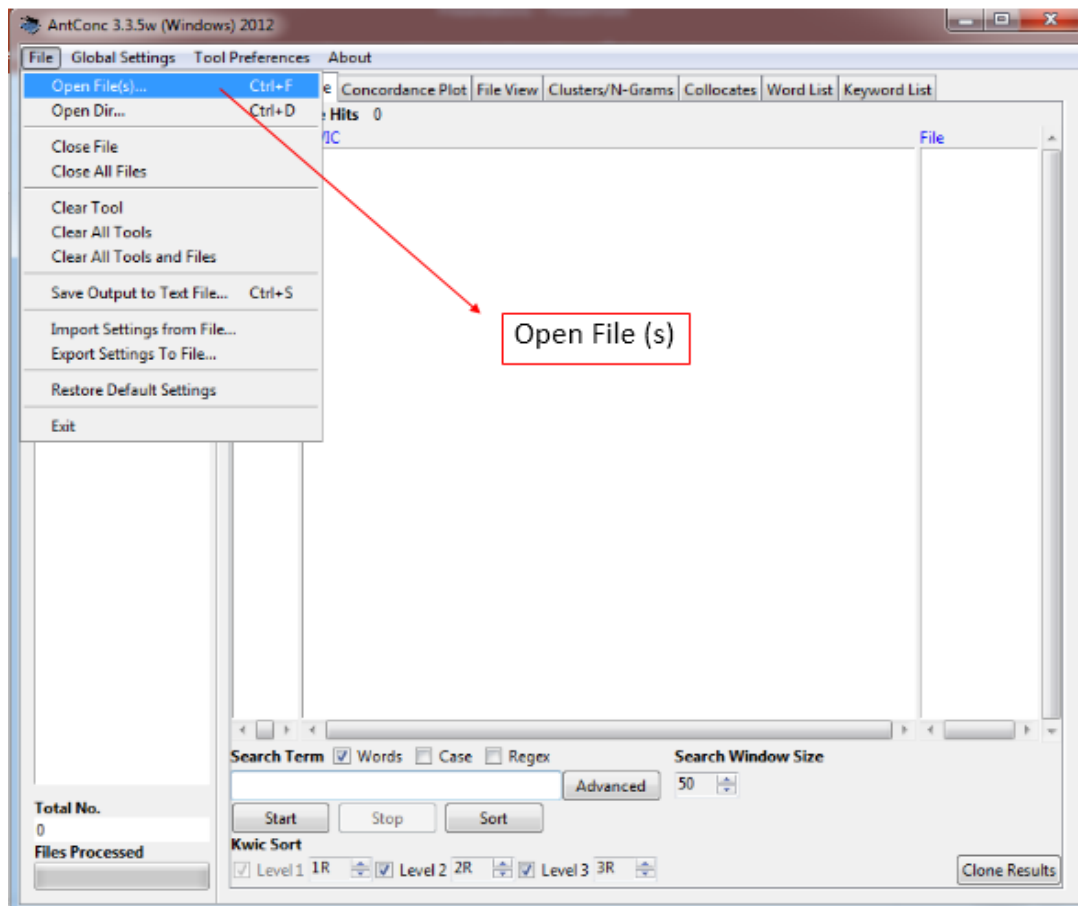
AntConc can help with analysing patterns in language, such as the Key Word In Context (KWIC), word frequency count, concordance, concordance plot, file view, clusters, collocates, word list and keyword list as shown in Figure 3.2.

Figure3. 2: The main window of AntConc



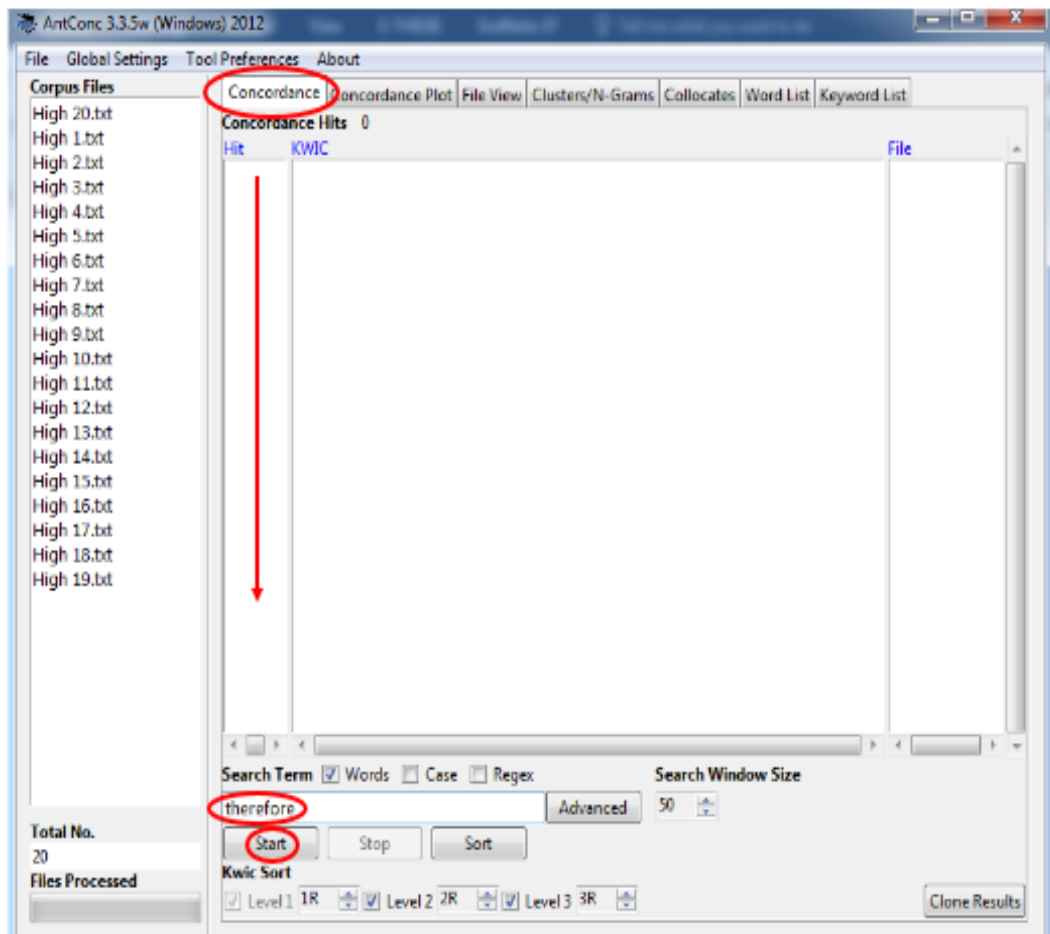
In the “open file(s)” dialogue window, select the files which will be analysed as shown in Figure 3.3.

Figure 3. 3: “Open File(s)” dialogue window



There were two main objectives of applying AntConc in this study. First, it was used to locate all DCs in all 60 essays. After the data structure was completed, a list of the lexis, 103 DCs was identified. Then, each of the DCs in the lexis was searched by the keyword list function using direct search input as shown in Figure 3.4.

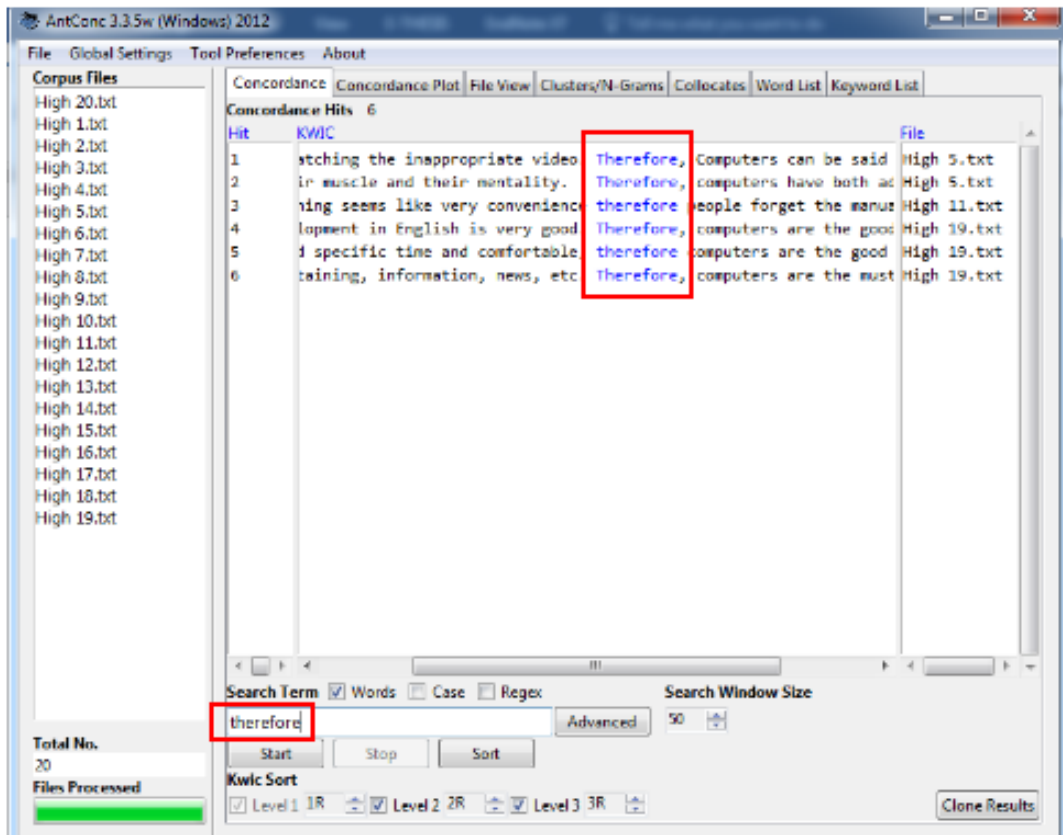
Figure3. 4: Generate concordance line by direct search input



The use of AntConc helped to ensure that the data identification was more accurate, as this tool can be applied to both upper case and lower case letters as shown in Figure 3.5.

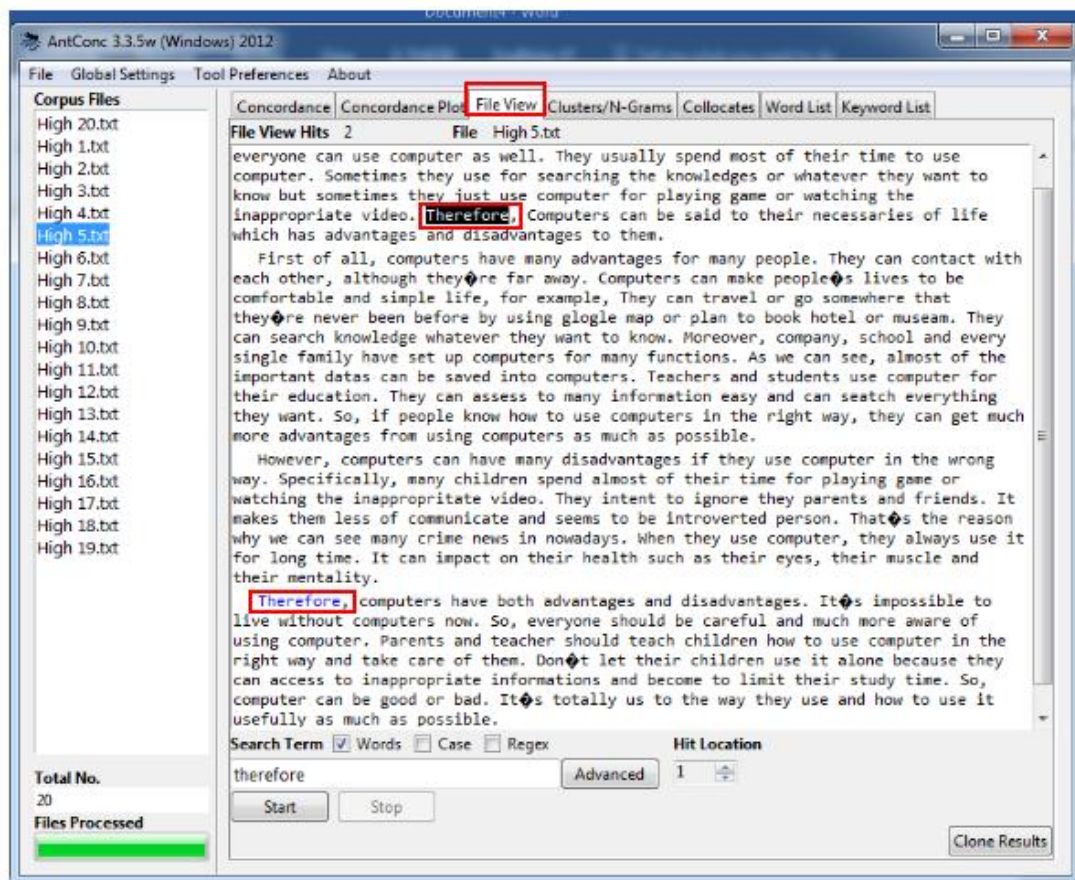


Figure 3. 5: Example of “therefore” using direct search input



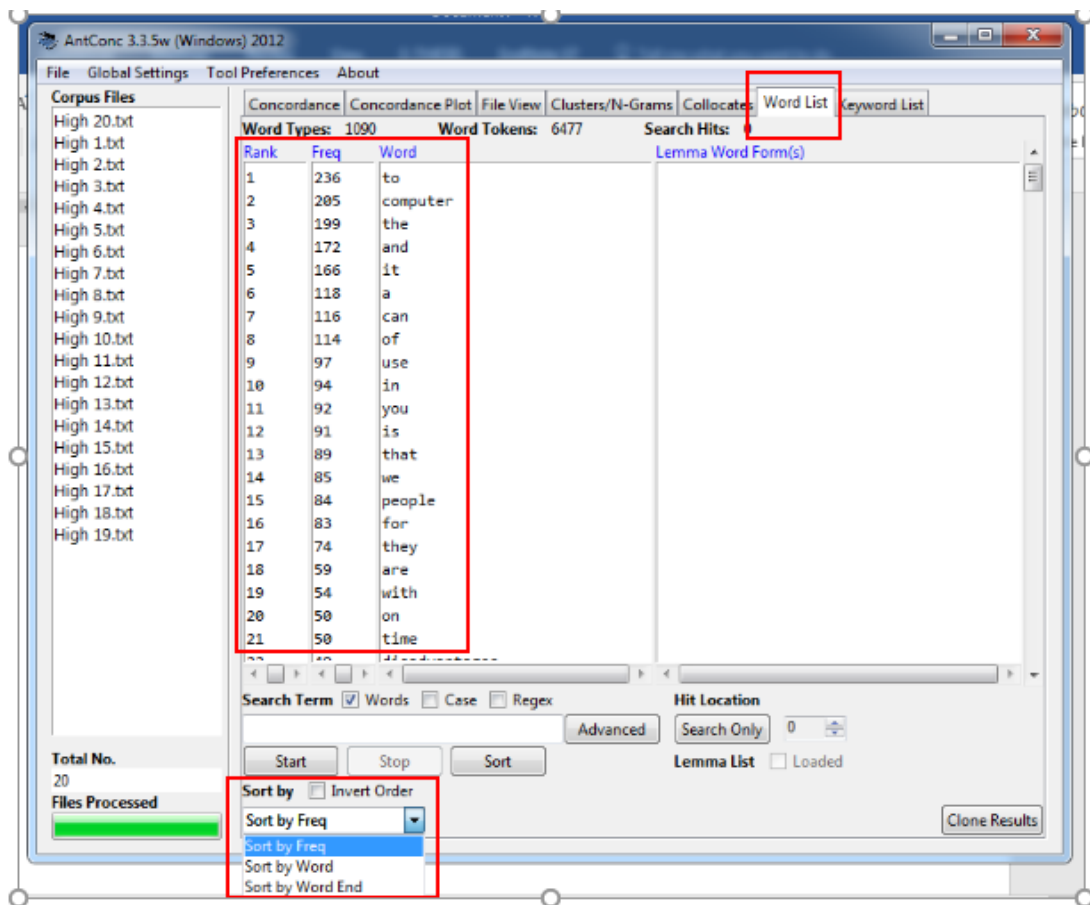
As shown in Figure 3.5, “therefore” was typed in lower case letters in a direct search tool box. Six tokens were found in the original context, including both upper case and lower case letters. This feature helps to ensure that the data identification is more reliable and accurate for the 103 DCs in the lexis from the 60 argumentative essays. Moreover, this program can also show words in file view as shown in Figure 3.6.

Figure 3. 6: Example of “therefore” in file view



Second, the AntConc program was used to count word frequency, and the program was set to sort words into alphabetical or frequency order or invert order as shown in Figure 3.7.

Figure3. 7: Generate concordance line from frequency list



As shown in the above example, the program was set to sort by frequency. It could be changed to sort by word or word end in either alphabetical order or invert order.

### 3.3.2.2 The manual linguistic identification of DCs

The use of AntConc was the first step in identifying the DCs, but the program had a limitation. Many DCs belonged to two or more different parts of speech; for example, “too” could function both as an adverb and as a DC as shown in the example below.

(46) My brother spends too much time playing computer games.

(47) Although there are many benefits, it has disadvantage effect for our lives too.

As can be seen from these examples, “too” in (46) performed the role of an adverb, but in (47) it was a DC. The AntConc program could not distinguish the differences. The program apparently could help us identify where DCs were in the sentence, but not every item in the lexis compiled by the program could be counted as DCs, such as “and”, “but”, and “or” as shown in the examples below.

(48) Both in your office, at home and at school, you can find it in everywhere.

(49) The convenience has proved itself in many circumstances and I do not know what I would do without it.

From the definition of DCs in this study, not all items in the lexis can be counted as DCs. For instance, “and” in (48) could not be counted as a DC because its function here is to combine only phrases. However, in (49), “and” could be counted as a DC since it linked two clauses. That is, in the process of word counts, the program only counted the language items that we put in the search box, but it could not differentiate the structure of those items. Therefore, manual checking was the second step in identifying the DCs.

### **3.3.3 Qualitative Analysis**

A description of DCs used in three sample groups is presented in this section.

#### **3.3.3.1 Linguistics description of DCs**

This study aimed to identify the three aspects of use of English DCs by NSs, NNSHs, and NNSLs; to compare and contrast the DCs used among the three groups; and to analyse the patterns and problems of DC usage in interlanguage stages between NNSHs and NNSLs by comparing their usage with that of NSs corpus. The three aspects DC usage are Orthography, Syntax, and Pragmatics. The details of each aspect are as follows:

The first aspect to look at was Orthography, which is concerned with the rules of transferring speech into writing, such as capitalisation, spelling and punctuation according to the rules of accepted usage. This study divided the analysis of orthography into two parts: spelling and punctuation. The guidelines for punctuation usage were taken from Quirk et al. (1985), (Gowers et al., 1987), (Huddleston & Pullum, 2002), Hacker and Sommers (2011), and Purdue Online Writing Lab (POWL) (2013).

The second aspect to analyse was Syntax. In this study, syntax was divided into two parts: sentence types and sentential positions. For the sentence types, there were

three: Simple, Compound and Complex (Lenker, 2011; Bauer-Ramazani, 2013). Examples, extracted from data corpus, are shown below.

Simple sentence: (50) In addition, it is very dangerous to place all of one's trust in a machine.

A simple sentence in the study refers to a sentence with one independent clause. The clause may have a single or compound subjects with a single or compound verbs.

Compound sentence: (51) The convenience has proved itself in many circumstances, and I do not understand.

A compound sentence in this study is a sentence with multiple independent clauses connected by DCs, i.e., “and”, “but”, “for”, “nor”, “or”, “so” and “yet”.

Complex sentence: (52) Even though I had lost touch with this classmate, her father's words were with me as I watched the events unfold in Germany.

A complex sentence in this study refers to a sentence with one independent clause and at least one dependent clause.

For the sentential positions, there were 3: Initial, Medial and Final (Biber et al., 1999). Examples, extracted from data corpus, are shown below.

Initial position: (53) Though I have only used a fraction of my computer's ability, I'm still aware of the tremendous opportunities which I have or will have.

The initial position in this study is a DC positioned at the beginning of the clause.

Medial position: (54) Automation of factories has also eliminated many manual jobs.

(55) They got faster, more sophisticated, more programs were made available, and they soon became more compatible with other technologies.

The medial position in this study is the position of a DC (54) in the middle of the clause usually between subject and verb or (55) between the two clauses, serving to connect the first and the second clause.

Final position: (56) Specifically, in new generation everyone can use computer as well.

The final position in this study is the position of a DC at the end of the clause.

For Syntax, the sentence type and the position of the DCs in each category of DCs were analysed through the occurrence of DCs in simple, compound and complex sentences including their positions in the sentences. The data analysis covered both quantity and quality. A summary of the framework is presented in the following table.

Table 3. 7: The syntactic framework for analysis (Biber et al., 1999; Lenker, 2011; Bauer-Ramazani, 2013)

Main category	Sub category	DCs Type	Sentence Type			Position		
			S	CP	CX	IN	ME	FI
Additive	Addition	additionally	/			/		
		also	/			/	/	
		and	/	/		/	/	
		as well	/					/
		at the same time	/			/		
		besides	/			/		/
		furthermore	/			/		
		in addition	/			/		
		likewise	/			/		
		meanwhile	/			/		
		moreover	/			/		
		or		/				/
		similarly	/			/		
	what is more	/			/			
	Exemplification	e.g.		/				/
		for example		/			/	/
		for instance		/			/	/
		such as		/				/
		to illustrate	/	/		/		/
	Restatement	i.e.		/				/
in other words		/			/			
namely		/			/			
specifically		/			/			
that is		/			/			
that is to say		/			/			
Adversative	Contrast	alternatively	/			/		

		but	/ /	/ /
		by comparison	/ /	/ /
		by way of contrast	/	/
		conversely	/	/
		in contrast	/	/
		instead	/	/
		nor	/	/
		on the contrary	/	/
		on the one hand	/	/
		on the other hand	/	/
	Concession	although		/ / /
		at any rate	/	/
		despite (the fact) that		/ / /
		even though		/ / /
		however	/	/ / /
		in any case	/	/
		in spite of	/	/
		nevertheless	/	/
		nonetheless	/	/
		still	/	/
		though		/ / /
		yet	/ /	/ /
Causal	Result/inference	accordingly	/	/
		as a consequence	/	/
		as a result	/	/
		because	/	/
		consequently	/	/
		due to	/	/
		due to the fact that		/ /
		for	/	/
		hence	/	/
		in consequence	/	/
		so	/ /	/ /
		then	/	/
		therefore	/	/
		thus	/	/
Temporal	Ordering	first	/	/
		first of all	/	/
		firstly	/	/

		for a start	/	/	
		for another thing	/	/	
		for one thing	/	/	
		fourth	/	/	
		fourthly	/	/	
		in the first	/	/	
		in the second	/	/	
		in the third place	/	/	
		last	/	/	
		last of all	/	/	
		lastly	/	/	
		next	/	/	
		second	/	/	
		secondly	/	/	
		then	/	/	
		third	/	/	
		thirdly	/	/	
		to begin with	/	/	
		to start with	/	/	
summation		all in all	/	/	
		as we have seen	/	/	
		in a nutshell	/	/	
		in conclusion	/	/	
		in short	/	/	
		in sum	/	/	
		in summary	/	/	
		overall	/	/	
		to conclude	/	/	
		to sum up	/	/	
		to summarise	/	/	
Continuatives	Transition	after all	/	/	
		anyway	/	/	/
		by the way	/	/	
		now	/	/	/
		of course	/	/	
		surely	/	/	
		well	/	/	

The third aspect to study was Semantics-Pragmatics, which is the study of how meaning is interpreted in context. For example, the main category of “and” is Additive,



but when “and” was analysed in-depth, its pragmatic function could be Adversative, Causal or even Temporal. The styles, such as word choices, which showed formal, informal, spoken or written, were also taken into account. Examples, extracted from the data corpus are shown below.

NSs: (57) This, realistically, has been quite a new invention, and its short life span has been able to change the world significantly.

From sentence (57), the semantic function of “and” was in the Additive category, but for the Pragmatics aspect, “and” in this sentence played the role of an Adversative.

NNSLs (58) \*However, computers are bad for human’s lives. Many children crazy game because every home have computers. And many people crazy social that make them far from close people, their family.

From sentence (58), the semantic function of “and” was in the Additive category, but for this aspect, the use of “and” was accepted as oral language which is considered to be an informal written style. The more suitable DC in this sentence was “moreover”.

To summarize, any DC lexis which did not have a one-to-one relationship between its semantic and pragmatic function was further explored in order to find out the actual pragmatic functions of the DCs. The results from this analysis was also reconfirmed by three other native experts with linguistics or English teaching backgrounds.

### **3.3.4 Quantitative analysis**

Two kinds of statistical analysis – descriptive statistics and inferential statistics – were employed in this study.

According to Trochim (2006), descriptive statistics were used to describe the basic features of the data in the study, but any conclusion beyond the data or conclusions regarding any hypotheses could not be made through these statistics. Thus, inferential statistics were applied to the study for reaching conclusions that extended beyond the immediate data. To put it simply, inferential statistics made inferences from the data to more general conditions.

For the descriptive statistics in this study, percentage, mean, range and standard deviation were analysed and reported. For inferential statistics, A One Way Analysis of Variance (ANOVA), and Post-Hoc Test: Scheffe were used.

One-way ANOVA is used appropriately with one explanatory variable or factor in order to compare the differences of the means of more than two sample groups. It helps determine whether any of those means are significantly different from each other. Therefore, in this study, it was used for comparing three sample groups: NSs, NNSHs and NNSLs. Each main DC category – Additive, Adversative, Causal, Temporal and Continuatives – was a dependent list or factor. ANOVA separated the variation in the dataset into 2 parts: between groups and within groups. However, it could not tell specifically which group was different. Then, Scheffe's method, with an alpha of .05, was taken into consideration because its purpose is for making multiple comparisons. It could test each of the three possible two-group comparisons, like NSs-NNSHs, NSs-NNSLs, or NNSHs-NNSLs.

To sum up, this study employed both descriptive statistics and inferential statistics in performing quantitative analysis.

### **3.4 Pilot study**

In order to test the effectiveness of the English Language Exposure Questionnaire and the framework for analysing DCs in argumentative essays, a pilot study was conducted. After the questionnaire was distributed to a group of sample students, and the scores were calculated, the students were divided into 2 groups: High English exposure and Low English exposure. All the questionnaire scores of the 110 NNS students were reordered. The 10 students who got the highest scores were selected as the NNSH group, while the 10 students who had the lowest scores were assigned into the NNSL group. In the pilot study, a total of 30 argumentative essays from NSs (10 essays), NNSHs (10 essays), and NNSLs (10 essays) were analysed. These samples were not included in the main study. For the pilot study, only the frequency of the DC semantic types and their syntactic structures were analysed. The findings from the pilot study were as follows:

### 3.4.1 The English Language Exposure questionnaires

The English Language Exposure questionnaires were distributed to 110 NNSs from universities in and around Bangkok. The NNSs were selected from their universities' Faculty of Education or Faculty of Liberal Arts and Science. The highest score was 180, whereas the lowest score was 41 out of a maximum possible total of 333. The average score of all the students was 116. The English language exposure scores of the selected sample groups in the pilot study is shown in Table 3.8.

Table3. 8: The English Language Exposure Scores (a pilot study)

Samples	N	Max	Min	Mean	Range	%	S.D.
NNSHs	10	180	159	166	21	49.84	6.94
NNSLs	10	87	41	73.2	46	21.98	14.11

Students whose scores were top ranked from 1-10 were assigned to the NNSH group, and those who were at the bottom end of the ranking from 100 – 110 were placed into the NNSL group. The total number of essays from each group was 10. The scores of the NNSHs ranged from 159–180 (49.84%), while the scores of the NNSLs ranged from 41-87 (21.98%). From Table 3.8, it can be seen that the NNSHs were more homogenous with a low standard deviation, whereas the NNSLs had a high standard deviation, which is indicative of a wider range of English Language Exposure in the Low group.

### 3.4.2 The length of the essays

The length of the essays was also one of many factors to be mentioned because it can lead to different results in DC usage among the three sample groups. The lengths of the essays in each group are shown in Table 3.9

Table3. 9: Number of DCs and the number of words in each group

Samples	No. of DCs			No. of Words in the Essays			
	Lexis	Avg.	Total	Max	Min	Avg.	Range
NSs	112	11.2	3,884	551	209	388.4	342
NNSHs	124	12.4	3,149	425	214	314.9	211
NNSLs	179	17.9	3,277	436	205	327.7	231

Samples	No.of DCs	No. of Words in the Essays				
		Total	Max	Min	Avg.	Range
NSs	112	3,884	551	209	388.4	342
NNSHs	124	3,149	425	214	314.9	211
NNSLs	179	3,277	436	205	327.7	231

Table 3.9 shows that the NSs produced the longest essays with an average of 388.4 words per essay, whereas the average number of words in the essays produced by the NNSHs and NNSLs were 314.9 and 327.7, respectively. Although the NSs had the highest number of words per essay, the frequency of DC usage in this group was the lowest (11.2 DCs per essay) compared to both of the NNSs groups (12.4 and 17.9 DCs per essay).

### 3.4.3 The frequency of DC usage from all five categories by the three sample groups

A comparison of the DC usage among the three sample groups is summarised into the five categories: Additive, Adversative, Causal, Temporal, and Continuatives.

Table3. 10: The frequency of DC usage from all five categories by the three sample groups

Categories	NSs		NNSHs		NNSLs	
	Token	%	Token	%	Token	%
<b>Additive</b>						
Addition	56	50	40	32.25	55	30.72
Exemplification	5	4.46	14	11.29	27	15.08
Restatement	-	-	-	-	-	-
<u>Sub total</u>	<u>61</u>	<u>54.46</u>	<u>54</u>	<u>43.54</u>	<u>82</u>	<u>45.80</u>
<b>Adversative</b>						
Contrast	12	10.71	14	11.29	26	14.52
Concession	14	12.5	10	8.06	18	10.05
<u>Sub total</u>	<u>26</u>	<u>23.21</u>	<u>24</u>	<u>19.35</u>	<u>44</u>	<u>24.57</u>
<b>Causal</b>						
Result/inference	20	17.83	23	18.54	32	17.86
<u>Sub total</u>	<u>20</u>	<u>17.83</u>	<u>23</u>	<u>18.54</u>	<u>32</u>	<u>17.86</u>
<b>Temporal</b>						
Ordering	4	3.57	17	13.7	13	7.26
Summation	1	0.89	4	3.22	8	4.46
<u>Sub total</u>	<u>5</u>	<u>4.46</u>	<u>21</u>	<u>16.92</u>	<u>21</u>	<u>11.72</u>
<b>Continuatives</b>						
Transitions	-	-	2	1.61	-	-
<u>Sub total</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>1.61</u>	<u>0</u>	<u>0</u>
<b>TOTAL</b>	112	100.00	124	100.00	179	100.00

From Table 3.10, it can be seen that the Additive group of DCs had the highest frequency of usage, followed by the Adversative, Causal, Temporal, and Continuatives DCs in descending order. However, there were three main differences in the percentages of DC usage among the three sample groups. Firstly, the Continuatives category was only found to have been used by the NNSH group. Secondly, clear differences can be seen in the percentage of Additive and Temporal usage between the NS and NNS groups. It was found that the Additive category was used more by the NS group (54.46%) than by the NNS groups (H: 43.20%, and L: 45.80). Lastly, the usage of DCs from the Temporal category was distinctively different between the NS and NNS groups. The percentages show that the NNSH group used this type of DC almost four times more than the NS group (H: 16.80, L: 11.72, and NS: 4.46).

### 3.4.4 The frequency of DC usage from the Additive category by the three sample groups

It can be said that Additive DCs were used with the highest frequency of all DC categories by the NS, NNSH, and NNSL groups as the percentages of usage were 54.46%, 43.20%, and 45.80%, respectively. In addition, Table 3.11 presents more detail of the usage frequency of each DC lexis from the Additive category by the three sample groups.

Table3. 11: The usage frequency of each DC lexis from the Additive category among the three sample groups

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs	
			Token	%	Token	%	Token	%
Additive	Addition	and	38	62.30	17	31.48	21	25.61
		also	12	19.67	14	25.93	6	7.32
		or	5	8.20	3	5.56	14	17.07
		in addition	1	1.64	1	1.85	3	3.66
		moreover	-	-	4	7.41	6	7.32
		furthermore	-	-	1	1.85	1	1.22
		besides	-	-	-	-	3	3.66
		meanwhile	-	-	-	-	1	1.22
	<u>Sub total</u>		<u>56</u>	91.80	<u>40</u>	74.07	<u>55</u>	67.07
	Exemplification	such as	4	6.56	10	18.52	18	21.95
		e.g.	1	1.64	-	-	-	-
for example		-	-	4	7.41	9	10.98	
<u>Sub total</u>		<u>5</u>	8.20	<u>14</u>	25.93	<u>27</u>	32.93	
Restatement		-	-	-	-	-	-	
	<u>Sub total</u>	<u>-</u>	-	<u>-</u>	-	<u>-</u>	-	
<b>TOTAL</b>		<b>61</b>	100.00	<b>54</b>	100.00	<b>82</b>	100.00	

As mentioned in Table 3.11, the findings of all the three sample groups revealed that only two sub-categories of Additives – addition and exemplification – were used. It was found that 11 DC lexis were used by all three sample groups, ten of which were used by the NNSLs, whereas the NSs used only six DCs, and eight were used by the NNSHs.

The DC which was most frequently used by all groups was “and”. It was used by NSs, NNSHs and NNSLs at a frequency of 62.30%, 31.48% and 25.61%,

respectively. It can be further observed that “and” was used twice as much by NSs than by NNSLs in their essays. While NSs used “and” with high regularity, the NNSHs and NNSLs preferred to use a greater variety of DCs, such as “moreover”, “furthermore”, “besides”, “meanwhile” and “for example”.

From the NS results, in the sub-category of addition, NSs used 4 DC lexis which were “and”, “also”, “or”, and “in addition”. The highest frequency of usage was for “and” (62.30%), followed by “also”, “or”, and “in addition” at 19.67%, 8.20%, and 1.64%, respectively. The other two DCs used from the sub-category of exemplification were “such as” (6.56%), and “e.g.” (1.64%).

The findings from the NNSHs show that 6 DCs lexis from the sub-category of addition were used: “and”, “also”, “or”, “in addition”, “moreover”, and “furthermore”. NNSHs used “and” (31.48%) and “also” (25.93%) with a high degree of regularity in their essays. The use of “moreover”, “or”, “in addition” and “furthermore” was lower in descending order accounting for 7.41%, 5.56% and 1.85%, respectively. The use of exemplification in NNSHs was 25.93%, which was comprised of the use of “such as” (18.52%) and “for example” (7.41%).

For the last sample group, the NNSLs used a wide variety of DC lexis from the sub-category of addition, specifically “and”, “also”, “or”, “in addition”, “moreover”, “besides”, “furthermore”, and “meanwhile”. The total percentage of use from this sub-category was 67.07%. The most frequently used DC from this sub-category was “and” at 25.61%, followed by “or” at 17.07%.

### **3.4.5 The frequency of DC usage from the Adversative category by the three sample groups**

It can be said that the percentage of Adversative DC usage by the NSs, NNSHs, and NNSLs is the second highest among the five DC categories at 23.21%, 19.20%, and 24.57%, respectively. Table 3.12 presents more detail of the DC usage frequency from the Adversative category by the three sample groups.

Table3. 12: The usage frequency of each DC lexis from Adversative category by the three sample groups

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs	
			Token	%	Token	%	Token	%
Adversative	Contrast	but	11	42.31	10	41.67	15	34.09
		on the contrary	1	3.85	2	8.33	-	-
		on the other hand	-	-	2	8.33	6	13.64
		in contrast	-	-	-	-	4	9.09
		* in other hand	-	-	-	-	1	2.27
		<u>Sub total</u>	<u>12</u>	<u>46.15</u>	<u>12</u>	<u>50.00</u>	<u>26</u>	<u>59.09</u>
	Concession	however	7	26.92	9	37.50	8	18.18
		still	3	11.54	-	-	-	-
		although	2	7.69	-	-	4	9.09
		yet	2	7.69	-	-	-	-
		nonetheless	-	-	1	4.17	-	-
		though	-	-	-	-	3	6.82
		even though	-	-	-	-	2	4.55
		nevertheless	-	-	-	-	1	2.27
		<u>Sub total</u>	<u>14</u>	<u>53.85</u>	<u>10</u>	<u>41.67</u>	<u>18</u>	<u>40.91</u>
		<b>TOTAL</b>	<b>26</b>	<b>100.00</b>	<b>24</b>	<b>100.00</b>	<b>44</b>	<b>100.00</b>

It can be seen from Table 3.12 that all three sample groups used both contrast and concession. There were 12 DCs in the Adversative category. Interestingly, NNSLs used 9 DC lexis from this category, while the NSs used 6 DCs, and the NNSHs used 5 DCs. “But” was used the most frequently by all three sample groups at 42.31% (NS), 41.67% (NNSH) and 34.09% (NNSL).

The findings from the NSs show that only “but” and “on the contrary” were used from the sub-category of contrast. The NS’s usage of “but” accounted for 42.31% whereas they used “on the contrary” only 3.85% of the total from this sub-category. The NSs also used “however”, “still”, “although”, and “yet” from the sub-category of concession, with “however” the most highly used (26.92%).

For the result of NNSHs, “but”, “on the contrary”, and “on the other hand” were used. Among these three, “but” was used the most frequently at 41.67%, while “on the contrary” and “on the other hand” were used with similar percentages of around 8.33% each. NNSHs used only two DC lexis from the sub-category of concession: “however” and “nonetheless”. “However” accounted for 37.50% of usage from this category,



whereas “nonetheless” was used only 4.17%. Remarkably, “nonetheless” was only used by the NNSHs.

NNSLs used 4 DC lexis from the sub-category of contrast: “but”, “on the other hand”, “in contrast”, and “\*in other hand”. Of these, “but” was used the most by the NNSLs (34.09%). We also find some incorrect spelling in the NNSL group when using lexis from this category. In the sub-category of concession, 5 DC lexis were used: “however”, “although”, “though”, “even though”, and “nevertheless”. The usage of “however” was the highest, while the usage frequency of “although”, “though”, “even though”, and “nevertheless” were lower in descending order. Interestingly, “though”, “even though” and “nevertheless” were DCs which were used only by this group.

### 3.4.6 The frequency of DC usage from the Causal category by the three sample groups

Table 3.13 shows that the ratio of Causal DC usage by the NSs, NNSHs, and NNSLs was the third highest among the 5 DC categories at 17.83%, 18.54%, and 17.86%, respectively.

Table 3.13: The usage frequency of each DC lexis from the Causal category by the three sample groups

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs	
			Token	%	Token	%	Token	%
Causal	Result/inference	therefore	4	20	-	-	2	6.25
		so	2	10	8	34.78	10	31.25
		then	1	5	-	-	-	-
		thus	-	-	2	8.70	-	-
		because	10	50	13	56.52	20	62.5
		due to	3	15	-	-	-	-
		<b>TOTAL</b>	<u>20</u>	100	<u>23</u>	100.00	<u>32</u>	100

As mentioned in Table 3.13, there were 6 DCs in this category, and 5 of them were used by the NSs, while the NNSHs and NNSLs used only 3 DCs. It is worth noting that “due to” was only used by the NSs, and “thus” was used only by the NNSHs.

For the Causal NSs usage, 5 DC lexis were used. The NSs used “because” the most (50%), followed by “therefore” (20%), “due to” (15%), “so” (10%), and “then”

(5.00%). The NNSHs used “because” the most, accounting for 56.52%, followed by “so” and “thus” with 34.78% and 8.70%, respectively. The NNSLs used “because” the most at 62.5%, followed by “so” and “therefore”.

### 3.4.7 The frequency of DC usage from the Temporal category by the three sample groups

It can be seen from Table 3.14 that the Temporal category was the fourth most commonly used type of DCs used by the NS, NNSH, and NNSL groups at 4.46%, 16.80%, and 11.72%, respectively.

Table 3.14: The usage frequency of each DC lexis from the Temporal category by the three sample groups

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs		
			Token	%	Token	%	Token	%	
Temporal	Ordering	first	1	20.00	6	28.57	5	23.81	
		firstly	1	20.00	2	9.52	-	-	
		second	-	-	1	4.76	4	19.05	
		secondly	1	20.00	2	9.52	-	-	
		last	-	-	-	-	1	4.76	
		lastly	-	-	2	9.52	1	4.76	
		at last	-	-	1	4.76	-	-	
		finally	-	-	-	-	2	9.52	
		to begin with	-	-	1	4.76	-	-	
		last but not least	-	-	2	9.52	-	-	
		then	1	20.00	-	-	-	-	
		<u>Sub total</u>	<u>4</u>	<u>80.00</u>	<u>17</u>	<u>80.95</u>	<u>13</u>	<u>61.90</u>	
		Summation	finally	1	20.00	-	-	-	-
			to conclude	-	-	2	9.52	-	-
			to sum up	-	-	2	9.52	6	28.57
in summary	-		-	-	-	2	9.52		
<u>Sub total</u>	<u>1</u>		<u>20.00</u>	<u>4</u>	<u>19.05</u>	<u>8</u>	<u>38.10</u>		
<b>TOTAL</b>	<b>5</b>	<b>100.00</b>	<b>21</b>	<b>100.00</b>	<b>21</b>	<b>100.00</b>			

Table 3.14 shows that all the three sample groups used DCs from both the ordering and summation sub-categories. The NSs used only 5 DCs out of the total of the 15 DCs in the Temporal category, whereas the NNSHs used 10 out of the 15 DCs, and the NNSLs used 7 of the 15 DCs.

### 3.4.8 The frequency of DC usage from the Continuatives category by the three sample groups

The Continuatives category is the least used among the 5 DC categories. Table 3.15 presents detail of their use.

Table 3. 15: The usage frequency of each DC lexis from the Continuatives category by the three sample groups

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs	
			Token	%	Token	%	Token	%
Continuatives	Transition	anyway	-	-	2	100.00	-	-
		<b>TOTAL</b>	-	-	<b>2</b>	<b>100.00</b>	-	-

From the data, it can be seen that only the NNSH group used any DC lexis from this category. The only DC from the Continuatives category that was produced by the NNSHs was “anyway”.

### 3.4.9 The syntactic aspect of the DC usage from all the five categories by the NSs

In this part, the syntactic aspect of the DC usage is explored in two dimensions: sentence types and sentential positions. Two sentence types and three sentential positions were found. Table 3.16 presents more detail of the syntactic use of the DCs in all the five categories by the NSs.

Table3. 16: The sentence types and the sentential positions of the DCs by the NSs

NSs												
	Sentence Types				Positions						Error	%
	CP		CX		IN		ME		FI			
	Token	%	Token	%	Token	%	Token	%	Token	%		
<b>Additive</b>												
Addition	56	50	-	-	48	42.86	8	7.14	-	-	-	-
Exemplification	5	4.46	-	-	-	-	5	4.46	-	-	-	-
Restatement	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>61</b>	<b>54.46</b>	<b>-</b>	<b>-</b>	<b>48</b>	<b>42.86</b>	<b>13</b>	<b>11.61</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Adversative</b>												
Contrast	12	10.71	-	-	12	10.71	-	-	-	-	-	-
Concession	12	10.71	2	1.79	11	9.82	3	2.68	-	-	-	-
<b>Sub-total</b>	<b>24</b>	<b>21.43</b>	<b>2</b>	<b>1.79</b>	<b>23</b>	<b>20.54</b>	<b>3</b>	<b>2.68</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Causal</b>												
Result/inference	7	6.25	13	11.61	20	17.86	-	-	-	-	-	-
<b>Sub-total</b>	<b>7</b>	<b>6.25</b>	<b>13</b>	<b>11.61</b>	<b>20</b>	<b>17.86</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Temporal</b>												
Ordering	4	3.57	-	-	4	3.57	-	-	-	-	-	-
Summation	1	0.89	-	-	1	0.89	-	-	-	-	-	-
<b>Sub-total</b>	<b>5</b>	<b>4.46</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>4.46</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Continuatives</b>												
Transition	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL</b>	<b>97</b>	<b>86.6</b>	<b>15</b>	<b>13.39</b>	<b>96</b>	<b>85.71</b>	<b>16</b>	<b>14.29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

It can be seen from Table 3.16 that the NS group used DCs in compound sentences (CP) much more than in complex sentences (CX) as the ratio was 86.61% to 13.39%, respectively. The 13.39% of DCs used in CX sentences were only from the sub-category of concession under the Adversative category (1.79%), and from the Causal category (11.61%). In the construction of CP sentences, 50% of the DCs used were from the sub-category of addition under the Additive category, and then the second highest use of DCs in CP sentences was equal in the sub-categories of contrast and of concession under the Adversative category, accounting for 10.71% each. The use of Causal and Temporal DCs were lower in descending order. For the overall position of DCs, the NS group most commonly used DCs in the initial (IN) position, accounting for 85.71% of all usage, while the remaining 14.29% of cases involved DCs placed in the medial (ME) position. From the data, it does not show any use of DCs in

the final position by the NS group. The DCs in the IN position were primarily from the Additive category (42.86%), whereas the 11.61% of the DCs in the ME position were also from the Additive category.

### 3.4.10 The syntactic aspect of the DC usage from all the five categories by the NNSHs

We divided syntactic use into two types: sentence types and sentential positions. There were two sentence types, and three sentential positions. Table 3.17 presents more detail of the syntactic use of DCs in all five categories by the NNSHs.

Table 3.17: The sentence types and the sentential positions of the DCs by NNSHs

	NNSHs											Error	%
	Sentence Types				Positions								
	CP		CX		IN		ME		FI				
	Token	%	Token	%	Token	%	Token	%	Token	%			
<b>Additive</b>													
Addition	40	32.26	-	-	27	21.77	13	10.48	-	-	-	-	-
Exemplification	14	11.29	-	-	4	3.23	10	8.06	-	-	-	-	-
Restatement	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>54</b>	<b>43.55</b>	:	:	<b>31</b>	<b>25</b>	<b>23</b>	<b>18.55</b>	:	:	:	:	:
<b>Adversative</b>													
Contrast	14	11.29	-	-	14	11.29	-	-	-	-	-	-	-
Concession	10	8.06	-	-	10	8.06	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>24</b>	<b>19.35</b>	:	:	<b>24</b>	<b>19.35</b>	:	:	:	:	:	:	:
<b>Causal</b>													
Result inference	23	18.55	-	-	23	18.55	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>23</b>	<b>18.55</b>	:	:	<b>23</b>	<b>18.55</b>	:	:	:	:	:	:	:
<b>Temporal</b>													
Ordering	17	13.71	-	-	17	13.71	-	-	-	-	-	-	-
Summation	4	3.23	-	-	4	3.23	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>21</b>	<b>16.94</b>	:	:	<b>21</b>	<b>16.94</b>	:	:	:	:	:	:	:
<b>Continuatives</b>													
Transition	2	1.61	-	-	2	1.61	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>2</b>	<b>1.61</b>	:	:	<b>2</b>	<b>1.61</b>	:	:	:	:	:	:	:
<b>TOTAL</b>	<b>124</b>	<b>100</b>	-	-	<b>101</b>	<b>81.45</b>	<b>23</b>	<b>18.55</b>	-	-	-	-	-

Table 3.17 shows that NNSHs did not use CXs. The group used only CPs and Additives were the most frequently used DCs at 43.55% of the total, comprised of 32.6% from the sub-category of addition and 11.29% from the sub-category of exemplification. The usage of Adversative, Casual, Temporal, and Continuatives was lower in descending order, with occurrences of 19.35%, 18.55%, 16.94%, and 1.61%, respectively. For the DCs positions, we found that 81.45% were used in the IN position,

whereas the ME position accounted for 18.55% of usage from the sub-categories of addition and exemplification under the Additive category.

### 3.4.11 The syntactic aspect of the DC usage in all five categories by the NNSLs

The syntactic use was divided into two types: sentence types and sentential positions. There were two sentence types, and three sentential positions. Table 3.18 presents more detail of the syntactic use of DCs in all five categories by the NNSLs.

Table 3.18: The sentence types and the sentential positions of the DCs by NNSLs

	NNSLs											
	Sentence Types				Positions						Error	%
	CP		CX		IN		ME		FI			
	Token	%	Token	%	Token	%	Token	%	Token	%		
<b>Additive</b>												
Addition	55	30.73	-	-	49	27.4	6	3.35	-	-	-	-
Exemplification	27	15.08	-	-	9	5.03	18	10.06	-	-	-	-
Restatement	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>82</b>	<b>45.81</b>	<b>:</b>	<b>:</b>	<b>58</b>	<b>32.4</b>	<b>24</b>	<b>13.41</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>
<b>Adversative</b>												
Contrast	26	14.53	-	-	26	14.5	-	-	-	-	-	-
Concession	13	7.26	2	1.12	15	8.38	-	-	-	-	3	1.68
<b>Sub-total</b>	<b>39</b>	<b>21.79</b>	<b>2</b>	<b>1.12</b>	<b>41</b>	<b>22.9</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>3</b>	<b>1.68</b>
<b>Causal</b>												
Resultinference	12	6.7	20	11.17	32	17.9	-	-	-	-	-	-
<b>Sub-total</b>	<b>12</b>	<b>6.7</b>	<b>20</b>	<b>11.17</b>	<b>32</b>	<b>17.9</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>
<b>Temporal</b>												
Ordering	13	7.26	-	-	13	7.26	-	-	-	-	-	-
Summation	8	4.47	-	-	8	4.47	-	-	-	-	-	-
<b>Sub-total</b>	<b>21</b>	<b>11.73</b>	<b>:</b>	<b>:</b>	<b>21</b>	<b>11.7</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>
<b>Continuatives</b>												
Transition	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>
<b>TOTAL</b>	<b>154</b>	<b>86.03</b>	<b>22</b>	<b>12.29</b>	<b>152</b>	<b>85</b>	<b>24</b>	<b>13.41</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>1.68</b>

In terms of sentence types, the NNSL group used both CPs and CXs, although the proportion between both of them was clearly different. CPs accounted for 86.03% of all sentences, while CXs accounted for 12.29%. All categories of DC were used in CPs, except Continuatives. The most commonly used DCs in CPs were 30.73% from the sub-category of addition and 15.08% from the sub-category of exemplification, both under the Additive category. The instances of Adversative, Temporal, and Causal DC usage were lower in descending order at 21.79%, 11.73%, and 6.70%, respectively. The results in this group were somewhat different from in the NS and NNSH groups as the results indicate a higher use of Causal DCs than Temporal DCs.

For the positioning of the DCs, 84.92% were used in the IN position across all categories, with the exception of the Continuatives category, whereas 13.41% were used in the ME position. All DCs in the ME positions were from the sub-categories of addition and exemplification.

### 3.4.12 The syntactic aspect of DC usage in the Additive category by all the three sample groups

In this part, Tables 3.19 to 3.21 show the use of each DC from the Additive category. This section begins with the syntactic analysis of usage by the NSs, NNSHs, and NNSLs.

Table 3.19: The sentence types and the sentential positions of the DCs in the Additive category by NSs

Main Category	Sub Category	DCs lexis	NSs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
			Token	%	Token	%	Token	%	Token	%	Token	%
Additive	Addition	and	38	62.295	-	-	38	79.1667	-	-	-	-
		also	12	19.672	-	-	4	8.33333	8	61.538	-	-
		or	5	8.1967	-	-	5	10.4167	-	-	-	-
		in addition	1	1.6393	-	-	1	2.08333	-	-	-	-
		moreover	-	-	-	-	-	-	-	-	-	-
		besides	-	-	-	-	-	-	-	-	-	-
		furthermore	-	-	-	-	-	-	-	-	-	-
		mean while	-	-	-	-	-	-	-	-	-	-
		<b>Sub-total</b>	<b>56</b>	<b>91.8</b>	<b>-</b>	<b>-</b>	<b>48</b>	<b>100</b>	<b>8</b>	<b>61.54</b>	<b>-</b>	<b>-</b>
		Exemplification	Exemplification	such as	4	6.5574	-	-	-	-	4	<u>30.77</u>
e.g.	1			1.6393	-	-	-	-	1	<u>7.692</u>	-	-
for example	-			-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>5</b>			<b>8.197</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>38.46</b>	<b>-</b>	<b>-</b>
<b>Restatement</b>	<b>-</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	Sub-total	-	-	-	-	-	-	-	-	-	-	
	<b>TOTAL</b>	<b>61</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>48</b>	<b>100.00</b>	<b>13</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	

From the NSs result in Table 3.19, it can be seen that all 4 DCs in the sub-category of addition – “and”, “also”, “or”, and “in addition” – were used only in CPs, while the other two DCs types in the sub-category of exemplification – “such as” and “e.g.” – were also used in CPs. In this category, “also” was the only DC type that could be placed in both the IN and ME position.

Table3. 20: The sentence types and sentential positions of the Additive DCs used by the NNSHs

Main Category	Sub Category	DCs lexis	NNSHs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
			Token	%	Token	%	Token	%	Token	%	Token	%
Additive	Addition	and	17	31.48	-	-	17	54.84	-	-	-	-
		also	14	25.93	-	-	1	3.23	13	56.52	-	-
		or	3	5.56	-	-	3	9.68	-	-	-	-
		in addition	1	1.85	-	-	1	3.23	-	-	-	-
		moreover	4	7.41	-	-	4	12.90	-	-	-	-
		besides	-	-	-	-	-	-	-	-	-	-
		furthermore	1	1.85	-	-	1	3.23	-	-	-	-
		meanwhile	-	-	-	-	-	-	-	-	-	-
		<b>Sub-total</b>	<b>40</b>	<b>74.07</b>	<b>-</b>	<b>-</b>	<b>27</b>	<b>87.1</b>	<b>13</b>	<b>10.48</b>	<b>-</b>	<b>-</b>
		Exemplification		such as	10	18.52	-	-	-	-	10	43.48
e.g.	-			-	-	-	-	-	-	-	-	
for example	4			7.41	-	-	4	12.90	-	-	-	
<b>Sub-total</b>	<b>14</b>			<b>25.93</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>12.90</b>	<b>10</b>	<b>43.48</b>	<b>-</b>	<b>-</b>
Restatement			-	-	-	-	-	-	-	-	-	
		<b>Sub-total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>TOTAL</b>			<b>54</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>31</b>	<b>100.00</b>	<b>23</b>	<b>100.00</b>	<b>-</b>	<b>-</b>

Table 3.20 shows that only CPs were used by the NNSH group. In the sub-category of addition, there were 6 DC lexis: “and”, “also”, “or”, “in addition”, “moreover”, and “furthermore”. All 6 of these were used in CPs, as were DCs from the sub-category of exemplification, which were “such as” and “for example”. In the sub-category of addition, “also” was the only one DCs lexis which could be used in both the IN and ME position. From the data, we can see that the NNSHs showed a preference for the use of “also” in the ME position as this accounted for 56.52% of usage, while “also” was used in the IN position only 3.23% of the total.



Table3. 21: The sentence types and sentential positions of the Additive DCs used by the NNSLs

Main Category	Sub Category	DCs lexis	NNSLs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
		Token	%	Token	%	Token	%	Token	%	Token	%	
Additive	Addition	and	21	25.61	-	-	21	36.21	-	-	-	-
		also	6	7.32	-	-	-	-	6	25.00	-	-
		or	14	17.07	-	-	14	24.14	-	-	-	-
		in addition	3	3.66	-	-	3	5.17	-	-	-	-
		moreover	6	7.32	-	-	6	10.34	-	-	-	-
		besides	3	-	-	-	3	-	-	-	-	-
		furthermore	1	1.22	-	-	1	1.72	-	-	-	-
		meanwhile	1	-	-	-	1	-	-	-	-	-
	<b>Sub-total</b>	<b>55</b>	<b>67.07</b>	-	-	<b>49</b>	<b>84.48</b>	<b>6</b>	<b>25.00</b>	-	-	
	Exemplification	such as	18	21.95	-	-	-	-	18	75.00	-	-
		e.g.	-	-	-	-	-	-	-	-	-	-
		for example	9	10.98	-	-	9	15.52	-	-	-	-
		<b>Sub-total</b>	<b>27</b>	<b>32.93</b>	-	-	<b>9</b>	<b>15.52</b>	<b>18</b>	<b>75.00</b>	-	-
	Restatement		-	-	-	-	-	-	-	-	-	-
Sub-total		-	-	-	-	-	-	-	-	-	-	
	<b>TOTAL</b>	<b>82</b>	<b>100.00</b>	-	-	<b>58</b>	<b>100.00</b>	<b>24</b>	<b>100.00</b>	-	-	

It can be seen from Table 3.21 that the NNSLs used only CPs. The combined use of the 8 DC lexis of “and”, “also”, “or”, “in addition”, “moreover”, “besides”, “furthermore”, and “meanwhile” was 67.07%, while “such as” and “for example” from the sub-category of exemplification accounted for 32.93% of usage.

The NNSLs also used DCs in both the IN and ME positions. All 8 DC lexis, except “also”, were used in the IN position for a combined usage percentage of 84.48%, whereas the placement of “also” in the ME position accounted for 25.00% of usage. In the sub-category of exemplification, “such as” and “for example” were both used. Of these, usage of “such as” in the ME position accounted for 75.00%, while usage of “for example” in the IN position accounted for 10.98%.

### 3.4.13 The syntactic aspect of DC usage in the Adversative category by all the three sample groups

This part presents the syntactic analysis of Adversative DC usage by the NSs, followed by the NNSHs and NNSLs, respectively.

Table3. 22: The sentence types and sentential positions of the Adversative DCs used by the NSs

Main Category	Sub Category	DCs lexis	NSs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
			Token	%	Token	%	Token	%	Token	%	Token	%
Adversative	Contrast	but	11	45.833	-	-	11	47.83	-	-	-	-
		on the contrary	1	4.1667	-	-	1	4.35	-	-	-	-
		on the other hand	-	-	-	-	-	-	-	-	-	-
		in contrast	-	-	-	-	-	-	-	-	-	-
		*in other hand	-	-	-	-	-	-	-	-	-	-
		<b>Sub-total</b>	<b>12</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>52.17</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	Concession	however	7	29.167	-	-	7	30.43	-	-	-	-
		still	3	12.5	-	-	-	-	3	100.00	-	-
		although	-	-	2	100.00	2	8.70	-	-	-	-
		yet	2	8.3333	-	-	2	8.70	-	-	-	-
		nonetheless	-	-	-	-	-	-	-	-	-	-
		though	-	-	-	-	-	-	-	-	-	-
		even though	-	-	-	-	-	-	-	-	-	-
		nevertheless	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>12</b>	<b>50.00</b>	<b>2</b>	<b>100.00</b>	<b>11</b>	<b>47.83</b>	<b>3</b>	<b>100.00</b>	<b>-</b>	<b>-</b>		
<b>TOTAL</b>	<b>24</b>	<b>100.00</b>	<b>2</b>	<b>100.00</b>	<b>23</b>	<b>100.00</b>	<b>3</b>	<b>100.00</b>	<b>-</b>	<b>-</b>		

For the NS group, there were 2 DC lexis in the sub-category of contrast – “but” and “on the contrary” – and another 4 DC lexis in the sub-category of concession: “however”, “still”, “although” and “yet”. In the sub-category of contrast, both DCs – “but” and “on the contrary” – were used only in the CPs with a ratio of 50.00%, with “but” accounting for 45.83%, and “on the contrary” accounting for 4.17%. In the sub-category of concession, “however”, “still”, and “yet” were used only in CPs with a ratio of 50.00%, whereas the use of “although” was found only in the CXs. For the DC positions, all DCs in the sub-category of contrast were used only in the IN position (52.17%), whereas DCs from the sub-category of concession were found in both the IN and ME positions. The DCs which were used in the IN position were “however”, “although”, and “yet”. Only one DCs, namely “still”, was used in the ME position.

Table3. 23: The sentence types and the sentential positions of Adversative DCs used by the NNSHs

Main Category	Sub Category	DCs lexis	NNSHs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
Token	%	Token	%	Token	%	Token	%	Token	%			
Adversative	Contrast	but	10	41.67			10	41.67			-	-
		on the contrary	2	8.33			2	8.33			-	-
		on the other hand	2	8.33			2	8.33			-	-
		in contrast	-	-	-	-	-	-	-	-	-	-
		*in other hand	-	-	-	-	-	-	-	-	-	-
		<b>Sub-total</b>	<b>14</b>	<b>58.33</b>	<b>:</b>	<b>:</b>	<b>14</b>	<b>58.33</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>
	Concession	however	9	37.50			9	37.50				
		still	-	-	-	-	-	-	-	-	-	-
		although	-	-	-	-	-	-	-	-	-	-
		yet	-	-	-	-	-	-	-	-	-	-
nonetheless		1	4.17			1	4.17					
	<b>Sub-total</b>	<b>10</b>	<b>41.67</b>	<b>:</b>	<b>:</b>	<b>10</b>	<b>41.67</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	
	<b>TOTAL</b>	<b>24</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>24</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	

The findings from the NNSH group show that 3 DC types from the sub-category of contrast were used. It can be seen that “but”, “on the contrary”, and “on the other hand” were used only in CPs at ratios of 41.67%, 8.33%, and 8.33%, respectively. In the sub-category of concession, there were only 2 DCs types which were used. Once again, it can be seen that “however” and “nonetheless” were used only in CPs at ratios of 37.50% and 4.17%, respectively. In term of the DCs’ positions, all 3 DC lexis in the sub-category of contrast and the 2 DCs from the sub-category of concession were all used in the IN position.

Table3. 24: The sentence types and sentential positions of Adversative DCs used by the NNSLs

Main Category	Sub Category	DCs lexis	NNSLs											
			Sentence Types				Positions				Error	%		
			CP		CX		IN		ME				FI	
Token	%	Token	%	Token	%	Token	%	Token	%					
Adversative	Contrast	but	15	38.462	-	-	15	36.59						
		on the contrary	-	-	-	-	-	-	-	-	-	-	-	-
		on the other hand	6	15.385	-	-	6	14.63	-	-	-	-	-	-
		in contrast	4	10.256	-	-	4	9.76	-	-	-	-	-	-
		*in other hand	1	2.5641	-	-	1	2.44	-	-	-	-	-	-
		<b>Sub-total</b>	<b>26</b>	66.667	-	-	<b>26</b>	63.41	-	-	-	-	-	-
	Concession	however	8	20.513	-	-	8	19.51						
		still	-	-	-	-	-	-	-	-	-	-	-	-
		although	-	-	2	100.00	2	4.88					2	66.67
		yet	-	-	-	-	-	-	-	-	-	-	-	-
nonetheless		-	-	-	-	-	-	-	-	-	-	-	-	
	though	3	7.6923	-	-	3	7.32	-	-	-	-	-	-	
	even though	1	2.5641	-	-	1	2.44	-	-	-	-	1	33.33	
	nevertheless	1	2.5641	-	-	1	2.44	-	-	-	-	-	-	
	<b>Sub-total</b>	<b>13</b>	33.333	<b>2</b>	100.00	<b>15</b>	36.59	-	-	-	-	<b>3</b>	100.00	
	<b>TOTAL</b>	<b>39</b>	100	<b>2</b>	100.00	<b>41</b>	100.00	-	-	-	-	<b>3</b>	100.00	

From the NNSL group, it can be seen that the 4 DC lexis that were used from the sub-category of contrast were used only in CPs. While “on the contrary” was not used at all, “but”, “on the other hand”, “in contrast”, and “\*in other hand” accounted for 38.46%, 15.38%, 10.26% and 2.56% of usage, respectively. From the sub-category of concession, 5 DCs lexis were used. Of these, “however”, “though”, “even though”, and “nevertheless” appeared only in CPs, while “although” was used exclusively in CXs. Moreover, it was found that there was an error rate of 66.7% in the use of “although”. For the DC positions, in the sub-category of contrast, the findings show that all 4 DCs were only used in the IN position, accounting for 63.41%, while from the sub-category of concession, it can be seen that all 5 DCs are used only in the IN position (36.59%). Surprisingly, while the NNSLs made errors in sentence type, they did position all DCs correctly.

### 3.4.14 The syntactic aspect of the DC usage in the Causal category by all three sample groups

This part presents the syntactic analysis of the Causal DC usage by the NSs, followed by the NNSHs and NNSLs, respectively.

Table3. 25: The sentence types and sentential positions of the Causal DCs by the NSs

Main Category	Sub Category	DCs lexis	NSs											
			Sentence Types				Positions						Error	%
			CP		CX		IN		ME		FI			
			Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
Causal	Result inference	because	-	-	10	76.92	-	-	10	100.00	-	-	-	-
		therefore	4	57.14	-	-	4	3.57	-	-	-	-	-	-
		due to	-	-	3	23.08	3	2.68	-	-	-	-	-	-
		so	2	28.57	-	-	2	1.79	-	-	-	-	-	-
		then	1	14.29	-	-	1	0.89	-	-	-	-	-	-
		<b>TOTAL</b>	<b>7</b>	<b>100.00</b>	<b>13</b>	<b>100.00</b>	<b>10</b>	<b>8.93</b>	<b>10</b>	<b>100.00</b>	-	-	-	-

It can be seen that in the NS group, 3 DC lexis were found in CPs: “therefore”, “so”, and “then”. Conversely, we found 2 DC lexis that were used in CXs: “because” and “due to”. With regard to the position of the DCs, all of the DCs except “because” were used in the IN position, while “because” was the only DC lexis which was used in the ME position.

Table3. 26: The sentence types and sentential positions of the Causal DCs by the NNSHs

Main Category	Sub Category	DCs lexis	NNSHs											
			Sentence Types				Positions						Error	%
			CP		CX		IN		ME		FI			
			Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
Causal	Reference inference	because	-	-	13	100.00	-	-	13	100.00	-	-	-	-
		so	8	80.00	-	-	8	80.00	-	-	-	-	-	-
		thus	2	20.00	-	-	2	20.00	-	-	-	-	-	-
		<b>TOTAL</b>	<b>10</b>	<b>100.00</b>	<b>13</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>13</b>	<b>100.00</b>	-	-	-	-

For the finding of the NNSHs, the results show that 2 DC lexis were used in CPs: “so” and “thus”. Only 1 DCs lexis was used in CXs: “because”. For the results of

the DCs' positioning, all of the DCs except "because" were used in the IN position, whereas "because" was used in the ME position.

Table3. 27: The sentence types and sentential positions of the Causal DCs by the NNSLs

Main Category	Sub Category	DCs lexis	NNSLs											
			Sentence Types				Positions				Error	%		
			CP		CX		IN		ME		FI			
			Token	%	Token	%	Token	%	Token	%	Token	%		
Causal	Result inference	because	-	-	20	100.00	-	-	20	100.00	-	-	-	-
		so	10	83.33	-	-	10	83.33	-	-	-	-	-	-
		therefore	2	16.67	-	-	2	16.67	-	-	-	-	-	-
		<b>TOTAL</b>	<b>12</b>	<b>100.00</b>	<b>20</b>	<b>100.00</b>	<b>12</b>	<b>100.00</b>	<b>20</b>	<b>100.00</b>	-	-	-	-

In the NNSL group, the results show that 2 out of the 3 DCs lexis were used in CPs: "therefore" and "so", whereas "because" was only found in CXs.

### 3.4.15 The syntactic aspect of DC usage in the Temporal category by all three sample groups

This part presents the syntactic analysis of the Temporal DC usage by the NSs, followed by the NNSHs and NNSLs, respectively.

Table3. 28: The sentence types and sentential positions of the Temporal DCs by the NSs

Main Category	Sub Category	DCs lexis	NSs											
			Sentence Types				Positions				Error	%		
			CP		CX		IN		ME		FI			
			Token	%	Token	%	Token	%	Token	%	Token	%		
Temporal	Ordering	first	1	20.00	-	-	1	20.00	-	-	-	-	-	-
		firstly	1	20.00	-	-	1	20.00	-	-	-	-	-	-
		secondly	1	20.00	-	-	1	20.00	-	-	-	-	-	-
		then	1	20.00	-	-	1	20.00	-	-	-	-	-	-
		<b>Sub-total</b>	<b>4</b>	<b>80.00</b>	:	:	<b>4</b>	<b>80.00</b>	:	:	:	:	:	:
	Summation	finally	1	20.00	-	-	1	20.00	-	-	-	-	-	
		<b>Sub-total</b>	<b>1</b>	<b>20.00</b>	:	:	<b>1</b>	<b>20.00</b>	:	:	:	:	:	
		<b>TOTAL</b>	<b>5</b>	<b>100.00</b>	-	-	<b>5</b>	<b>100.00</b>	-	-	-	-	-	

For the NS group, 4 DCs from the sub-category of ordering were used in CPs. Accounting for 20% each, "first", "firstly", "secondly", and "then" contributed a

combined total of 80.00% of usage, while the remaining 20% was attributed to “finally”, which was the only DC from the sub-category of summation that was used in CPs. For the position of the DCs, the results show that all 4 DCs from the sub-category of ordering as well as “finally” from the sub-category of summation were used only in the IN position, accounting for 80.00% and 20.00%, respectively.

Table3. 29: The sentence types and sentential positions of the Temporal DCs by the NNSHs

Main Category	Sub Category	DCs lexis	NNSHs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
Token	%	Token	%	Token	%	Token	%	Token	%			
Temporal	Ordering	first	6	28.57	-	-	6	28.57	-	-	-	-
		firstly	2	9.52	-	-	2	9.52	-	-	-	-
		second	1	4.76	-	-	1	4.76	-	-	-	-
		secondly	2	9.52	-	-	2	9.52	-	-	-	-
		lastly	2	9.52	-	-	2	9.52	-	-	-	-
		at last	1	4.76	-	-	1	4.76	-	-	-	-
		to begin with	1	4.76	-	-	1	4.76	-	-	-	-
		last but not least	2	9.52	-	-	2	9.52	-	-	-	-
		<b>Sub-total</b>	<b>17</b>	<b>80.95</b>	:	:	<b>17</b>	<b>80.95</b>	:	:	:	:
		Summation	to conclude	2	9.52	-	-	2	9.52	-	-	-
to sum up	2		9.52	-	-	2	9.52	-	-	-	-	
<b>Sub-total</b>	<b>4</b>		<b>19.05</b>	:	:	<b>4</b>	<b>19.05</b>	:	:	:	:	
		<b>TOTAL</b>	<b>21</b>	<b>100.00</b>	:	:	<b>21</b>	<b>100.00</b>	:	:	:	:

Regarding the use of Temporal DCs by the NNSH group, it can be seen that there was high usage from the sub-category of ordering, with 8 DCs from this sub-category used: “first”, “firstly”, “second”, “secondly”, “lastly”, “at last”, “to begin with”, and “last but not least”. Accounting for 80.95% of usage, these DCs were used only in CPs. For the sub-category of summation, 2 DCs lexis were used in CPs – “to conclude” and “to sum up” – accounting for the remaining 19.05% of usage. For the position of the DCs, the findings show that all DCs lexis in the Temporal category were used only in the IN position.

Table3. 30: The sentence types and sentential positions of the Temporal DCs by the NNSLs

Main Category	Sub Category	DCs lexis	NNSLs									
			Sentence Types				Positions					
			CP		CX		IN		ME		FI	
			Token	%	Token	%	Token	%	Token	%	Token	%
Temporal	Ordering	first	5	23.81	-	-	5	23.81	-	-	-	-
		second	4	19.05	-	-	4	19.05	-	-	-	-
		last	1	4.76	-	-	1	4.76	-	-	-	-
		lastly	1	4.76	-	-	1	4.76	-	-	-	-
		finally	2	9.52	-	-	2	9.52	-	-	-	-
	<b>Sub-total</b>	<b>13</b>	61.90	:	:	<b>13</b>	61.90	:	:	:	:	
	Summation	to sum up	6	28.57	-	-	6	28.57	-	-	-	-
in summary		2	9.52	-	-	2	9.52	-	-	-	-	
<b>Sub-total</b>		<b>8</b>	38.10	:	:	<b>8</b>	38.10	:	:	:	:	
<b>TOTAL</b>			<b>21</b>	100.00	-	-	<b>21</b>	100.00	-	-	-	-

For the use of Temporal DCs by the NNSL group, we found that this group used 5 DCs from the sub-category of ordering: “first”, “second”, “last”, “lastly”, and “finally”. Accounting for 61.90% of usage from this category, these DCs were used only in CPs. For the sub-category of summation, “to sum up” and “in summary” were the only 2 DCs lexis used. Accounting for the remaining 38.10% of usage in this category, these 2 DC were also found only in CPs. For the position of the DCs, all 7 DCs lexis from the sub-categories of ordering and summation were used only in the IN position.

#### 3.4.16 The syntactic aspect of the DC usage in the Continuatives category by all three sample groups

For the category of Continuatives, the NSs and NNSHs did not use any DCs from this category. Only the NNSL group used DCs from the Continuatives category.



Table3. 31: The sentence types and sentential positions of the Continuatives DCs by the NNSLs

Main	Sub	DCs lexis	NNSLs									
Category	Category		Sentence Types				Positions					
			CP		CX		IN		ME		FI	
			Token	%	Token	%	Token	%	Token	%	Token	%
Continuative	Transition	anyway	2	100.00	-	-	2	100.00	-	-	-	-
		<b>TOTAL</b>	<b>2</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>100.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

From the sub-category of transition, “anyway” was the only DC used. It appeared exclusively in the IN position of CPs.

Analysing the data from Tables 3.16 to 3.31, the syntactic analysis of DCs are explained in two criteria: (1) sentence type and (2) DC position. The frameworks of Bauer-Ramazani (2005) and Lenker (2011) were used for sentence type analysis, while the position framework was adopted from Biber et al (1999). The syntactic analysis focused on only the structure or the form of DCs in the sentences.

From the pilot study, it helped me shape my main study in many ways. In terms of research tools, the English Language Exposure Questionnaire and the frameworks for analysing the semantics aspect was tested and they were found to be reliable and could be applied in the main study. Nevertheless, there were some limitations in the use of the research tools and in the use of the framework for analysing aspects of syntax. For the sentence types, there were only 2 sentence types in the pilot study: compound and complex sentences. When I analysed the essays, I found that DCs were also found in simple sentences, as well. From this finding, the framework was adapted.

In the pilot study, NNSs were given 60 minutes to write an argumentative essay, but they were not able to complete them in that given time. This showed me that the time assigned for completing the essays in the pilot study was too short. Thus, in the main study, the NNSs were given 90 minutes to complete their essays. Grading the argumentative essay was not performed in the pilot study. From this, there may be a question of whether the essays written by the sample groups were actually argumentative essays or not. This question may decrease the validity and the reliability

of the main study. The framework for marking the argumentative essays was, therefore, studied and employed in the main study.

### **3.5 Summary**

This chapter presented the research methodology in terms of (1) population and sample groups; (2) data collection procedures, both NS and NNS data; (3) identifying the grading criteria of argumentative essays; and (4) data analysis. Also, the pilot study was described to show how the main study would be explored. Chapter 4 will report the findings of DC usage in all the aspects as explored in the pilot study.



## CHAPTER IV

### RESEARCH FINDINGS

The main purpose of this chapter is to present the findings of the main study in response to the research questions: (1) What are the patterns of English discourse connector (DC) usage of native speakers of English (NSs), non-native speakers of English with high-English exposure (NNSHs), and non-native speakers of English with low-English exposure (NNSLs) in the argumentative essays? (2) Do the patterns and problems in the use of DCs in the two NNS sample groups differ from the NS group, and if so, how? (3) What are the differences of the patterns and problems of DC usage in NNS argumentative essays between NNSHs and NNSLs? This chapter is organized into four sections. The first section deals with the argumentative essays in terms of the length of the essays written by NSs, NNSHs, and NNSLs. The second section reports the quantitative analysis in terms of the frequency of DCs usage in the five main categories in these three sample groups. The third section reports both the quantitative and qualitative analyses of the DCs used by the three sample groups in three aspects: (1) orthography, (2) syntax, and (3) semantics and pragmatics. The fourth section focuses on the errors in the use of DCs by NSs and NNSs.

#### **4.1 Argumentative essays: the length of the essays**

In this section, the length of the essays determined by the total number of words and sentences of the three sample groups are described.

In order to identify the pattern of DC usage, especially quantitatively speaking, the length of the essays should be taken into account as it is one variable to be considered. The number of DCs in each sample group may be varied due to the number of words in the essays. The AntConc program was used to count the numbers of words in the essays of each sample group. As one of its functions is to count word frequency, this program could give accurate numbers. In the program, the word “token” was used to refer to each unique word in a corpus (see Figures 4.1-4.3).

Figure4. 1: The total number of words in NSs

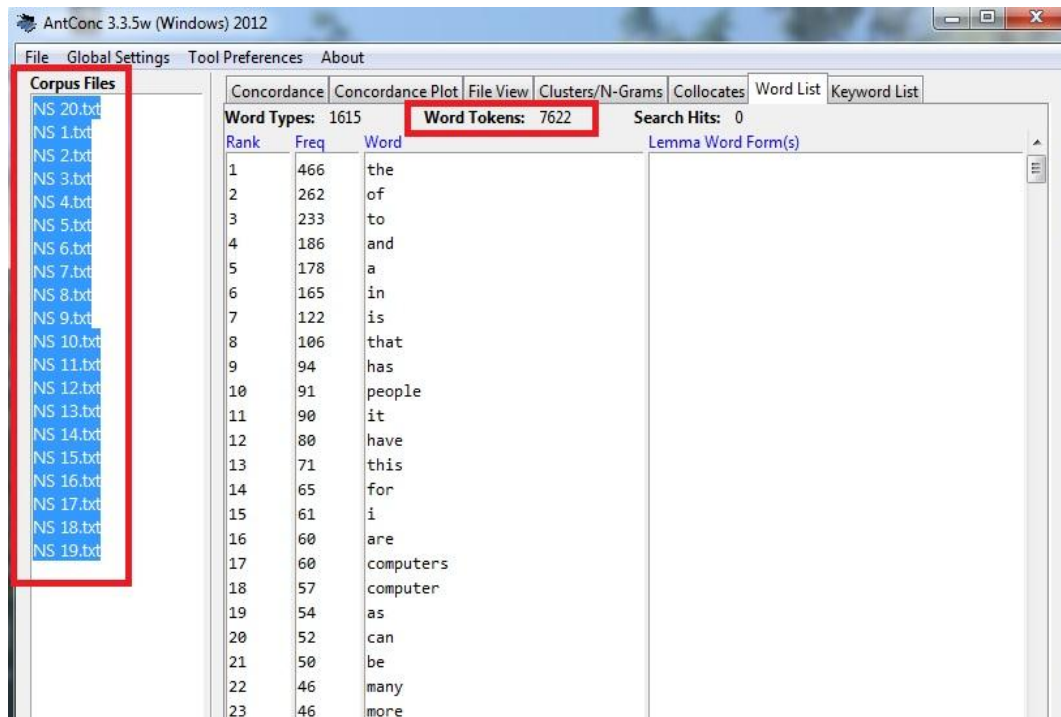
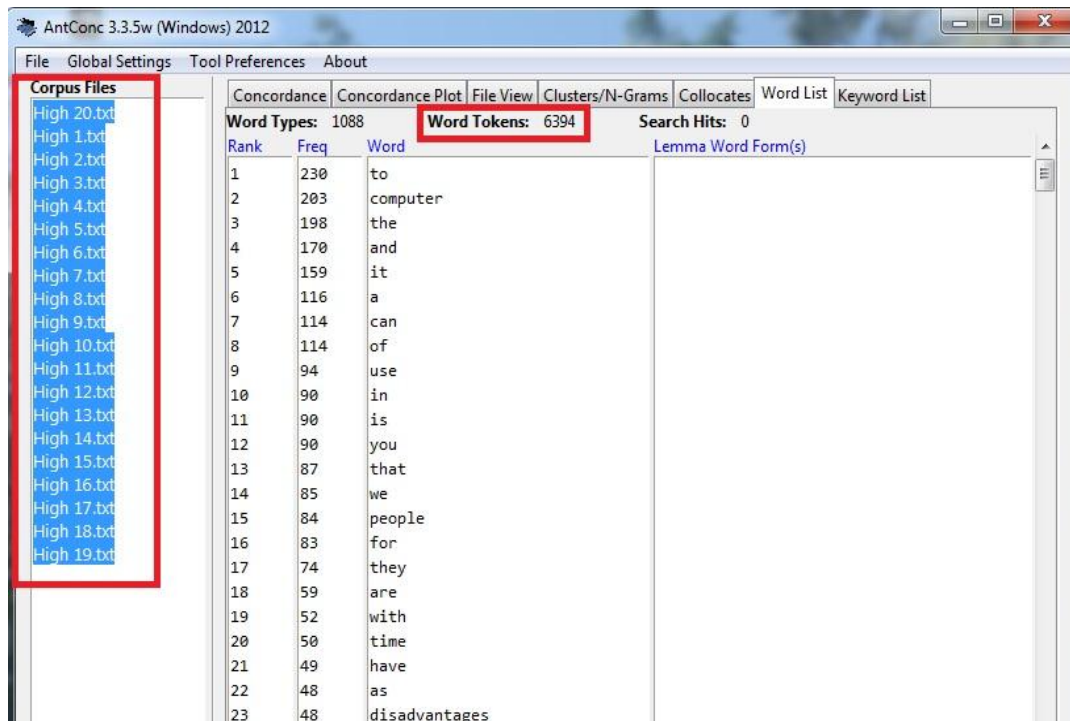


Figure 4.1 revealed that there were 7,622 words in the 20 essays written by the NS group.

Figure 4. 2: The total number of words in NNSHs



Rank	Freq	Word	Lemma	Word Form(s)
1	230	to		
2	203	computer		
3	198	the		
4	170	and		
5	159	it		
6	116	a		
7	114	can		
8	114	of		
9	94	use		
10	90	in		
11	90	is		
12	90	you		
13	87	that		
14	85	we		
15	84	people		
16	83	for		
17	74	they		
18	59	are		
19	52	with		
20	50	time		
21	49	have		
22	48	as		
23	48	disadvantages		

Figure 4.2 revealed that there were 6,394 words in the 20 essays written by the NNSH group.

Figure 4. 3: The total number of words in NNSLs

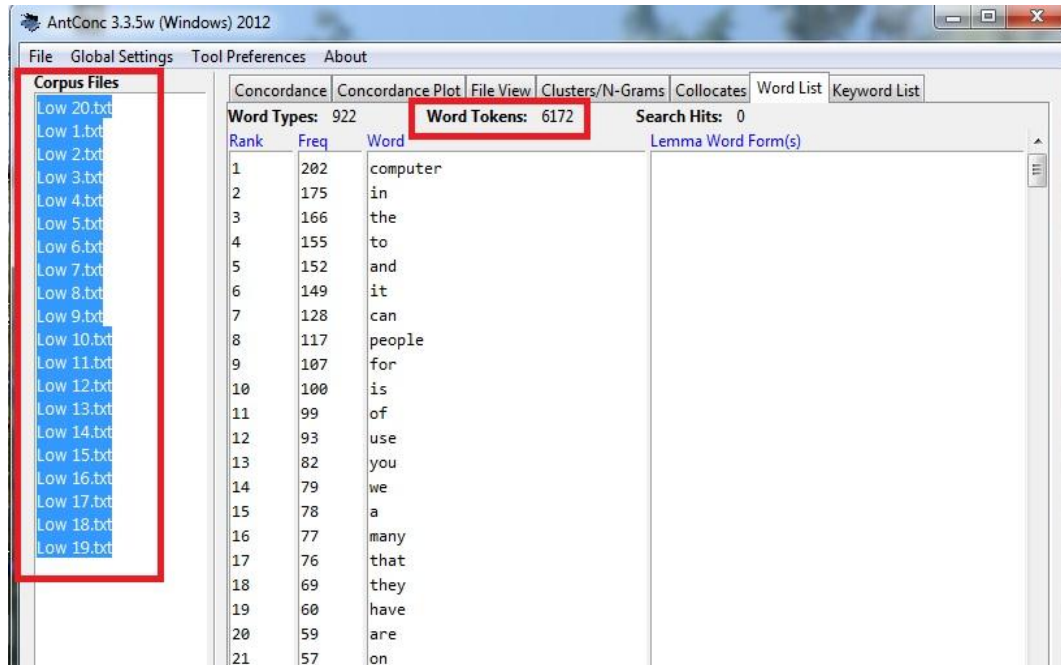


Figure 4.3 revealed that there were 6,172 words in the 20 essays written by the NNSL group.

From Figures 4.1 – 4.3, it can be seen that the NSs produced the longest essays with 7,622 words in total, whereas the total number of words in the essays of the NNSHs and NNSLs were 6,394 and 6,172 respectively. After performing a direct search using AntConc, and manually checking the 103 DC lexis in each sample group, there were only 38 DC lexis used with a total of 260 tokens from 410 sentences in the essays of the NSs. For the NNSHs, there were 46 DC lexis with a total of 302 tokens from 441 sentences, while there were 41 DC lexis with a total of 319 tokens from 457 sentences in the essays of the NNSLs. Although the NSs had the longest essays, the number of DC lexis as well as the number of DC tokens were smallest for this group compared to both NNS groups.

Both the number of DC lexis and the number of tokens of DCs in the NS and NNS groups found in this study concurred with the findings of many previous studies (Milton & Tsang, 1993; Altenberg & Tapper, 1998; Bolton et al., 2003; Narita et al., 2004; Tankó, 2004; Chen, 2006). Previous literature mentioned that native English

speakers use fewer DCs than non-native speakers. The non-native speakers in these studies were students from Hong Kong, Sweden, Japan, Hungary and Taiwan.

As mentioned in Ferris (2002) and Hyland (2003), NNSs normally produce shorter writing which contains more errors. This supports what was found and reported in Figures 4.1-4.3. The NS group had the longest text with an average of 381.1 words and 20.5 sentences per essay. The average number of words per essay by the NNSH group was 319.7 words and 22.05 sentences per essay, while the NNSLs produced an average of 308.6 words and 22.85 sentences per essay. Although the NSs produced the highest number of words per essay, they also had the smallest number of sentences per essay. It could be inferred from this that the number of Compound or Complex sentences in the essays of the NSs must be higher than the number of Simple sentences. The number of DCs and the length of the essays in each group are shown in Table 4.1.

Table 4. 1: Number of DCs and the length of the essays for each group (N=20)

Samples	No. of DCs	No. of Words in the Essays							No. of Sentences in the Essays
		Total	Max	Min	Avg	Range	%	S.D.	Avg
NSs	260	7622	567	210	381.1	357	3.41	98.18	20.5
NNSHs	302	6394	425	232	319.7	193	4.72	55.09	22.05
NNSLs	319	6172	403	253	308.6	150	5.16	50.9	22.85

These data represented the starting point for comparing the similarities and differences in the use of DCs among the three sample groups, especially in sentence types. The differing ways in which the three sample groups wrote argumentative essays resulted the NSs and the NNSs producing essays of different lengths.

## 4.2 The overall frequency of DC usage in the three sample groups

The second section in this chapter provided an answer to Question 1 regarding the patterns of DC usage in the three sample groups, particularly in terms of frequency of use. This section presented (1) the frequency of DC usage in terms of the total number of DC tokens in the corpus data compared to the theoretical framework, and (2) the use of DC lexis in the five main categories as well as the sentence types and the sentential positions of these DCs. The results were determined from both the descriptive and the inferential statistical analyses.

### 4.2.1 The total number of DC lexis

Out of a total of 103 DC lexis in English, 62 DC lexis were used by the three sample groups. The DC lexis used by the three sample groups are presented in *italics* and underlined in Table 4.2

Table 4. 2: The 62 DC lexis used by the three sample groups compared to the total of 103 DC lexis in the English language as categorized by Halliday & Hasan, 1976; Quirk et al, 1985; Biber et al, 1999; and Cowan, 2008

No	Main Category	Sub Category	DCs
1	Additive	Addition	<i><u>also, and, as well, besides, furthermore, in addition, meanwhile, moreover, or, additionally, as well, at the same time, further, likewise, similarly, what is more</u></i>
		Exemplification	<i><u>e.g., for example, for instance, such as, to illustrate</u></i>
		Restatement	<i><u>specifically, that is, that is to say, i.e., in other words, namely</u></i>
2	Adversative	Contrast	<i><u>but, conversely, in contrast, instead, nor, on the contrary, on the other hand, alternatively, by comparison, by way of contrast, on the one hand</u></i>
		Concession	<i><u>although, even though, however, nevertheless, nonetheless, though, yet, at any rate, despite that, in any case, in spite of</u></i>



3	Causal	Result/inference	<i>because, due to, hence, so, then, therefore, thus, accordingly, as a consequence, as a result, consequently, due to the fact that, for</i>
4	Temporal	Ordering	<i>at last, finally, first, first of all, firstly, last but not least, lastly, next, second, secondly, third, to begin with, for a start, for another thing, for one thing, fourth, fourthly, in the first/second/third place, last of all, then, to start with</i>
		Summation	<i>all in all, in conclusion, in short, in sum, in summary, to conclude, to sum up, as we have seen, in a nutshell, overall, to summarize</i>
5	Continuatives	Transition	<i>anyway, now, of course, surely, well, after all, by the way</i>

From Table 4.2, it can be seen that the three sample groups used 17 DC lexis out of the total of 26 English DCs in the Additive category. Interestingly, in the Exemplification sub-category, all 5 of the available English DCs were used. For the Adversative category, 14 DC lexis out of the total of 24 English DCs were used by the three sample groups, while they only used 7 out of the 13 DC lexis from the Causal category, 19 out of the 34 English DCs from the Temporal category, and 5 out of the 7 English DCs in the Continuatives category.

It could be concluded from Table 4.2 that the three sample groups used a combined total of 62 out of the 103 available English DC lexis. Figure 4.4 below presents more information on which DC lexis were used by the NSs, NNSHs and NNSLs.

Figure 4. 4: The 62 DC Lexis used by each sample group

Additive	Adversative	Causal	Temporal	Continuatives
<p>- <b>Addition (9)</b>  <b>NS (8)</b>: and, also, or, as well, besides, furthermore, in addition, moreover</p> <p><b>NNSH (9)</b>: and, also, or moreover, as well , in addition, besides, furthermore, meanwhile</p> <p><b>NNSL (8)</b>: and, also, moreover, or, in addition, as well, besides, furthermore</p>	<p>- <b>Contrast (7)</b>  <b>NS (4)</b>: but, instead, on the contrary, on the other hand</p> <p><b>NNSH (5)</b>: but, on the other hand, instead, on the contrary, conversely</p> <p><b>NNSL (6)</b>: but, in contrast, on the other hand, instead, nor, on the contrary</p>	<p>- <b>Result/ inference (7)</b>  <b>NS (7)</b>: because, therefore, so, thus, due to, hence, then</p> <p><b>NNSH (6)</b>: so, because, therefore, thus, due to, then</p> <p><b>NNSL (5)</b>: because, so, then, therefore, due to</p>	<p>- <b>Ordering (12)</b>  <b>NS (4)</b>: finally, firstly, lastly, secondly</p> <p><b>NNSH (10)</b>: first, secondly, first of all, finally, last but not least, second, at last, first, lastly, to begin with</p> <p><b>NNSL (7)</b>: first, finally, second, third, first of all, lastly, next</p>	<p>- <b>Transitions (5)</b>  <b>NS (3)</b>: now, of course, well</p> <p><b>NNSH (4)</b>: now, anyway, of course, surely</p> <p><b>NNSL (3)</b>: now, of course, surely</p>
<p>- <b>Exemplification (5)</b>  <b>NS (4)</b>: such as, for example, for instance, e.g.</p> <p><b>NNSH (3)</b>: such as, for example, to illustrate</p> <p><b>NNSL (2)</b>: such as, for example</p>	<p>- <b>Concession (7)</b>  <b>NS (4)</b>: however, although, even though, yet</p> <p><b>NNSH (4)</b>: however, although, even though, nonetheless</p> <p><b>NNSL (5)</b>: however, although, even though, though, nevertheless</p>	<p>- <b>Summation (7)</b>  <b>NS (2)</b>: in short, all in all</p> <p><b>NNSH (4)</b>: in conclusion, to conclude, to sum up, in summary</p> <p><b>NNSL (3)</b>: in conclusion, to sum up, in sum</p>	<p>- <b>Restatement (3)</b>  <b>NS (1)</b>: that is</p> <p><b>NNSH (1)</b>: specifically</p> <p><b>NNSL (2)</b>: that is, that is to say</p>	

Figure 4.4 presents the detailed information of DC lexis usage by the NSs, NNSHs, and NNSLs. The Additive category is comprised of three sub-categories: (1) Addition, (2) Exemplification, and (3) Restatement. From the theoretical framework, a total of 16 English DC lexis were stated in the Addition sub-category. Of these 16 English DCs only 9 lexis were used by the sample groups, the NSs used 8; the NNSHs used 9, and the NNSLs used 8. For the Exemplification sub-category, out of the 5 available English DCs, the NSs used 4, while the NNSHs used 3, and the NNSLs used only 2. There are 6 English DC lexis in the Restatement sub-category; however, only 3 of these, i.e., “that is”, “that is to say”, and “specifically”, were used. The Adversative category was divided into two sub-categories: (1) Contrast and (2) Concession. Of the 11 English DC lexis in the Contrast sub-category, the NSs used 4 DCs, while the NNSHs used 5 DCs, and the NNSLs used 6 DCs. Regarding the Concession sub-category, the total number of English DC lexis from the framework was 11. Of these, both the NSs and the NNSHs used 4 DCs, whereas the NNSLs used 5 out of the 11 DCs. From the total of 13 English DCs in the Causal category, the NSs used 7 of them; the NNSHs used 6; and the NNSLs used 5. The Temporal category consisted of two sub-categories: (1) Ordering and (2) Summation. From the framework, a total of 23 English DCs were stated in the Ordering sub-category. While the NSs used only 4 of these, the NNSHs used 10 and the NNSLs used 7. This sub-category showed the clear and distinct differences in the number of DC lexis used among the three sample groups. For the Summation sub-category, the total number of English DC lexis in this group was 11, but the NSs used only 2, while the NNSHs used 4 and the NNSLs used 3. From

the 7 English DCs in the Continuatives category, the NSs used 3 of these; the NNSHs used 4; and the NNSLs used 3. A summary of the number of DC lexis used from Figure 4.4 is presented in Table 4.3.

Table 4. 3: Summary of the number of English DC lexis used by the three sample groups

Samples	Number of DC lexis used by the sample groups				
	Additive	Adversative	Causal	Temporal	Continuatives
NSs	13	9	7	6	3
NSSHs	13	9	6	14	4
NNSLs	12	11	5	10	3
TOTAL	38	29	18	30	10

Overall, there was no significant difference in terms of the number of DC lexis used among the three sample groups. However, the word choice was interesting. For example, in the Concession sub-category, according to the word frequency in Collins COBUILD dictionary (2016), all of the DC lexis which the NSs used were high frequency words, such as “although”, “however”, and “even though”. Conversely, the NNSHs and NNSLs chose low frequency words like “nonetheless” and “nevertheless”, which are less frequently used according to the Collins Corpus, a corpus consisting of over 4.5 billion words.

It could be inferred from this section that even though all three sample groups used nearly similar numbers of DC lexis from the Additive, Adversative, and Continuatives categories, differences were found in the use of DCs from the Causal and Temporal categories.

#### 4.2.2 The frequency of DC usage from all five categories by the NSs, NNSHs and NNSLs

In order to answer the research questions, a comparison was made among the three sample groups with regard to their usage of the five main categories of DCs: Additive, Adversative, Causal, Temporal, and Continuatives. The results were analyzed and reported using descriptive statistic, percentage. The previous section revealed how

many of the DC lexis were used, whereas this section presents the number of tokens used from each category of DC lexis (see Table 4.4)

Table 4. 4: The frequency of DC usage in all five categories by the NSs, NNSHs, and NNSLs

Main Category	Sub Category	NSs		NNSHs		NNSLs	
		Token	%	Token	%	Token	%
Additive	Addition	135	51.92	115	38.98	106	34.19
	Exemplification	17	6.54	27	9.15	38	12.26
	Restatement	2	0.77	2	0.68	3	0.97
	<b>Sub total</b>	<b>154</b>	<b>59.23</b>	<b>144</b>	<b>48.81</b>	<b>147</b>	<b>47.42</b>
Adversative	Contrast	24	9.23	33	11.19	33	10.65
	Concession	26	10.00	18	6.10	28	9.03
	<b>Subtotal</b>	<b>50</b>	<b>19.23</b>	<b>51</b>	<b>17.29</b>	<b>61</b>	<b>19.68</b>
Causal	Result/inference	27	10.38	57	19.32	57	18.39
	<b>Sub total</b>	<b>27</b>	<b>10.38</b>	<b>57</b>	<b>19.32</b>	<b>57</b>	<b>18.39</b>
Temporal	Ordering	4	1.54	23	7.80	21	6.77
	Summation	3	1.15	9	3.05	14	4.52
	<b>Sub total</b>	<b>7</b>	<b>2.69</b>	<b>32</b>	<b>10.85</b>	<b>35</b>	<b>11.29</b>
Continuatives	Transitions	22	8.46	11	3.73	10	3.23
	<b>Sub total</b>	<b>22</b>	<b>8.46</b>	<b>11</b>	<b>3.73</b>	<b>10</b>	<b>3.23</b>
	<b>TOTAL</b>	<b>260</b>	<b>100.00</b>	<b>295</b>	<b>100.00</b>	<b>310</b>	<b>100.00</b>

The patterns of usage were slightly different among the three sample groups. The Additive category showed the highest usage among all three groups, while the usage of DCs from the Adversative, Causal, Temporal and Continuatives categories were lower in descending order.

It could be concluded from Table 4.4 that there were two main differences in the percentage usage of DCs among the three sample groups. Firstly, there were clear differences between the NSs and NNSs, both the high and the low groups, in the usage of DCs from the Causal and Temporal categories. From the Causal category, the NSs had the lowest usage (10.38%) compared to 19.32% by the NNSHs and 18.39% by the NNSLs. A similar degree of difference was found in the Temporal category as well, with the NSs recording only 2.69% usage from this category, compared to 10.85% by the NNSHs and 11.29% by the NNSLs.

From Table 4.4, the percentages of DCs used by the three sample groups did not reveal any obvious similarities or differences in any of the categories. Therefore, a statistical analysis was performed using ANOVA to compare the number of DCs from each of the five main categories and determine whether the differences in the percentage of use among the three sample groups were significant or not. The results of the ANOVA analysis are shown in Table 4.5.

Table 4. 5: The ANOVA results

		df	MS	F	p
Additive	Between Groups	2	1.317	.132	.877
	Within Groups	57	9.999		
	Total	59			
Adversative	Between Groups	2	1.517	.584	.561
	Within Groups	57	2.596		
	Total	59			
Causal	Between Groups	2	15.000	5.423	*.007
	Within Groups	57	2.766		
	Total	59			
Temporal	Between Groups	2	11.317	5.783	*.005
	Within Groups	57	1.957		
	Total	59			
Continuatives	Between Groups	2	2.217	2.351	.104
	Within Groups	57	.943		
	Total	59			

(\*  $p < 0.05$ )

The results from Table 4.5 show that among the three groups, there were significant differences in the percentages of DC usage in two main categories: Causal and Temporal. For the Causal category, the F-test was 5.423, and the t-test was .007 ( $p < 0.05$ ); for the Temporal category, the F-test was 5.783, and the t-test was .005 ( $p < 0.05$ ). To find more details about these differences in the use of Causal and Temporal DCs, the Scheffe method was employed to perform a multiple comparison among the three groups (see Table 4.6).

Table 4. 6: The Scheffe results

Dependent Variable	(I) G	(J) G	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Causal	1	2	-1.500*	.526	*.022	-2.82	-.18
		3	-1.500*	.526	*.022	-2.82	-.18
	2	1	1.500*	.526	*.022	.18	2.82
		3	.000	.526	1.000	-1.32	1.32
	3	1	1.500*	.526	*.022	.18	2.82
		2	.000	.526	1.000	-1.32	1.32
Temporal	1	2	-1.250*	.442	*.024	-2.36	-.14
		3	-1.350*	.442	*.013	-2.46	-.24
	2	1	1.250*	.442	*.024	.14	2.36
		3	-.100	.442	.975	-1.21	1.01
	3	1	1.350*	.442	*.013	.24	2.46
		2	.100	.442	.975	-1.01	1.21

Note: 1 = NSs, 2 = NNSHs, 3 = NNSLs

\*. The mean difference is significant at the 0.05 level.

Table 4.6 reveals that there was a significant difference in the Causal category between the NS group and the two NNS groups. The t-test was .022 ( $p < 0.05$ ) in all three groups. However, there was no significant difference between the NNSHs and the NNSLs with a t-test score of 1.0 ( $p < 0.05$ ). For the Temporal category, there was a significant difference between the NSs and both NNSs groups. The t-test was .024 ( $p < 0.05$ ) in comparison between the NSs and NNSHs, and the t-test was .013 ( $p < 0.05$ ) when comparing between the NSs and NNSLs.

Even though each DCs lexis was not reported in 4.3.2, the section illustrated the overall picture of DC usage in the five main categories. Tables 4.4-4.6 serve to answer research question 1.

It was found that there were significant differences between the NSs and both groups of NNSs in their usage of DCs from the Causal and Temporal categories. The use of each DC lexis will be reported in 4.3.3 – 4.3.7.

### 4.2.3 The frequency of DC usage from the Additive category by the NSs, NNSHs and NNSLs

From the five main categories, DC usage from the Additive category was the highest by all three sample groups. Detailed descriptions of the usage of each DC lexis from the Additive category is given in Table 4.7

Table 4. 7: The usage frequency of each DC lexis from the Additive category by the NSs, NNSHs and NNSLs

Main Category	Sub Category	Lexis	NSs		NNSHs		NNSLs	
			Token	%	Token	%	Token	%
Additive	Addition	1 also	24	15.58	19	13.19	14	9.52
		2 and	94	61.04	66	45.83	62	42.18
		3 as well	4	2.60	5	3.47	3	2.04
		4 besides	2	1.30	1	0.69	2	1.36
		5 furthermore	1	0.65	1	0.69	2	1.36
		6 in addition	1	0.65	2	1.39	4	2.72
		7 moreover	1	0.65	7	4.86	11	7.48
		8 or	8	5.19	13	9.03	8	5.44
		9 meanwhile	0	0.00	1	0.69	0	0.00
	<u>Sub total</u>		<u>135</u>	<u>87.66</u>	<u>115</u>	<u>79.86</u>	<u>106</u>	<u>72.11</u>
	Exemplification	1 for example	6	3.90	6	4.17	18	12.24
		2 such as	7	4.55	20	13.89	20	13.61
		3 e.g.	1	0.65	0	0.00	0	0.00
		4 for instance	3	1.95	0	0.00	0	0.00
		5 to illustrate	0	0.00	1	0.69	0	0.00
	<u>Sub total</u>		<u>17</u>	<u>11.04</u>	<u>27</u>	<u>18.75</u>	<u>38</u>	<u>25.85</u>
	Restatement	1 that is	2	1.30	0	0.00	2	1.36
		2 specifically	0	0.00	2	1.39	0	0.00
		3 that is to say	0	0.00	0	0.00	1	0.68
	<u>Sub total</u>		<u>2</u>	<u>1.30</u>	<u>2</u>	<u>1.39</u>	<u>3</u>	<u>2.04</u>
		<b>TOTAL</b>	<b>154</b>	<b>100</b>	<b>144</b>	<b>100</b>	<b>147</b>	<b>100</b>

As can be seen from Table 4.7, all 9 of the DC lexis from the Addition sub-category were used. Of these 9 DCs, the NSs and NNSLs each used 8, whereas the NNSHs used all 9 of the DC lexis from this sub-category. Among all three groups, the highest percentages of usage for DCs from this sub-category were for “and” with 61.04% by the NSs, 45.83% by the NNSHs, and 42.18% by the NNSLs. The second and third highest percentages of DC usage by the NSs and NNSHs were for “also” and



“or”, whereas “also” and “moreover” were the second and the third most frequently used DCs from this sub-category by the NNSLs.

In the analysis of the Exemplification sub-category, 5 DC lexis were used by the three sample groups. Although NSs used a wider variety of DCs from this category, their total frequency of usage was the lowest. While the NNSLs used only 2 DC lexis out of the total of 5, the total frequency of usage was higher in this group than in the NSs. For the restatement sub-category, the NNSLs used 2 DC lexis, whereas only one DC lexis was used by NSs and NNSHs.

#### **4.2.4 The frequency of DC usage from the Adversative category by the NSs, NNSHs and NNSLs**

The DCs from the Adversative category were expected to be used more than the DCs from any other categories in argumentative essays as the nature of these essays is to show the pros and cons of what is being discussed by the writers. Table 4.8 presents the frequency of usage of all DC lexis from this category by all three sample groups.

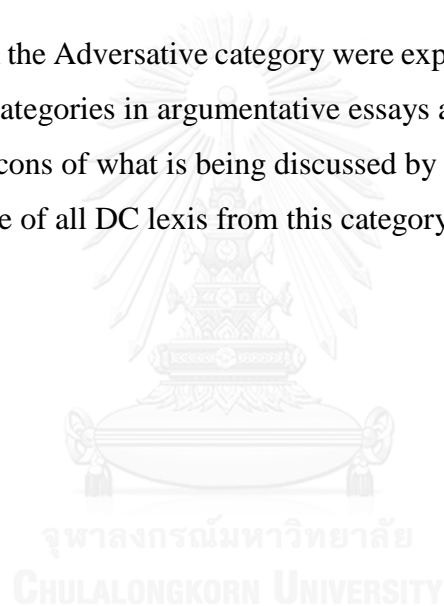


Table4. 8: The usage frequency of each DC lexis from Adversative category by NSs, NNSHs and NNSLs

Main	Sub		Lexis	NS		HIGH		LOW			
Category	Category			Token	%	Token	%	Token	%		
Adversative	Contrast	1	but	20	40.00	25	49.02	22	36.07		
		2	instead	2	4.00	2	3.92	1	1.64		
		3	on the contrary	1	2.00	2	3.92	1	1.64		
		4	on the other hand	1	2.00	3	5.88	5	8.20		
		5	conversely	0	0.00	1	1.96	0	0.00		
		6	in contrast	0	0.00	0	0.00	3	4.92		
		7	nor	0	0.00	0	0.00	1	1.64		
			<u>Sub total</u>			<u>24</u>	<u>48.00</u>	<u>33</u>	<u>64.71</u>	<u>33</u>	<u>54.10</u>
			Concession	1	although	1	2.00	4	7.84	8	13.11
2	even though			1	2.00	2	3.92	2	3.28		
3	however			18	36.00	11	21.57	16	26.23		
4	yet			1	2.00	0	0.00	0	0.00		
5	nonetheless			0	0.00	1	1.96	0	0.00		
6	nevertheless			0	0.00	0	0.00	1	1.64		
7	though			5	10.00	0	0.00	1	1.64		
	<u>Sub total</u>					<u>26</u>	<u>52.00</u>	<u>18</u>	<u>35.29</u>	<u>28</u>	<u>45.90</u>
			<b>TOTAL</b>	<b>50</b>	<b>100</b>	<b>51</b>	<b>100</b>	<b>61</b>	<b>100</b>		

From Table 4.8, it can be seen that the total number of DCs which were used by the three sample groups from the Adversative category was 14. Of these, the NSs and the NNSHs each used 9 DCs, while the NNSLs used 11 DCs. In the Contrast sub-category, the highest percentage of usage was for “but”, accounting for 40.00% usage by the NSs, 49.02% by the NNSHs, and 36.07% by the NNSLs. For the NS group, “but” was by far the most frequently used DC from this sub-category as it had a usage rate of 40.00% out of the combined total usage rate for this sub-category of 48.00%. Also of note is the fact that some DC lexis were only used by NNSs, such as “conversely”, “in contrast” and “nor”.

In the Concession sub-category, all three sample groups used “however” most frequently with rates of 36.00% for the NS, 21.57% for the NNSHs, and 26.23% for the

NNSLs. However, the second most used DC differed between the NSs and NNSs. The NSs used “though” at a rate of 10.00%, whereas the NNSH group did not use it at all, and the NNSL group only used it at 1.64%. For the NNSs, “although” was also used more frequently than among the NSs at 7.84% for the NNSHs and 13.11% for the NNSLs compared to only 2.00% by the NSs.

Interestingly, the use of “nonetheless” and “nevertheless” were found among the NNSs. From the Collins COBUILD dictionary (2016), these two lexis are considered to be formal and are rarely used, whereas “though” and “yet” are more commonly used in text. That is, the DC lexis which are commonly used were found only in the essays of the NSs, while the formal DC lexis which are rarely used were found only in the essays of the NNSs.

#### 4.2.5 The frequency of DC usage from the Causal category by the NSs, NNSHs and NNSLs

From the analysis, the Causal category was found to be one of the two categories which showed significant differences in usage between the NSs and NNSs. Table 4.9 shows more details on the use of each DC from this category.

Table 4.9: The usage frequency of each DC lexis from the Causal category by the NSs, NNSHs and NNSLs

Main Category	Sub Category	Lexis	NS		HIGH		LOW	
			Token	%	Token	%	Token	%
Causal	Result/inference	1 because	11	40.74	20	35.09	33	57.89
		2 due to	1	3.70	1	1.75	1	1.75
		3 so	4	14.81	27	47.37	16	28.07
		4 then	1	3.70	1	1.75	4	7.02
		5 therefore	7	25.93	6	10.53	3	5.26
		6 thus	2	7.41	2	3.51	0	0.00
		7 hence	1	3.70	0	0.00	0	0.00
	<u>Sub total</u>		<u>27</u>	<u>100.00</u>	<u>57</u>	<u>100.00</u>	<u>57</u>	<u>100.00</u>
		<b>TOTAL</b>	<b>27</b>	<b>100</b>	<b>57</b>	<b>100</b>	<b>57</b>	<b>100</b>

As can be seen from Table 4.9, the Causal category had only one sub-category, Result/inference, and all 7 of the DCs from this category were used by the NSs in various percentages, whereas 6 of the 7 DCs were used by NNSHs, and 5 of the 7 DCs were used by the NNSLs. For the NSs, the three most used DCs in the category were

“because” (40.74%), “therefore” (25.93%), and “so” (14.81%). For the NNSHs, the three most used DCs in the category were “so” (47.37%), “because” (35.09%), and “therefore” (10.53%), while the 3 Causal DCs which were used most frequently by the NNSLs were “because” (57.89%), “so” (28.07%), and “then” (7.02%).

In terms of the DC lexis, there was not much difference among the three sample groups. That is, the three sample groups exhibited similar patterns of usage for the DC lexis and types. However, the percentages were surprising. For example, “so” was used by all three sample groups, but its percentage of use was only 14.81% by the NSs, compared to 47.37% by the NNSHs and 28.07% by the NNSLs. “Therefore” was another interesting DC lexis in this category. The percentage of use of “therefore” was 25.93% by the NSs, whereas it was much lower at 10.53% by the NNSHs and 5.26% by the NNSLs. It is taught by English instructors that the two DC lexis of “so” and “therefore” have the same meaning, and so they are used interchangeably. According to (Bates, 1998), however, there are some differences in their usage as “so” is normally used in an informal context. It could be said that because the NSs understand these subtly different styles, they chose to use the more formal “therefore” in the written mode.

#### **4.2.6 The frequency of DC usage from the Temporal category by the NSs, NNSHs and NNSLs**

The previous section already mentioned that significant differences were found between the NSs and NNSs in terms of their use of the DCs from the Temporal category. Table 4.10 presents the frequency of use of each DC lexis from this category by all three sample groups.

Table4. 10: The usage frequency of each DC lexis from the Temporal category by the NSs, NNSHs and NNSLs

Main	Sub		Lexis	NS		HIGH		LOW	
Category	Category			Token	%	Token	%	Token	%
Temporal	Ordering	1	finally	1	14.29	2	6.25	4	11.43
		2	lastly	1	14.29	1	3.13	1	2.86
		3	firstly	1	14.29	5	15.63	0	0.00
		4	secondly	1	14.29	5	15.63	0	0.00
		5	first	0	0.00	1	3.13	9	25.71
		6	first of all	0	0.00	3	9.38	1	2.86
		7	second	0	0.00	2	6.25	3	8.57
		8	at last	0	0.00	1	3.13	0	0.00
		9	last but not least	0	0.00	2	6.25	0	0.00
		10	to begin with	0	0.00	1	3.13	0	0.00
		11	next	0	0.00	0	0.00	1	2.86
		12	third	0	0.00	0	0.00	2	5.71
	<u>Sub total</u>			<u>4</u>	<u>57.14</u>	<u>23</u>	<u>71.88</u>	<u>21</u>	<u>60.00</u>
	Summation	1	in conclusion	0	0.00	4	12.50	7	20.00
		2	to sum up	0	0.00	2	6.25	6	17.14
		3	all in all	1	14.29	0	0.00	0	0.00
		4	in short	2	28.57	0	0.00	0	0.00
		5	in summary	0	0.00	1	3.13	0	0.00
		6	to conclude	0	0.00	2	6.25	0	0.00
		7	in sum	0	0.00	0	0.00	1	2.86
	<u>Sub total</u>			<u>3</u>	<u>42.86</u>	<u>9</u>	<u>28.13</u>	<u>14</u>	<u>40.00</u>
			<b>TOTAL</b>	<b>7</b>	<b>100</b>	<b>32</b>	<b>100</b>	<b>35</b>	<b>100</b>

For the NSs, only 4 DCs out of 12 from the Ordering sub-category were used with the percentage of use for each DC lexis 14.29%, and the total percentage of this sub-category 57.14%. From the Summation sub-category, only 2 DCs out of 7 were used. These two DC lexis were “in short” and “all in all” with 28.57% and 14.29% usage, respectively. The total percentage of usage from the Summation sub-category was 42.86%. On the other hand, 10 DCs out of 12 in the Ordering sub-category were used by the NNSHs. The 2 DCs which were used at the highest rates by this group were “firstly” and “secondly”, each at 15.63%. The total percentage of this sub-category was 71.88%. For the Summation sub-category, 4 DC lexis out of 7 were used. The highest rate of usage among the DCs in this sub-category was “in conclusion” with 12.50%, followed by “to sum up” and “to conclude”, each with 6.25%. The total percentage of usage for the Summation category was 28.13%.

For the NNSLs, 7 DC lexis out of 12 in the Ordering sub-category were used. The 2 DCs which were used at the highest rates by this group were “first” and “finally” with percentage scores of 25.71% and 11.43%, respectively. The total percentage of this sub-category was 60.00%. For the Summation sub-category, 3 DC lexis out of 7 were used. The highest percentage of usage for any DC lexis in this sub-category was “in conclusion” with 20.00%.

The use of DC lexis from the Temporal category revealed significant differences in terms of both DC lexis or types used and the frequency of use of tokens among the three sample groups. In terms of the DC lexis in the Ordering sub-category, there was a greater variety of DC lexis used by the NNSs, and the frequency use was different, too.

#### **4.2.7 The frequency of DC usage from the Continuatives category by the NSs, NNSHs and NNSLs**

Of all five categories, the Continuatives category had the smallest number of DC lexis. From the framework, it can be seen that there were 7 DC lexis in this category, but only 5 DC lexis were used. Table 4.11 presents details of the DC lexis that were used and their frequency of use by all three sample groups.

Table4. 11: The usage frequency of each DC lexis from the Continuatives category by the NSs, NNSHs and NNSLs

Main Category	Sub Category	Lexis	NS		HIGH		LOW	
			Token	%	Token	%	Token	%
Continuatives	Transitions	1 now	17	77.27	7	63.64	8	80.00
		2 of course	4	18.18	1	9.09	1	10.00
		3 surely	0	0.00	1	9.09	1	10.00
		4 well	1	4.55	0	0.00	0	0.00
		5 anyway	0	0.00	2	18.18	0	0.00
	<u>Subtotal</u>		<u>22</u>	<u>100.00</u>	<u>11</u>	<u>100.00</u>	<u>10</u>	<u>100.00</u>
	<b>TOTAL</b>		<b>22</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>100</b>

As can be seen from Table 4.11, Transitions was the only sub-category in the Continuatives main category, and 3 DCs out of 5 were used by NSs and NNSLs, whereas 4 DCs out of 5 were used by NNSHs. The DC with the highest usage among all three groups was “now”.

The patterns of DC usage by the NSs, NNSHs, and NNSLs in terms of the DC lexis or types applied and the frequency of use or tokens are reported in this section. For the Additive category, there was not much difference in the number of DC lexis or in the frequency of use, except in the use of “and” and “moreover”. They were used by all three sample groups, but their frequency of use was different. For the Adversative category, there was a clear difference in word choice from the Concession sub-category. The NNSs used the less common DC lexis, i.e., “nonetheless” and “nevertheless”, while the NSs tended to prefer “however” from this sub-category. For the Causal category, the interesting point was the use of “so” and “therefore” because they generally had the same meaning, but different patterns of use were observed between the NSs and the NNSs. For the Temporal category, both the DC lexis and the frequency of use showed significant differences between the NSs and the NNSs. For

the Continuatives category, no significant differences were observed in either the DC lexis or the frequency of use.

From the findings above, it could be concluded that the patterns of DC usage in terms of the frequency of use of the DC lexis were different between the NSs and NNSs. However, the NNSHs and NNSLs tended to use DCs lexis in the similar way.

### **4.3 Orthographic aspect of the use of DCs**

The Orthographic aspect of the use of DCs in this study was concerned with the rules of transferring speech into writing, such as through the use of capitalization, spelling and punctuation as related to the rules of accepted usage. This study divided the analysis of orthography into two parts: spelling and punctuation. The guidelines for punctuation usage were taken from the Purdue Online Writing Lab (POWL) (2013), Quirk *et al.* (1985) and Hacker and Sommers (2011). This section started by reporting the findings in the use of punctuation by the NSs, NNSHs and NNSLs, and then aimed to identify from these findings the patterns of punctuation usage and errors.

#### **4.3.1 The NSs, NNSHs and NNSLs**

Table 4.12 presents the Orthographic aspect of DC usage among the three sample groups. For spelling, both the NNS groups had spelling errors at a rate of 0.68% by the NNSHs and 1.30% by the NNSLs, whereas there was a lack of spelling errors among the NSs. In terms of the punctuation used, it was found that the NSs had the highest percentage of correct usage (72.65%) followed by the NNSLs (67.84%) and the NNSHs with (64.10%). Some degree of incorrect use of punctuation was found in all three of the sample groups. The NNSHs had the highest percentage of incorrect usage (35.90%) followed by the NNSLs (32.16%) and the NSs (27.35%).



Table4. 12: The Orthographic aspect of DC usage by the NSs, NNSHs and NNSLs

Sample	Total DCs in 20 essays	Spelling						Punctuation					
		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
NSs	260	260	100.00	260	100.00	0	0.00	117	100.00	85	72.65	32	27.35
NNSHs	295	295	100.00	293	99.32	2	0.68	156	100.00	100	64.10	56	35.90
NNSLs	310	310	100.00	306	98.70	4	1.30	171	100.00	116	67.84	55	32.16

Table 4.12 presents only the overall detail of the Orthographic aspect of DC usage by all three of the sample groups. A more detailed explanation of the DC usage of each sample group can be found in sections 4.3.2 – 4.3.4.

### 4.3.2 The NSs

The NSs used 38 DCs with a total count of 260 tokens. Table 4.13 reveals the ratios of correct and incorrect use in terms of spelling and punctuations.

Table4. 13: The Orthographic aspect of DC usage by the NSs

Sample	Total DCs in 20 essays	Spelling						Punctuation					
		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
NSs	260	260	100.00	260	100.00	0	0.00	117	100.00	85	72.65	32	27.35

As shown in Table 4.13, the total number of DCs applied in the 20 essays was 260 tokens, with all tokens written correctly. For the second aspect, it was found that the total punctuation usage was 117 tokens. The correct usage was recorded in 85 tokens, or 72.65%, whereas the incorrect use of punctuation was found in 32 tokens, or 27.35%. The details of the punctuation usage for each DC is shown in Table 4.14.

Table 4. 14: The details of punctuation used by the NSs

No.	DC Lexis	Punctuation	Total usage		Correct		Incorrect	
			Token	%	Token	%	Token	%
1	Also	,	4	3.42	2	1.71	2	1.71
2	And	,	38	32.48	24	20.51	14	11.97
3	As well	,	1	0.85	1	0.85	0	0.00
4	Furthermore	,	1	0.85	0	0.00	1	0.85
5	In addition	,	1	0.85	1	0.85	0	0.00
6	Moreover	,	1	0.85	0	0.00	1	0.85
7	Or	,	1	0.85	1	0.85	0	0.00
8	E.g.	,	1	0.85	1	0.85	0	0.00
9	For example	,	6	5.13	4	3.42	2	1.71
10	For instance	,	3	2.56	2	1.71	1	0.85
11	But	,	13	11.11	11	9.40	2	1.71
12	Instead	,	2	1.71	2	1.71	0	0.00
13	On the contrary	,	1	0.85	1	0.85	0	0.00
14	On the other hand	,	1	0.85	1	0.85	0	0.00
15	Even though	,	1	0.85	1	0.85	0	0.00
16	However	,/;	16	13.68	13	11.11	3	2.56
17	Though	,	5	4.27	5	4.27	0	0.00
18	Hence	,	1	0.85	1	0.85	0	0.00
19	So	,	4	3.42	2	1.71	2	1.71
20	Therefore	,	5	4.27	3	2.56	2	1.71
21	Finally	,	1	0.85	1	0.85	0	0.00
22	Firstly	,	1	0.85	1	0.85	0	0.00
23	Lastly	,	1	0.85	1	0.85	0	0.00
24	Secondly	,	1	0.85	1	0.85	0	0.00
25	All in all	,	1	0.85	1	0.85	0	0.00
26	In short	,	2	1.71	2	1.71	0	0.00
27	Of course	,	3	2.56	1	0.85	2	1.71
28	Well	,	1	0.85	1	0.85	0	0.00
		TOTAL	117	100.00	85	72.65	32	27.35

Referring to Table 4.14, the punctuation items which were used in this sample data were comma (,) and semicolon (;). There were 28 DC lexis which the NSs used together with commas and semicolons. The semicolon was used once together with the DC, “however”. The finding that even the native speakers of English used punctuation incorrectly at an error rate of 27.35% was quite unexpected. It could be seen that punctuation used with “and” the most problematic in this sample group. The use of “and” accounted for 32.48% of total DC usage by this group and the ratio of occurrences with incorrect punctuation was 11.97%. It is also noteworthy that “furthermore” and “moreover” were the only 2 DCs found to be used incorrectly in all cases, each accounting for 0.85% of the total incorrect usage.

### 4.3.3 The NNSHs

The NNSHs used 46 DCs with a total count of 295 tokens. Table 4.15 presents the use of DCs by this group in the Orthographic aspect.

Table 4. 15: The Orthographic aspect of DC usage by the NNSHs

Sample	Total DCs in 20 essays	Spelling						Punctuation					
		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
NNSHs	295	295	100.00	293	99.32	2	0.68	156	100.00	100	64.10	56	35.90

As shown in Table 4.15, the total DC usage in the 20 essays by the NNSH group totaled 295 tokens, with only 2 tokens, or 0.68%, written incorrectly. The two DCs which were found to have incorrect spelling were “besides” (written as: “beside”) and “even though” (written as: “eventhough”). For the second aspect, it was found that the total punctuation usage was 156 tokens. The correct usage was counted in 100 tokens, or 64.10%, whereas incorrect punctuation usage was found in 56 tokens, or 35.90%. The details of the punctuation usage with each DC is shown in Table 4.16.

Table 4. 16: The details of punctuation used by the NNSHs

No.	DC Lexis	Punctuation	Total usage		Correct		Incorrect	
			Token	%	Token	%	Token	%
1	Also	,	1	0.64	1	0.64	0	0.00
2	And	,	22	14.10	1	0.64	21	13.46
5	Furthermore	,	1	0.64	1	0.64	0	0.00
6	In addition	,	2	1.28	1	0.64	1	0.64
7	Meanwhile	,	1	0.64	0	0.00	1	0.64
8	Moreover	,	7	4.49	6	3.85	1	0.64
9	Or	,	4	2.56	2	1.28	2	1.28
10	For example	,	6	3.85	5	3.21	1	0.64
11	Such as	,	1	0.64	0	0.00	1	0.64
12	To illustrate	,	1	0.64	1	0.64	0	0.00
13	Specifically	,	2	1.28	2	1.28	0	0.00
14	But	,	16	10.26	7	4.49	9	5.77
15	Conversely	,	1	0.64	1	0.64	0	0.00
16	On the contrary	,	2	1.28	2	1.28	0	0.00
17	On the other hand	,	3	1.92	3	1.92	0	0.00
18	Although	,	4	2.56	1	0.64	3	1.92
19	Even though	,	2	1.28	1	0.64	1	0.64
20	However	, / ;	11	7.05	11	7.05	0	0.00
21	Nonetheless	,	1	0.64	1	0.64	0	0.00
22	Because	,	1	0.64	0	0.00	1	0.64
23	Due to	,	1	0.64	1	0.64	0	0.00
24	So	,	24	15.38	13	8.33	11	7.05
25	Therefore	,	6	3.85	4	2.56	2	1.28
26	Thus	,	2	1.28	2	1.28	0	0.00
27	At last	,	1	0.64	1	0.64	0	0.00
28	Finally	,	2	1.28	2	1.28	0	0.00
29	First	,	1	0.64	1	0.64	0	0.00
30	First of all	,	3	1.92	3	1.92	0	0.00
31	Firstly	,	5	3.21	5	3.21	0	0.00
32	Last but not least	,	2	1.28	2	1.28	0	0.00
33	Lastly	,	1	0.64	1	0.64	0	0.00
34	Second	,	2	1.28	2	1.28	0	0.00
35	Secondly	,	5	3.21	5	3.21	0	0.00
36	To begin with	,	1	0.64	1	0.64	0	0.00
37	In conclusion	,	4	2.56	3	1.92	1	0.64
38	In summary	,	1	0.64	1	0.64	0	0.00
39	To conclude	,	2	1.28	2	1.28	0	0.00
40	To sum up	,	2	1.28	2	1.28	0	0.00
41	Anyway	,	2	1.28	2	1.28	0	0.00
		TOTAL	156	100.00	100	64.1026	56	35.90

Referring to Table 4.16, the punctuation found in this sample data was limited to only the comma (.). There were 41 DCs which the NNSHs used together with commas. The punctuation which was used with “and” was the most problematic in the sample group. The use of “and” accounted for 14.10% of total DC usage by this group and the ratio of occurrences with incorrect punctuation usage was 13.46%. Three DCs – “meanwhile”, “such as” and “because” – were found to be used only incorrectly in terms of punctuation, each accounting for 0.64% of the total incorrect usage. The use

of punctuation with “so” proved to have the highest ratio of correct usage with a percentage of 8.33%; however, the percentage of incorrect use was only slightly lower with a ratio of 7.05%.

#### 4.3.4 The NNSLs

The NNSLs used 41 DCs with a total count of 310 tokens. Table 4.17 presents the Orthographic aspect of DC usage by this group.

Table 4.17: The Orthographic aspect of DC usage by the NNSLs

Sample	Total DCs in 20 essays	Spelling						Punctuation					
		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
NNSLs	310	310	100.00	306	98.70	4	1.30	171	100.00	116	67.84	55	32.16

As shown in Table 4.17, the total DC usage in the 20 essays by the NNSL group was 310 tokens, with only four DCs written incorrectly. The four DCs written with incorrect spelling were “on the other hand” (written as: “in the other hands” and “in the other hand”), “although” (written as: “althought”) and “in conclusion” (written as: “conclusion”). For the second aspect, we found that the total punctuation usage was 171 tokens. The correct usage was found in 116 tokens, or 67.84%, whereas the incorrect punctuation was found in 55 tokens, or 32.16%. The details of the punctuation usage with each DC is shown in Table 4.18.

Table 4. 18: The details of punctuation used by the NNSLs

No.	DC Lexis	Punctuation	Total usage		Correct		Incorrect	
			Token	%	Token	%	Token	%
1	And	,	15	8.77	1	0.58	14	8.19
2	Besides	,	1	0.58	1	0.58	0	0.00
3	Furthermore	,	2	1.17	2	1.17	0	0.00
4	In addition	,	4	2.34	4	2.34	0	0.00
5	Moreover	,	11	6.43	11	6.43	0	0.00
6	Or	,	1	0.58	1	0.58	0	0.00
7	For example	,	16	9.36	12	7.02	4	2.34
8	Such as	,	19	11.11	2	1.17	17	9.94
9	That is to say	,	1	0.58	1	0.58	0	0.00
10	But	,	11	6.43	4	2.34	7	4.09
11	In contrast	,	3	1.75	3	1.75	0	0.00
12	On the contrary	,	1	0.58	1	0.58	0	0.00
13	On the other hand	,	3	1.75	3	1.75	0	0.00
14	Although	,	7	4.09	4	2.34	3	1.75
15	Even though	,	1	0.58	0	0.00	1	0.58
16	However	, / ;	15	8.77	15	8.77	0	0.00
17	Nevertheless	,	1	0.58	1	0.58	0	0.00
18	Though	,	1	0.58	1	0.58	0	0.00
19	Because	,	1	0.58	0	0.00	1	0.58
20	Due to	,	1	0.58	1	0.58	0	0.00
21	So	,	16	9.36	10	5.85	6	3.51
22	Then	,	1	0.58	1	0.58	0	0.00
23	Therefore	,	3	1.75	3	1.75	0	0.00
24	Finally	,	3	1.75	3	1.75	0	0.00
25	First	,	9	5.26	9	5.26	0	0.00
26	First of all	,	1	0.58	1	0.58	0	0.00
27	Lastly	,	1	0.58	1	0.58	0	0.00
28	Next	,	1	0.58	1	0.58	0	0.00
29	Second	,	3	1.75	3	1.75	0	0.00
30	Third	,	2	1.17	2	1.17	0	0.00
31	In conclusion	,	7	4.09	6	3.51	1	0.58
32	In sum	,	1	0.58	1	0.58	0	0.00
33	To sum up	,	6	3.51	6	3.51	0	0.00
34	Now	,	1	0.58	0	0.00	1	0.58
35	Of course	,	1	0.58	1	0.58	0	0.00
		TOTAL	171	100.00	116	67.84	55	32.16

Referring to Table 4.18, the punctuation items which were used in this sample data were comma (,) and semicolon (;). There were 35 DCs which the NNSLs used together with commas and semicolons. The semicolon was used only once in conjunction with the DC, “however”. Interestingly, the NNSLs used the semicolon with “however” in the same way as the native speakers of English do. It could be seen that the punctuation used with “such as” and “and” were the most problematic in this sample group, with error rates of 9.94% and 8.19%, respectively. The two DC used most

frequently with the correct punctuation were “for example” and “however” with accuracy ratios of 7.02% and 8.77%, respectively. Three DCs were found to be used only incorrectly in terms of punctuation. The DCs used incorrectly in every case were “even though”, “because” and “now”, each accounting for 0.58% of the total incorrect usage.

The patterns of DC usage among the NSs, NNSHs, and NNSLs in terms of Orthographic aspects were reported in this section. For the NSs, there were no errors in terms of spelling, but some in the use of punctuation. It was found that even native speakers of English made errors in the use of punctuation, particularly in the use of commas. Gowers *et al.* (1987, p. 155) stated that “the use of commas cannot be learned by rule”. This observation was supported with the idea of light and heavy punctuation styles (Huddleston & Pullum, 2002). The NSs learnt their native language primarily from a communicative context. This may imply that punctuation was not used in such a communicative context, i.e., spoken language. This would explain why errors were made in the use of punctuation by the NSs. For the NNSHs, only 2 DCs were found to contain misspelling. However, it was shown that the NNSHs made the most errors in the use of punctuation. For the NNSLs, misspelling was found in 4 DCs, and there was also a high proportion of errors in the use of punctuation, too. For the NNSs, they had to learn how to use punctuation through grammar books, and the problem was that “Not only does conventional practice vary from period to period, but good writers of the same period differ among themselves” (Gowers et al., 1987, p. 155).

From the findings above, it can be said that the problems in punctuation use by the NSs could be attributed to styles and a lack of awareness. However, the problems which were found in the NNSs could be from overgeneralization and confusion regarding correct punctuation usage.

## 4.4 Syntax

Sentence types and sentential positions were the two aspects included in the Syntax analysis. The overall usage of sentence types by the three sample groups is presented first, followed by the specific usage of the NSs, NNSHs and NNSLs. Then sentential positions are reported, first with regard to all of the sample groups together, and then separately by the NSs, NNSHs, and NNSLs. The details of each DC are also described.

### 4.4.1 Sentence Types

The sentence types were divided into three types: Simple (S), Compound (CP), and Complex (CX). The following sections present the overall frequency of DC usage in all three groups, followed by specific details for the NSs, NNSHs, and NNSLs.

#### 4.4.1.1 NSs, NNSHs and NNSLs

Table 4.19 shows the differences among the three groups. Interestingly, similar patterns were found in the use by the NSs and the NNSHs, which were different from those of the NNSLs.

Table4. 19: The usage frequency of sentence types among the three sample groups

Samples	Number of sentences	Number of Sentence Types					
		S.		CP.		CX.	
		No.	%	No.	%	No.	%
NSs	258	67	25.97	166	64.34	25	9.69
NNSHs	280	104	37.14	148	52.86	28	10.00
NNSLs	298	135	45.30	100	33.56	63	21.14

In terms of sentence types, the patterns of usage were similar for both the NS group and the NNSH group, with Compound sentences most frequently used (NSs: 64.34%; NNSHs: 52.86%), followed by Simple sentences (NSs: 25.97%, NNSHs: 37.14%) and Complex sentences (NSs: 9.69%, NNSHs: 10.00%). For the NNSL group, the use of Simple sentences was the most prevalent (45.30%), followed by Compound sentences (33.56%) and Complex sentences (21.14%).



The percentages in Table 4.19 al any obvious similarities or differences among the three sample groups. Therefore, an inferential statistic, a One-way ANOVA, was used to in order compare usage of the three sentence types in the three sample groups for statistical significance. The findings in Table 4.20 supported the findings from the descriptive statistic in Table 4.19.

Table4. 20: The ANOVA results (sentence types)

		df	MS	F	p
S	Between Groups	2	71.017	7.747	.001
	Within Groups	57	9.168		
	Total	59			
CP	Between Groups	2	47.017	3.432	.039
	Within Groups	57	13.701		
	Total	59			
CX	Between Groups	2	27.517	5.148	.009
	Within Groups	57	5.346		
	Total	59			

(\*  $p < 0.05$ )

The result in Table 4.20 show that, among the three sample groups, there were significant differences in the usage frequencies of all three sentence types. For Simple sentences, the F-test was 7.747, and the t-test was .001 ( $p < 0.05$ ); for Compound sentences, the F-test was 3.432, and the t-test was .039 ( $p < 0.05$ ); and for Complex sentences, the F-test was 5.148, and the t-test was .009 ( $p < 0.05$ ). Next, the Scheffe method was employed to perform a multiple comparison among the three groups as the One-way ANOVA reported only the significant differences among the groups but could not identify specific similarities or differences for particular groups (see Table 4.21).

Table 4. 21: The Scheffe results (sentence types)

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
S	1	2	-2.2	0.957	0.08	-4.61	0.21
		3	-3.750*	0.957	*.001	-6.16	-1.34
	2	1	2.2	0.957	0.08	-0.21	4.61
		3	-1.55	0.957	0.278	-3.96	0.86
	3	1	3.750*	0.957	*.001	1.34	6.16
		2	1.55	0.957	0.278	-0.86	3.96
CP	1	2	0.95	1.171	0.721	-1.99	3.89
		3	3.000*	1.171	*.045	0.06	5.94
	2	1	-0.95	1.171	0.721	-3.89	1.99
		3	2.05	1.171	0.225	-0.89	4.99
	3	1	-3.000*	1.171	*.045	-5.94	-0.06
		2	-2.05	1.171	0.225	-4.99	0.89
CX	1	2	-0.55	0.731	0.755	-2.39	1.29
		3	-2.250*	0.731	*.013	-4.09	-0.41
	2	1	0.55	0.731	0.755	-1.29	2.39
		3	-1.7	0.731	0.076	-3.54	0.14
	3	1	2.250*	0.731	*.013	0.41	4.09
		2	1.7	0.731	0.076	-0.14	3.54

Note: 1 = NSs, 2 = NNSHs, 3 = NNSLs

\*. The mean difference is significant at the 0.05 level.

According to the Scheffe result (Table 4.21), it can be seen that there was a significant difference between the NSs and the NNSLs in the use of Simple sentences. The t-test was .001 ( $p < 0.05$ ). However, there was no significant difference between the NNSHs and the NNSLs. The t-test was .278 ( $p < 0.05$ ). Similarly for Compound sentences, there was also a significant difference between the usage by the NSs and the NNSLs. The t-test was .045 ( $p < 0.05$ ). This pattern was also repeated for the Complex sentences, for which there was also a significant difference between the NSs and the NNSLs. The t-test was .013 ( $p < 0.05$ ). It could be concluded from Table 4.21 that there was no significant difference between the NSs and the NNSHs in all three sentence types, whereas there were significant differences between the NSs and the NNSLs in the use of all sentence types.

Table 4.19 to 4.21 reveal only the overall details in the usage of all three sentence types, especially the significant differences among the three sample groups. An explanation of the DCs in each sample group is reported in 4.4.1.2-4.4.1.4.

#### 4.4.1.2 NSs

Sentence types were divided into 3 types: Simple (S), Compound (CP) and Complex (CX). The total number of sentences of all types were equal to the total number of DCs which the sample groups used in their 20 essays. For the NSs, the total number of DCs was 260 tokens. It was found that the total number of sentences was 258 tokens, 2 fewer than the number of DCs. The data revealed a surprising result because the native speakers of English made 2 errors in producing their sentences. The errors are explained in a later section (4.7). As mentioned previously in Table 4.19, the most frequently used sentence types by the NSs were Compound sentences with 166 tokens (64.34%), followed by Simple sentences with 67 tokens (25.97%), and Complex sentences with 25 tokens (9.69%). In this section, Table 4.22 illustrates the overall use of different sentence types in the five main categories by the NSs.

Table4. 22: The overall use of sentence types in the five main categories by the NSs

Main category	Sub-category	Sentence Types					
		Simple		Compound		Complex	
		Token	%	Token	%	Token	%
Additive	Addition	17	25.37	114	68.67	4	16.00
	Exemplification	17	25.37	0	0.00	0	0.00
	Restatement	0	0.00	2	1.20	0	0.00
	<u>Sub total</u>	<u>34</u>	<u>50.75</u>	<u>116</u>	<u>69.88</u>	<u>4</u>	<u>16.00</u>
Adversative	Contrast	7	10.45	17	10.24	0	0.00
	Concession	2	2.99	17	10.24	6	24.00
	<u>Subtotal</u>	<u>9</u>	<u>13.43</u>	<u>34</u>	<u>20.48</u>	<u>6</u>	<u>24.00</u>
Causal	Result/inference	6	8.96	9	5.42	11	44.00
	<u>Sub total</u>	<u>6</u>	<u>8.96</u>	<u>9</u>	<u>5.42</u>	<u>11</u>	<u>44.00</u>
Temporal	Ordering	3	4.48	1	0.60	0	0.00
	Summation	2	2.99	1	0.60	0	0.00
	<u>Sub total</u>	<u>5</u>	<u>7.46</u>	<u>2</u>	<u>1.20</u>	<u>0</u>	<u>0.00</u>
Continuatives	Transitions	13	19.40	5	3.01	4	16.00
	<u>Sub total</u>	<u>13</u>	<u>19.40</u>	<u>5</u>	<u>3.01</u>	<u>4</u>	<u>16.00</u>
	<b>TOTAL</b>	<b>67</b>	<b>100.00</b>	<b>166</b>	<b>100.00</b>	<b>25</b>	<b>100.00</b>

From Table 4.22, it can be seen that more than 50% of the Simple sentences were used in the Additive category, followed by Continuatives, Adversative, Causal and Temporal in descending order. For the use of Compound sentences in each category, it is shown that the highest use was in the Additive category (69.88%), while the second highest use was in the Adversative category (20.48%), and the third highest use was in the Causal category (5.42%). For Complex sentences, the usage pattern was

quite different from the other two sentence types. The highest use was found in the Causal category (44.00%), followed by the Adversative, Additive and Continuatives categories with 24.00%, 16.00% and 16.00%, respectively.

#### **4.4.1.3 NNSHs**

For the NNSHs, the total number of DCs was calculated as 295 tokens. It was found that the total number of sentences of all types was 280 tokens, with 15 ungrammatical sentences used by this group. The errors are explained in a later section (4.7). As mentioned previously in Table 4.19, the most frequently used sentence types by the NNSHs were Compound sentences, accounting for 148 tokens (52.86%), followed by Simple sentences with 104 tokens (37.14%), and Complex sentence with 28 tokens (10.00%). In this section, Table 4.23 presents the overall use of all sentence types in the five main categories by the NNSHs.



Table4. 23: The overall use of sentence types in the five main categories by the NNSHs

Main category	Sub-category	Sentence Types					
		Simple		Compound		Complex	
		Token	%	Token	%	Token	%
Additive	Addition	30	28.85	83	56.08	0	0.00
	Exemplification	18	17.31	5	3.38	2	7.14
	Restatement	2	1.92	0	0	0	0
	<b>Sub total</b>	<b>50</b>	<b>48.08</b>	<b>88</b>	<b>59.46</b>	<b>2</b>	<b>7.14</b>
Adversative	Contrast	11	10.58	22	14.86	0	0
	Concession	10	9.62	1	0.68	2	7.14
	<b>Subtotal</b>	<b>21</b>	<b>20.19</b>	<b>23</b>	<b>15.54</b>	<b>2</b>	<b>7.14</b>
Causal	Result/inference	10	9.62	26	17.57	20	71.43
	<b>Sub total</b>	<b>10</b>	<b>9.62</b>	<b>26</b>	<b>17.57</b>	<b>20</b>	<b>71.43</b>
Temporal	Ordering	13	12.50	4	2.70	2	7.14
	Summation	3	2.88	6	4.05	0	0
	<b>Sub total</b>	<b>16</b>	<b>15.38</b>	<b>10</b>	<b>6.76</b>	<b>2</b>	<b>7.14</b>
Continuatives	Transitions	7	6.73	1	0.68	2	7.14
	<b>Sub total</b>	<b>7</b>	<b>6.73</b>	<b>1</b>	<b>0.68</b>	<b>2</b>	<b>7.14</b>
	<b>TOTAL</b>	<b>104</b>	<b>100.00</b>	<b>148</b>	<b>100.00</b>	<b>28</b>	<b>100.00</b>

Table 4.23 shows that 48.08% of Simple sentence use was in the Additive category, followed by Adversative, Temporal, Causal, and Continuatives in descending order. For the use of Compound sentence in each category, it can be seen that the highest use was in the Additive category (59.46%), while the second highest use was in the Causal category (17.57%), and the third highest use was in the Adversative category (15.54%). For Complex sentences, the usage pattern was quite different from the other two sentence types. DCs were used the most in the Causal category (71.43%), followed by Additive, Adversative, Temporal and Continuatives, each with the same proportion of 7.14%.

#### 4.4.1.4 NNSLs

For the NNSLs, the total number of DCs used was 310 tokens. It was found that the total number of sentences of all types was 298 tokens, with 12 ungrammatical sentences used by this group. The errors are explained in Section 4.7. As mentioned previously in Table 4.19, the most frequently used sentence types by the NNSLs were Simple sentences, accounting for 135 tokens (45.30%), followed by Compound sentences with 100 tokens (33.56%), and Complex sentence with 63 tokens (21.14%).

In this section, Table 4.24 presents the overall use of all sentence types in the five main categories by the NNSLs.

Table4. 24: The overall use of sentence types in the five main categories by the NNSLs

Main category	Sub-category	Sentence Types					
		Simple		Compound		Complex	
		Token	%	Token	%	Token	%
Additive	Addition	37	27.41	59	59.00	8	12.70
	Exemplification	23	17.04	6	6.00	6	9.52
	Restatement	3	2.22	0	0	0	0
	<b>Sub total</b>	<b>63</b>	<b>46.67</b>	<b>65</b>	<b>65.00</b>	<b>14</b>	<b>22.22</b>
Adversative	Contrast	9	6.67	18	18.00	5	7.94
	Concession	10	7.41	4	4.00	10	15.87
	<b>Subtotal</b>	<b>19</b>	<b>14.07</b>	<b>22</b>	<b>22.00</b>	<b>15</b>	<b>23.81</b>
Causal	Result/inference	15	11.11	9	9.00	31	49.21
	<b>Sub total</b>	<b>15</b>	<b>11.11</b>	<b>9</b>	<b>9.00</b>	<b>31</b>	<b>49.21</b>
Temporal	Ordering	18	13.33	2	2.00	1	1.59
	Summation	12	8.89	1	1.00	1	1.59
	<b>Sub total</b>	<b>30</b>	<b>22.22</b>	<b>3</b>	<b>3.00</b>	<b>2</b>	<b>3.17</b>
Continuatives	Transitions	8	5.93	1	1.00	1	1.59
	<b>Sub total</b>	<b>8</b>	<b>5.93</b>	<b>1</b>	<b>1.00</b>	<b>1</b>	<b>1.59</b>
	<b>TOTAL</b>	<b>135</b>	<b>100.00</b>	<b>100</b>	<b>100.00</b>	<b>63</b>	<b>100.00</b>

Table 4.24 shows that 46.67% of the Simple sentences produced by this group were used in the Additive category, followed by lesser ratios in the Temporal, Adversative, Causal, and Continuatives categories in descending order. For the use of Compound sentences in each category, it can be seen that the highest use was in the Additive category (65.00%), while the second highest use was in the Adversative category (22.00%), and the third highest use was in the Causal category (9.00%). For Complex sentences, the usage pattern was quite different compared to the other 2 sentence types. The highest use was in the Causal category (49.21%), followed by the Adversative category (23.81%), the Additive category (22.22%), the Temporal category (3.17%) and the Continuatives category (1.59%).

The patterns of DC usage by the NSs, NNSHs, and NNSLs in terms of sentence types were presented in sections 4.4.1.2-4.4.1.4. For the NSs and NNSHs, they tended to exhibit similar patterns of usage as their essays were comprised of the same kind of sentence types. That is, both groups used Compound sentences the most, followed by Simple sentences and Complex sentences, whereas the most frequently used sentence types by the NNSLs were Simple sentences, followed by Compound sentences and

Complex sentences. From an inferential statistic, it was found that the NSs and the NNSLs had significant differences in their use of all three sentence types. However, no significant differences were noted between the NNSHs and the NNSLs.

#### 4.4.2 Sentential positions

The sentential positions of the DCs were divided into three types: Initial (IN), Medial (ME) and Final (FI) positions. The following details consist of the overall frequency of DC usage by all three groups, followed by specific details for the NSs, NNSHs, and NNSLs separately.

##### 4.4.2.1 NSs, NNSHs, NNSLs

Table 4.25 shows the differences among the 3 groups. Interestingly, the NSs and the NNSHs had the same patterns which were different from the NNSLs.

Table 4.25: The usage frequency of sentential positions among the three sample groups

Samples	Number of sentences	Number of Sentence Types					
		IN		ME		FI	
		No.	%	No.	%	No.	%
NSs	258	60	23.26	194	75.19	4	1.55
NNSHs	280	97	34.64	175	62.50	8	2.86
NNSLs	298	153	51.34	139	46.64	6	2.01

From the percentage usage, the number of Medial positions was the highest in both the NSs (75.19%) and the NNSHs (62.50%), followed by Initial positions (NSs: 23.26%; NNSHs: 34.64%) and Final positions (NSs: 1.55%; NNSHs: 2.86%). On the other hand, the number of Initial positions was the highest among the NNSLs (51.34%), followed by Medial positions (46.64%) and Final positions (2.01%).

The percentages in Table 4.25 do not clearly show the similarities or differences among the three sample groups. Therefore, an inferential statistic, a One-way ANOVA, was used to compare the three sentential positions in the three sample groups for statistical significance. The findings, presented in Table 4.26, support the finding from the descriptive statistics in Table 4.25.

Table 4. 26: The ANOVA results (sentential positions)

		df	MS	F	p
IN	Between Groups	2	84.117	8.52	*.001
	Within Groups	57	9.873		
	Total	59			
ME	Between Groups	2	23.217	1.949	0.152
	Within Groups	57	11.911		
	Total	59			
FI	Between Groups	2	1.85	3	0.058
	Within Groups	57	0.617		
	Total	59			

(\* $p < 0.05$ )

The result in Table 4.26 show that, among the three groups, there were significant differences only in the initial position between the groups. For the initial position, the F-test was 8.520, and the t-test was \*.001 ( $p < 0.05$ ). Next, the Scheffe method was employed to perform a multiple comparison among the three groups as the One-way ANOVA reported only the significant differences among the groups, but it could not identify which groups were similar or different (see Table 4.27).



Table 4. 27: The Scheffe results (sentential position)

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
IN	1	2	-1.95	0.994	0.155	-4.45	0.55
		3	-4.100*	0.994	*.001	-6.6	-1.6
	2	1	1.95	0.994	0.155	-0.55	4.45
		3	-2.15	0.994	0.105	-4.65	0.35
	3	1	4.100*	0.994	*.001	1.6	6.6
		2	2.15	0.994	0.105	-0.35	4.65
ME	1	2	0.95	1.091	0.686	-1.79	3.69
		3	2.15	1.091	0.153	-0.59	4.89
	2	1	-0.95	1.091	0.686	-3.69	1.79
		3	1.2	1.091	0.55	-1.54	3.94
	3	1	-2.15	1.091	0.153	-4.89	0.59
		2	-1.2	1.091	0.55	-3.94	1.54
FI	1	2	-0.55	0.248	0.095	-1.17	0.07
		3	-0.5	0.248	0.141	-1.12	0.12
	2	1	0.55	0.248	0.095	-0.07	1.17
		3	0.05	0.248	0.98	-0.57	0.67
	3	1	0.5	0.248	0.141	-0.12	1.12
		2	-0.05	0.248	0.98	-0.67	0.57

Note: 1= NSs, 2 = NNSHs, 3= NNSLs

\* The mean difference is significant at the 0.05 level.

According to the Scheffe result (Table 4.27), it can be seen that in the Initial position, there was a significant difference between the NSs and the NNSLs. The t-test result was .001 ( $p < 0.05$ ). On the other hand, there was no significant difference between the NNSHs and the NNSLs. The t-test result was .105 ( $p < 0.05$ ). It could be concluded from Table 4.27 that there was no significant difference between the NSs and the NNSHs in the Initial position, whereas there was a significant difference between the NSs and the NNSLs.

Tables 4.25 to 4.27 present only the overall details for all three sentential positions, especially the significant differences among three sample groups. An explanation of the DCs in each sample group is reported in 4.4.2.2-4.4.2.4.

#### 4.4.2.2 NSs

For the NSs, the total number of DCs was 260 tokens, but it was found that the total number of sentential positions was 258 tokens, and there were 2 ungrammatical sentences which cannot be grouped in any sentential positions. The errors are explained in Section 4.7. Table 4.28 presents the overall sentential position results. As mentioned

previously in Table 4.25, the most frequently used sentential positions by the NSs are the Medial position with 194 tokens (75.20%), followed by the Initial position with 60 tokens (23.25%), and the Final position with 4 tokens (1.55%). In this section, Table 4.28 presents the overall sentential positions in the five main categories of the NSs.

Table 4. 28: The overall sentential positions in the five main categories by the NSs

Main category	Sub-category	Sentential Positions					
		Initial		Medial		Final	
		Token	%	Token	%	Token	%
Additive	Addition	10	16.67	122	62.89	3	75.00
	Exemplification	5	8.33	12	6.19	0	0.00
	Restatement	0	0.00	2	1.03	0	0.00
	<b>Sub total</b>	<b>15</b>	<b>25.00</b>	<b>136</b>	<b>70.10</b>	<b>3</b>	<b>75.00</b>
Adversative	Contrast	7	11.67	17	8.76	0	0.00
	Concession	15	25.00	10	5.15	0	0.00
	<b>Subtotal</b>	<b>22</b>	<b>36.67</b>	<b>27</b>	<b>13.92</b>	<b>0</b>	<b>0.00</b>
Casual	Result/inference	6	10.00	20	10.31	0	0.00
	<b>Sub total</b>	<b>6</b>	<b>10.00</b>	<b>20</b>	<b>10.31</b>	<b>0</b>	<b>0.00</b>
Temporal	Ordering	4	6.67	0	0.00	0	0.00
	Summation	3	5.00	0	0.00	0	0.00
	<b>Sub total</b>	<b>7</b>	<b>11.67</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
Continuatives	Transitions	10	16.67	11	5.67	1	25.00
	<b>Sub total</b>	<b>10</b>	<b>16.67</b>	<b>11</b>	<b>5.67</b>	<b>1</b>	<b>25.00</b>
	<b>TOTAL</b>	<b>60</b>	<b>100.00</b>	<b>194</b>	<b>100.00</b>	<b>4</b>	<b>100.00</b>

The Initial position was highly used for the Adversative category (36.67%), followed by the Additive, Continuatives, Temporal and Causal categories in descending order. For the use of the Medial position in each category, it can be seen that the highest use was in the Additive category (70.10%), while the second highest use was in the Adversative category (13.92%), and the third highest use was in the Causal category (10.31%). For the Final position, it can be seen that only two main categories – Additive and Continuatives – were used. Of these, the highest use was in the Additive category (75.00%), followed by the Continuatives category (25.00%).

#### 4.4.2.3 NNSHs

For the NNSHs, the total number of DCs was 295 tokens, but only 280 tokens were found in sentential positions because the remaining 15 sentences could not be grouped in any sentential positions as they were ungrammatical sentences. The errors are explained in Section 4.7. As mentioned previously in Table 4.25, the most commonly used sentential positions among the NNSHs were the Medial position with 175 tokens (62.50%), followed by the Initial position with 97 tokens (34.64%), and the Final position with 8 tokens (2.86%). In this section, Table 4.29 presents the overall sentential positions used by the NNSHs in the five main categories.

Table 4.29: The overall sentential positions in the five main categories by the NNSHs

Main category	Sub-category	Sentential Positions					
		Initial		Medial		Final	
		Token	%	Token	%	Token	%
Additive	Addition	16	16.49	90	51.43	7	87.50
	Exemplification	4	4.12	21	12.00	0	0.00
	Restatement	2	2.06	0	0.00	0	0.00
	<b>Sub total</b>	<b>22</b>	<b>22.68</b>	<b>111</b>	<b>63.43</b>	<b>7</b>	<b>87.50</b>
Adversative	Contrast	11	11.34	22	12.57	0	0.00
	Concession	13	13.40	0	0.00	0	0.00
	<b>Subtotal</b>	<b>24</b>	<b>24.74</b>	<b>22</b>	<b>12.57</b>	<b>0</b>	<b>0.00</b>
Causal	Result/inference	16	16.49	40	22.86	0	0.00
	<b>Sub total</b>	<b>16</b>	<b>16.49</b>	<b>40</b>	<b>22.86</b>	<b>0</b>	<b>0.00</b>
Temporal	Ordering	19	19.59	0	0.00	0	0.00
	Summation	9	9.28	0	0.00	0	0.00
	<b>Sub total</b>	<b>28</b>	<b>28.87</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
Continuatives	Transitions	7	7.22	2	1.14	1	12.50
	<b>Sub total</b>	<b>7</b>	<b>7.22</b>	<b>2</b>	<b>1.14</b>	<b>1</b>	<b>12.50</b>
	<b>TOTAL</b>	<b>97</b>	<b>100.00</b>	<b>175</b>	<b>100.00</b>	<b>8</b>	<b>100.00</b>

The Initial position was highly used in the Temporal category (28.87%), followed by the Adversative, Additive, Causal and Continuatives categories in descending order. For the use of the Medial position, it was found that the highest use was in the Additive category (63.43%), while the second highest use was in the Causal category (22.86%), and the third highest use was in the Adversative category (12.57%). For Final position usage, it can be seen that this position was used with only two main categories: Additive and Continuatives. Of these, the most frequent use was in the Additive category with 87.50%, followed by the Continuatives category with 12.50%.

#### 4.4.2.4 NNSLs

For the NNSLs, the total number of DCs was 310 tokens, but only 298 tokens were found in sentential positions as the remaining 12 sentences were ungrammatical sentences. The errors are explained in a later section (4.7). As mentioned previously in Table 4.25, the most commonly used sentential positions by the NNSL group were the Initial position with 153 tokens (51.34%), followed by the Medial position with 139 tokens (46.64%), and the Final position with 6 tokens (2.01%). In this section, Table 4.30 presents the overall sentential positions used by the NNSL group in the five main categories.

Table 4.30: The overall sentential positions in the five main categories by the NNSLs

Main category	Sub-category	Sentential Positions					
		Initial		Medial		Final	
		Token	%	Token	%	Token	%
Additive	Addition	40	26.14	61	43.88	3	50.00
	Exemplification	12	7.84	23	16.55	0	0.00
	Restatement	3	1.96	0	0.00	0	0.00
	<b>Sub total</b>	<b>55</b>	<b>35.95</b>	<b>84</b>	<b>60.43</b>	<b>3</b>	<b>50.00</b>
Adversative	Contrast	18	11.76	13	9.35	1	16.67
	Concession	21	13.73	3	2.16	0	0.00
	<b>Subtotal</b>	<b>39</b>	<b>25.49</b>	<b>16</b>	<b>11.51</b>	<b>1</b>	<b>16.67</b>
Causal	Result/inference	21	13.73	34	24.46	0	0.00
	<b>Sub total</b>	<b>21</b>	<b>13.73</b>	<b>34</b>	<b>24.46</b>	<b>0</b>	<b>0.00</b>
Temporal	Ordering	20	13.07	1	0.72	0	0.00
	Summation	14	9.15	0	0.00	0	0.00
	<b>Sub total</b>	<b>34</b>	<b>22.22</b>	<b>1</b>	<b>0.72</b>	<b>0</b>	<b>0.00</b>
Continuatives	Transitions	4	2.61	4	2.88	2	33.33
	<b>Sub total</b>	<b>4</b>	<b>2.61</b>	<b>4</b>	<b>2.88</b>	<b>2</b>	<b>33.33</b>
	<b>TOTAL</b>	<b>153</b>	<b>100.00</b>	<b>139</b>	<b>100.00</b>	<b>6</b>	<b>100.00</b>

The Initial position was most highly used in the Additive category (35.95%), followed by the Adversative, Temporal, Causal, and Continuatives categories in descending order. For the use of the Medial position with each category, it can be seen that the highest use was in the Additive category (60.43%), while the second highest use was in the Causal category (24.46%), and the third highest use was in the Adversative category (11.51%). For Final position usage, it can be seen that only three main categories were used: Additive, Adversative and Continuatives. Of these, the highest use was in the Additive category, accounting for 50.00% of all usage, followed by the Continuatives category with 33.33% and the Adversative category with 16.67%.

### **4.4.3 The use of each DC by sentence type and sentential position**

This section explains the use of each DC by sentence type and sentential position in each category. It starts by analyzing the use by the NSs, followed by the NNSHs and finally the NNSLs

#### **4.4.3.1 NSs**

The following tables (4.31 to 4.35) provide more detail of DC usage in each category by giving the number of tokens for each DC, and also the percentage in each category. The explanations and tables are applied first in relation to the Additive category, followed by Adversative, Causal, Temporal and Continuatives categories.

##### **4.4.3.1.1 Additive category**

It can be seen from Table 4.31 that for Simple sentences, the Medial position was used the most with 22 tokens (64.71%), followed by the Initial position with 12 tokens (35.29%). There was no use of DCs in the Final position in Simple sentences. For the initial position, “also” was used in this position the most, accounting for 11.76% of total usage, while the second and third highest DC usage were “for example” with 8.82% and “besides” and “for instance” with 5.88% each. For the Medial position, the results show that the 3 highest DCs used in this position were “also” with 29.41%, “such as” with 20.59%, and “for example” with 8.82%.

For Compound sentence usage, the Medial position was used the most with 110 tokens (94.83%), followed by the Initial and Final position with 3 tokens (2.59%) each. For the Initial position, “also” and “as well” were used in this position at rates of 1.72% and 0.86% respectively. For the Medial position, the results show that the three most frequently used DCs in this position were “and” with 81.03%, “or” with 6.90%, and “also” with 3.45%. For the Final position, “as well” was the only DC used in the position with 2.59%. For Complex sentences, it has been found that only “also” was used and that it was used in the Medial position. These findings are presented in more detail in Table 4.31.

Table4. 31: Sentence types and sentential positions of each DC in the Additive category (NSs)

Main category	Sub-category	DCLexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Additive	Addition	1 also	4	11.76	10	29.41	0	0.00	2	1.72	4	3.45	0	0.00	0	0.00	4	100	0	0.00
		2 and	0	0.00	0	0.00	0	0.00	0	0.00	94	81.03	0	0.00	0	0.00	0	0	0	0.00
		3 as well	0	0.00	0	0.00	0	0.00	1	0.86	0	0.00	3	2.59	0	0.00	0	0	0	0.00
		4 besides	2	5.88	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		5 furthermore	0	0.00	0	0.00	0	0.00	0	0.00	1	0.86	0	0.00	0	0.00	0	0	0	0.00
		6 in addition	1	2.94	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		7 moreover	0	0.00	0	0.00	0	0.00	0	0.00	1	0.86	0	0.00	0	0.00	0	0	0	0.00
		8 or	0	0.00	0	0.00	0	0.00	0	0.00	8	6.90	0	0.00	0	0.00	0	0	0	0.00
		<b>Sub total</b>	<b>7</b>	<b>20.59</b>	<b>10</b>	<b>29.41</b>	<b>0</b>	<b>0.00</b>	<b>3</b>	<b>2.59</b>	<b>108</b>	<b>93.10</b>	<b>3</b>	<b>2.59</b>	<b>0</b>	<b>0.00</b>	<b>4</b>	<b>100</b>	<b>0</b>	<b>0.00</b>
Exemplification		1 e.g.	0	0.00	1	2.94	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		2 for example	3	8.82	3	8.82	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		3 for instance	2	5.88	1	2.94	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		4 such as	0	0.00	7	20.59	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00
		<b>Sub total</b>	<b>5</b>	<b>14.71</b>	<b>12</b>	<b>35.29</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>
Restatement		1 that is	0	0.00	0	0.00	0	0.00	0	0.00	2	1.72	0	0.00	0	0.00	0	0	0	0.00
		<b>Sub total</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>1.72</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>
		<b>TOTAL</b>	<b>12</b>	<b>35.29</b>	<b>22</b>	<b>64.71</b>	<b>0</b>	<b>0.00</b>	<b>3</b>	<b>2.59</b>	<b>110</b>	<b>94.83</b>	<b>3</b>	<b>2.59</b>	<b>0</b>	<b>0.00</b>	<b>4</b>	<b>100</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.1.2 Adversative category

As can be seen in Table 4.32, for Simple sentences, only the Initial position was used with 9 tokens. For the Initial position, it was surprisingly found that “but” was used with 4 tokens. For Compound sentence usage, the Medial position was used the most with 23 tokens (67.65%), followed by the Initial position with 11 tokens (32.35%). There was no use of DCs in the Final position in Compound sentences. For the Initial position, all 11 tokens used were for only one DC, “however”, accounting for 32.35%. For the Medial position, the results show that the 3 DCs used in this position were “but” (47.06%), “however” (17.65%), and “instead” (2.94%). The results show no use of DCs in the final position. For Complex sentences, the results show that “even though” and “though” were used in the Initial position with one token each, and only “though” was used in the Medial position with 4 tokens. These findings are presented in more detail in Table 4.32.

Table4. 32: Sentence types and sentential positions of each DC in the Adversative category (NSs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence								
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final				
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%			
Adversative	Contrast	1 but	4	44.44	0	0.00	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	
		2 instead	1	11.11	0	0.00	0	0.00	0	0	0	0	1	2.94	0	0.00	0	0	0	0	0	0	0.00
		3 on the contrary	1	11.11	0	0.00	0	0.00	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0	0	0.00
		4 on the other hand	1	11.11	0	0.00	0	0.00	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0	0	0.00
		<b>Sub total</b>	<b>7</b>	<b>77.78</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>
	Concession	1 although	0	0.00	0	0.00	0	0.00	0	0	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00
		2 even though	0	0.00	0	0.00	0	0.00	0	0	0	0	0.00	0	0.00	1	16.7	0	0	0	0	0	0.00
		3 however	1	11.11	0	0.00	0	0.00	11	32.4	6	17.65	0	0.00	0	0	0	0	0	0	0	0	0.00
		4 though	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0.00	1	16.7	4	66.67	0	0	0	0	0.00
		5 yet	1	11.11	0	0.00	0	0.00	0	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0	0.00
		<b>Sub total</b>	<b>2</b>	<b>22.22</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>11</b>	<b>32.4</b>	<b>6</b>	<b>17.65</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>33.3</b>	<b>4</b>	<b>66.67</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
		<b>TOTAL</b>	<b>9</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>11</b>	<b>32</b>	<b>23</b>	<b>67.65</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>33</b>	<b>4</b>	<b>66.7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	

#### 4.4.3.1.3 Causal category

As shown in Table 4.33, it was found that for Simple sentences, only the Initial position was used by three DCs: “therefore” (3 tokens), “so” (2 tokens) and “hence” (1 token). For Compound sentence usage, only the Medial position was used. The total number of DCs used in this position were nine tokens from 4 DCs. Of these, “therefore” was used the most with 4 tokens or 44.44%. For complex sentences, it was found that “because” was the only DC used in this type of sentence, and its position was in the Medial position with 11 tokens. These findings are presented in more detail in Table 4.33.

Table 4. 33: Sentence types and sentential positions of each DC in the Causal category (NSs)

Main category	Sub-category	DC/lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Causal	Result/inference	1 because	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11	100.00	0	0.00
		2 due to	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 hence	1	16.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 so	2	33.33	0	0.00	0	0.00	0	0.00	2	22.22	0	0.00	0	0.00	0	0.00	0	0.00
		5 then	0	0.00	0	0.00	0	0.00	0	0.00	1	11.11	0	0.00	0	0.00	0	0.00	0	0.00
		6 therefore	3	50.00	0	0.00	0	0.00	0	0.00	4	44.44	0	0.00	0	0.00	0	0.00	0	0.00
		7 thus	0	0.00	0	0.00	0	0.00	0	0.00	2	22.22	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Subtotal</b>	<b>6</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>9</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>11</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>
		<b>TOTAL</b>	<b>6</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>9</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>11</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>



#### 4.4.3.1.4 Temporal category

As shown in Table 4.34, for Simple sentences, only the Initial position was used. The total numbers of DCs used in this position was five. For Compound sentences, the Initial position was only used for two DCs: “finally” and “in short”. The findings are presented in more detail in Table 4.34.

Table 4. 34: Sentence types and sentential positions of each DC in the Temporal category (NSs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence								
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final				
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%			
Temporal	Ordering	1 finally	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
		2 firstly	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
		3 lastly	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
		4 secondly	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
			<b>Sub total</b>	<b>3</b>	<b>60.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
		Summation	1 all in all	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	2 in short		1	20.00	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
	<b>Sub total</b>		<b>2</b>	<b>40.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	
			<b>TOTAL</b>	<b>5</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.1.5 Continuatives category

Table 4.35 shows that for Simple sentences, the Initial position was used the most with 7 tokens (53.85%), followed by the Medial and Final position with 5 tokens (38.46%) and 1 token (7.69%), respectively. For the Initial position, it was found that 3 DCs were used: “now”, “of course” and “well”. Meanwhile, “now” was also used in the Medial and Final position. For Compound sentences, the Medial position was used the most with 3 tokens (60.00%), followed by the Initial position with 2 tokens (40.00%). There was no use of DCs in the Final position in Compound sentences. For the Initial position, “of course” was the only DC used in this position, while “now” was the only DC used in the Medial position. For Complex sentences, “now” was the only DC used. The results also show that “now” was used both in the Initial position and Medial position. Table 4.35 shows more details of this analysis.

Table4. 35: Sentence types and sentential positions of each DC in the Continuatives category (NSs)

Main category	Sub-category	DCLexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Continuatives	Transitions	1 now	4	30.77	5	38.46	1	7.69	0	0.00	3	60.00	0	0.00	1	25.00	3	75.00	0	0.00
		2 of course	2	15.38	0	0.00	0	0.00	2	40.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 well	1	7.69	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>7</b>	<b>53.85</b>	<b>5</b>	<b>38.46</b>	<b>1</b>	<b>7.69</b>	<b>2</b>	<b>40.00</b>	<b>3</b>	<b>60.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>25.00</b>	<b>3</b>	<b>75.00</b>	<b>0</b>	<b>0.00</b>
		<b>TOTAL</b>	<b>7</b>	<b>53.85</b>	<b>5</b>	<b>38.46</b>	<b>1</b>	<b>7.69</b>	<b>2</b>	<b>40.00</b>	<b>3</b>	<b>60.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>25.00</b>	<b>3</b>	<b>75.00</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.2 NNSHs

The following tables (4.36 to 4.40) present more detail of DC usage in each category by giving the number of tokens for each DC, and also the percentage for each category. The explanations and tables are applied first in relation to the Additive category, followed by Adversative, Causal, Temporal and Continuatives categories.

##### 4.4.3.2.1 Additive category

It can be seen from Table 4.36 that for Simple sentences, the Medial position was used the most with 25 tokens (50.00%), followed by the Initial position with 19 tokens (38.00%) and the Final position with 6 tokens (12.00%). For the Initial position, “moreover” was used the most at 12.00% while the second and third highest DC usage were for “and” with 10.00% and “for example” and “specifically” with 4.00% each. For the Medial position, only 2 DCs were used: “such as” and “also”. For the Final position, “as well” and “also” were the two DCs used in the position with 8.00% and 4.00%, respectively. For Compound sentences, the Medial position was used the most with 85 tokens (96.59%), followed by the Initial and Final position with 2 tokens (2.27%) and 1 token (1.14%). For the Initial position, “furthermore” and “moreover” were used at a rate of 1.14% each. For the Medial position, the results show that the three DCs used most in this position were “and” with 69.32%, “or” with 14.77%, and “also” with 4.55%. For the Final position, “as well” was the only DC used in this position with 1.14%. For Complex sentences, it was found that “for example” was used in the Initial position and “such as” was used in the Medial position. These findings are presented in more detail in Table 4.36.

Table4. 36: Sentence types and sentential positions of each DC in the Additive category (NNSHs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Additive	Addition	1 also	1	2.00	10	20.00	2	4.00	0	0.00	4	4.55	0	0.00	0	0.00	0	0.00	0	0.00
		2 and	5	10.00	0	0.00	0	0.00	0	0.00	61	69.32	0	0.00	0	0.00	0	0.00	0	0.00
		3 as well	0	0.00	0	0.00	4	8.00	0	0.00	0	0.00	1	1.14	0	0.00	0	0.00	0	0.00
		4 besides	1	2.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 furthermore	0	0.00	0	0.00	0	0.00	1	1.14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		6 in addition	1	2.00	0	0.00	0	0.00	0	0.00	1	1.14	0	0.00	0	0.00	0	0.00	0	0.00
		7 meanwhile	0	0.00	0	0.00	0	0.00	0	0.00	1	1.14	0	0.00	0	0.00	0	0.00	0	0.00
		8 moreover	6	12.00	0	0.00	0	0.00	1	1.14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		9 or	0	0.00	0	0.00	0	0.00	0	0.00	13	14.77	0	0.00	0	0.00	0	0.00	0	0.00
			<b>Sub total</b>	<b>14</b>	<b>28.00</b>	<b>10</b>	<b>20.00</b>	<b>6</b>	<b>12.00</b>	<b>2</b>	<b>2.27</b>	<b>80</b>	<b>90.91</b>	<b>1</b>	<b>1.14</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
	Exemplification	1 for example	2	4.00	0	0.00	0	0.00	0	0.00	2	2.27	0	0.00	1	50.00	0	0.00	0	0.00
2 such as		0	0.00	15	30.00	0	0.00	0	0.00	3	3.41	0	0.00	0	0.00	1	50.00	0	0.00	
3 to illustrate		1	2.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
		<b>Sub total</b>	<b>3</b>	<b>6.00</b>	<b>15</b>	<b>30.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>5</b>	<b>5.68</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>
	Restatement	1 specifically	2	4.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>2</b>	<b>4.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
		<b>TOTAL</b>	<b>19</b>	<b>38.00</b>	<b>25</b>	<b>50.00</b>	<b>6</b>	<b>12.00</b>	<b>2</b>	<b>2.27</b>	<b>85</b>	<b>96.59</b>	<b>1</b>	<b>1.14</b>	<b>1</b>	<b>50</b>	<b>1</b>	<b>50</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.2.2 Adversative category

Table 4.37 shows that for Simple sentences, only the Initial position was used with 20 tokens. For the Initial position, five DCs were used: “but”, “conversely”, “on the contrary”, “on the other hand” and “however”. The most used DC in this position was “however” with 10 tokens (50.00%). For Compound sentences, the Medial position was used the most with 22 tokens (91.67%), followed by the Initial position with two tokens (8.33%). There was no use of DCs in the Final position in Compound sentences. For the Initial position, two tokens were used, “but” and “nonetheless”, each at a percentage of 4.17. For the Medial position, “but” and “instead” were the two DCs used at 83.33%, and 8.33%, respectively. The results showed no use of DCs in the Final position. For Complex sentences, “even though” was used both in the Initial position and in the Medial position with one token each, and only “although” was used in the Medial position. These findings are presented in more detail in Table 4.37.

Table4. 37: Sentence types and sentential positions of each DC in the Adversative category (NNSHs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Adversative	Contrast	1 but	4	20.00	0	0.00	0	0.00	1	4.17	20	83.33	0	0.00	0	0.00	0	0.00	0	0.00
		2 conversely	1	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 instead	0	0.00	0	0.00	0	0.00	0	0.00	2	8.33	0	0.00	0	0.00	0	0.00	0	0.00
		4 on the contrar	2	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 on the other h	3	15.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>10</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>4.17</b>	<b>22</b>	<b>91.67</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
	Concession	1 although	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00
		2 even though	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00
		3 however	10	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 nonetheless	0	0.00	0	0.00	0	0.00	1	4.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>10</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>4.17</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>
		<b>TOTAL</b>	<b>20</b>	<b>100</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>8.33</b>	<b>22</b>	<b>91.67</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.2.3 Causal category

As can be seen from Table 4.38, for Simple sentences, only the Initial position was used for four DCs: “so” (4 tokens), “therefore” (4 tokens), “because” (1 token), and “thus” (1 token). For Compound sentences, the Medial position was used the most with a ratio of 92.31%, of which “so” was used 76.92%. For Complex sentences, “because” was used the most in the Medial position. These findings are presented in more detail in Table 4.38.

Table4. 38: Sentence types and sentential positions of each DC in the Causal category (NNSHs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Causal	Result/inference	1 because	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	19	95.00	0	0.00
		2 due to	0	0.00	0	0.00	0	0.00	0	0.00	1	3.85	0	0.00	0	0.00	0	0.00	0	0.00
		3 so	4	40.00	0	0.00	0	0.00	1	3.85	20	76.92	0	0.00	1	5.00	0	0.00	0	0.00
		4 then	0	0.00	0	0.00	0	0.00	0	0.00	1	3.85	0	0.00	0	0.00	0	0.00	0	0.00
		5 therefore	4	40.00	0	0.00	0	0.00	0	0.00	2	7.69	0	0.00	0	0.00	0	0.00	0	0.00
		6 thus	1	10.00	0	0.00	0	0.00	1	3.85	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>10</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>7.69</b>	<b>24</b>	<b>92.31</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>5.00</b>	<b>19</b>	<b>95.00</b>	<b>0</b>	<b>0.00</b>
<b>TOTAL</b>	<b>10</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>7.69</b>	<b>24</b>	<b>92.31</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>5.00</b>	<b>19</b>	<b>95.00</b>	<b>0</b>	<b>0.00</b>		

#### 4.4.3.2.4 Temporal category

Table 4.39 shows that, for Simple sentences, only the Initial position was used. The total numbers of DCs used in this position was 16 tokens comprised of 11 different DCs. The most commonly used DCs in this position were “first of all” (18.75%), “finally” (12.50%), “last but not least” (12.50%) and “to conclude” (12.50%). For Compound sentences, the Initial position was only used for a total of 10 tokens comprised of five different DCs: “in conclusion” (30.00%); “firstly”, “second”, and “to sum up” (20.00% each); and “in summary” (10.00%). The results also show the use of “secondly” in Complex sentences and in the Initial position. The findings are presented in more detail in Table 4.39.

Table4. 39: Sentence types and sentential positions of each DC in the Temporal category (NNSHs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Temporal	Ordering	1 at last	1	6.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 finally	2	12.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 first	1	6.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 first of all	3	18.75	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 firstly	1	6.25	0	0.00	0	0.00	2	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		6 last but not least	2	12.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		7 lastly	1	6.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		8 second	0	0.00	0	0.00	0	0.00	2	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		9 secondly	1	6.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	0	0.00
		10 to begin with	1	6.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Sub total	13	81.25	0	0.00	0	0.00	4	40.00	0	0.00	0	0.00	2	100.00	0	0.00	0	0.00
	Summation	1 in conclusion	1	6.25	0	0.00	0	0.00	3	30.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 in summary	0	0.00	0	0.00	0	0.00	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 to conclude	2	12.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 to sum up	0	0.00	0	0.00	0	0.00	2	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Sub total	3	18.75	0	0.00	0	0.00	6	60.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		TOTAL	16	100.00	0	0.00	0	0.00	10	100.00	0	0.00	0	0.00	2	100	0	0.00	0	0.00

#### 4.4.3.2.5 Continuatives category

Table 4.40 shows that, for Simple sentences, the Initial position was used the most with five tokens (71.43%), followed by the Medial and Final positions with one token (14.29%) each. For the Initial position, it was found that three DCs were used: “anyway”, “now”, and “of course”. Additionally, “now” was used in the Medial and Final position, as well. For Compound sentences, “now” was the only DC used in the Initial position. For Complex sentences, “now” and “surely” were used in both the Initial and Medial position. The findings are presented in more detail in Table 4.40.

Table 4. 40: Sentence types and sentential positions of each DC in the Continuatives category (NNSHs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Continuatives	Transitions	1 anyway	2	28.57	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 now	2	28.57	1	14.29	1	14.29	1	100.00	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00
		3 ofcourse	1	14.29	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 surely	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00
		<u>Sub total</u>	<u>5</u>	<u>71.43</u>	<u>1</u>	<u>14.29</u>	<u>1</u>	<u>14.29</u>	<u>1</u>	<u>100.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>1</u>	<u>50.00</u>	<u>1</u>	<u>50.00</u>	<u>0</u>	<u>0.00</u>
		<b>TOTAL</b>	<b>5</b>	<b>71.43</b>	<b>1</b>	<b>14.29</b>	<b>1</b>	<b>14.29</b>	<b>1</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>

#### 4.4.3.3 NNSLs

The following tables (4.41 to 4.45) present more detail of DC usage in each category by giving the number of tokens for each DC, and also the percentage for each category. The explanations and tables are applied first in relation to the Additive category, followed by Adversative, Causal, Temporal and Continuatives categories.

##### 4.4.3.3.1 Additive category

It can be seen from Table 4.41 that, for Simple sentences, the Medial position was used the most with 31 tokens (49.21%), followed by the Initial position with 30 tokens (47.62%) and the Final position with two tokens (3.17%). For the Initial position, “moreover” was used the most with a ratio of 14.29%, while the second and third highest DC usage were “and” with 9.52% and “for example” and “in addition” with 6.35% each. Three DC were used in the Medial position: “such as” with 23.81%, “also” with 19.05%, and “for example” with 6.35%. For the final position, “as well” was the only DC used at 3.17%.

For Compound sentences, the Medial position was used the most with 56 tokens (86.15%), followed by the Initial and Final position with eight tokens (12.31%) and one token (1.54%), respectively. For the Initial position, “for example” (9.23%), “in addition” (1.54%) and “moreover” (1.54%) were used. For the Medial position, two DCs were used: “and” with 76.92%, and “or” with 9.23%. For the Final position, “as well” was the only DC used in the position with 1.54%.

For Complex sentences, the Medial position was used the most with 64.29%, followed by the Initial position with 35.71%. These findings are presented in more detail in Table 4.41.

Table 4. 41: Sentence types and sentential positions of each DC in the Additive category (NNSLs)

Main category	Sub-category	DC/lexis	Simple Sentence						Compound Sentence						Complex Sentence							
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final			
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%		
Additive	Addition	1 also	0	0.00	12	19.05	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 and	6	9.52	0	0.00	0	0.00	0	0.00	50	76.92	0	0.00	1	7.14	5	35.71	0	0.00	0	0.00
		3 as well	0	0.00	0	0.00	2	3.17	0	0.00	0	0.00	1	1.54	0	0.00	0	0.00	0	0.00	0	0.00
		4 besides	1	1.59	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	7.14	0	0.00	0	0.00	0	0.00
		5 furthermore	2	3.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		6 in addition	4	6.35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		7 moreover	9	14.29	0	0.00	0	0.00	1	1.54	0	0.00	0	0.00	1	7.14	0	0.00	0	0.00	0	0.00
		8 or	1	1.59	0	0.00	0	0.00	1	1.54	6	9.23	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Sub total	23	36.51	12	19.05	2	3.17	2	3.08	56	86.15	1	1.54	3	21.43	5	35.71	0	0.00	0	0.00
	Exemplification	1 for example	4	6.35	4	6.35	0	0.00	6	9.23	0	0.00	0	0.00	2	14.29	0	0.00	0	0.00	0	0.00
		2 such as	0	0.00	15	23.81	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	28.57	0	0.00	0	0.00
		Sub total	4	6.35	19	30.16	0	0.00	6	9.23	0	0.00	0	0.00	2	14.29	4	28.57	0	0.00	0	0.00
	Restatement	1 that is	2	3.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 that is to say	1	1.59	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Sub total	3	4.76	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		TOTAL	30	47.62	31	49.21	2	3.17	8	12.31	56	86.15	1	1.54	5	35.71	9	64.29	0	0.00	0	0.00

#### 4.4.3.3.2 Adversative category

As can be seen in Table 4.42, for Simple sentences, only the Initial position was used with 47.37%. For the Initial position, four DCs were used: “but”, “in contrast”, “on the other hand” and “however”. The highest use in this position was “however” with 52.63%. For Compound sentence usage, the Medial position was used the most with 68.18%, followed by the Initial position with 31.82%. There was no use of DCs in the Final position in Compound sentences. For the Initial position, five tokens were used, with “but” used at 13.64%, and “nor”, “on the other hand”, “however” and “nevertheless” at 4.55% each. For the Medial position, three DCs were used: “but” (54.55%), “on the other hand” (4.55%) and “however” (8.09%). The results showed no use of DCs in the Final position. For Complex sentences, 7 DCs were used in the Initial position: “but”, “on the contrary”, “on the other hand”, “although”, “even though”,



“however” and “though”. The highest use was for “although” with 33.33%. The results also showed that “although” was used in the Medial position and “instead” was used in the Final position. These findings are presented in more detail in Table 4.42.

Table 4. 42: Sentence types and sentential positions of each DC in the Adversative category (NNSLs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Adversative	Contrast	1 but	4	21.05	0	0.00	0	0.00	3	13.64	12	54.55	0	0.00	2	13.33	0	0.00	0	0.00
		2 in contrast	3	15.79	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 instead	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	6.67
		4 nor	0	0.00	0	0.00	0	0.00	1	4.55	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 on the contrary	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	6.67	0	0.00	0	0.00
		6 on the other hand	2	10.53	0	0.00	0	0.00	1	4.55	1	4.55	0	0.00	1	6.67	0	0.00	0	0.00
		<b>Sub total</b>	<b>9</b>	<b>47.37</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>5</b>	<b>22.73</b>	<b>13</b>	<b>59.09</b>	<b>0</b>	<b>0.00</b>	<b>4</b>	<b>26.67</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>6.67</b>
	Concession	1 although	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	33.33	1	6.67	0	0.00
		2 even though	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	6.67	0	0.00	0	0.00
		3 however	10	52.63	0	0.00	0	0.00	1	4.55	2	9.09	0	0.00	2	13.33	0	0.00	0	0.00
		4 nevertheless	0	0.00	0	0.00	0	0.00	1	4.55	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 though	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	6.67	0	0.00	0	0.00
				<b>Sub total</b>	<b>10</b>	<b>52.63</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>9.09</b>	<b>2</b>	<b>9.09</b>	<b>0</b>	<b>0.00</b>	<b>9</b>	<b>60.00</b>	<b>1</b>	<b>6.67</b>
		<b>TOTAL</b>	<b>19</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>7</b>	<b>31.82</b>	<b>15</b>	<b>68.18</b>	<b>0</b>	<b>0.00</b>	<b>13</b>	<b>86.67</b>	<b>1</b>	<b>6.67</b>	<b>1</b>	<b>6.67</b>

#### 4.4.3.3.3 Causal category

Table 4.43 shows that, for Simple sentences, only the Initial position was used by five DCs, and the highest use was by “so” with 46.67%. For Compound sentences, the Medial position was used the most with 77.78%, followed by the Initial position with 22.22%. There was no use of DCs in the Final position in Compound sentences. The only DC used in Compound sentences was “so” and it appeared in both the Initial and Medial positions. For Complex sentences, “because” was used the most in the Medial position with 87.10%, and in the Initial position with 6.45%. These findings are presented in more detail in Table 4.43.

Table 4. 43: Sentence types and sentential positions of each DC in the Causal category (NNSLs)

Main category	Sub-category	DC	Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
				Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
				T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Causal	Result/inference	1	because	3	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	6.45	27	87.10	0	0.00
		2	due to	1	6.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3	so	7	46.67	0	0.00	0	0.00	2	22.22	7	77.78	0	0.00	0	0.00	0	0.00	0	0.00
		4	then	2	13.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	3.23	0	0.00	0	0.00
		5	therefore	2	13.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	3.23	0	0.00	0	0.00
			<u>Sub total</u>	<u>15</u>	<u>100.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>2</u>	<u>22.22</u>	<u>7</u>	<u>77.78</u>	<u>0</u>	<u>0.00</u>	<u>4</u>	<u>12.90</u>	<u>27</u>	<u>87.10</u>	<u>0</u>	<u>0.00</u>
	<b>TOTAL</b>	<b>15</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>22.22</b>	<b>7</b>	<b>77.78</b>	<b>0</b>	<b>0.00</b>	<b>4</b>	<b>12.90</b>	<b>27</b>	<b>87.10</b>	<b>0</b>	<b>0.00</b>		

#### 4.4.3.3.4 Temporal category

Table 4.44 shows that, for Simple sentences, only the Initial position was used. The total number of DCs used in this position was ten, with “first” (23.33%), “to sum up” (20.00%), and “in conclusion” (16.67%) the three most commonly used DCs in this position. For Compound sentences, the initial position was used by “first” and “in conclusion”. The results also reveal the use of “finally” in the Medial position. The two DCs which were used in the Initial position in Complex sentences were “first” and “in conclusion”. These findings are presented in more detail in Table 4.44.

Table4. 44: Sentence types and sentential positions of each DC in the Temporal category (NNSLs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Temporal	Ordering	1 finally	3	10.00	0	0.00	0	0.00	0	0.00	1	33.33	0	0.00	0	0.00	0	0.00	0	0.00
		2 first	7	23.33	0	0.00	0	0.00	1	33.33	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00
		3 first of all	1	3.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		4 lastly	1	3.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		5 next	1	3.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		6 second	3	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		7 third	2	6.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		<b>Sub total</b>	<b>18</b>	<b>60.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>33.33</b>	<b>1</b>	<b>33.33</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
Summation	1 in conclusion	5	16.67	0	0.00	0	0.00	1	33.33	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	
	2 in sum	1	3.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
	3 to sum up	6	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
	<b>Sub total</b>	<b>12</b>	<b>40.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>33.33</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>50.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	
<b>TOTAL</b>	<b>30</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>66.67</b>	<b>1</b>	<b>33.33</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>		

#### 4.4.3.3.5 Continuatives category

Table 4.45 shows that, for Simple sentences, DCs were used in the Initial position and the Medial position with three tokens each (37.50%), and in the Final position with two tokens (25.00%). Two DCs were used in Simple sentences: “now” and “of course”. Of these, “now” was used in all three sentential positions, while “of course” was used only once in the Initial position. For Compound sentence usage, “now” was still the only DC used in the Initial position. For Complex sentences, “surely” was used in the Medial position. Table 4.45 presents more detail of this analysis.

Table4. 45: Sentence types and sentential positions of each DC in the Continuatives category (NNSLs)

Main category	Sub-category	DC Lexis	Simple Sentence						Compound Sentence						Complex Sentence					
			Initial		Medial		Final		Initial		Medial		Final		Initial		Medial		Final	
			T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
Continuatives	Transitions	1 now	2	25.00	3	37.50	2	25.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		2 of course	1	12.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		3 surely	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00
		<u>Sub total</u>	<u>3</u>	<u>37.50</u>	<u>3</u>	<u>37.50</u>	<u>2</u>	<u>25.00</u>	<u>1</u>	<u>100.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>1</u>	<u>100.00</u>	<u>0</u>	<u>0.00</u>
		<b>TOTAL</b>	<b>3</b>	<b>37.50</b>	<b>3</b>	<b>37.50</b>	<b>2</b>	<b>25.00</b>	<b>1</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>1</b>	<b>100.00</b>	<b>0</b>	<b>0.00</b>

Interestingly, my data on the DC usage by the three sample groups suggest that not only were the DCs used according to their meanings, but they were also utilized in context. Some DCs exhibited a one-to-one relationship between their semantic and pragmatic function.

#### 4.5 Semantics and Pragmatics

There were 62 DCs lexis which were used by all three sample groups with a total of 865 tokens. However, only two of these DCs lexis that did not have a one-to-one relationship between their semantic functions and pragmatic uses. They were “and” and “finally” with a total of 25 tokens.

##### 4.5.1 The pragmatic function of “and” and “finally” by the NSs, NNSHs and NNSLs

The semantic function of “and” according to the theoretical framework (Halliday & Hasan, 1976; Biber et al., 1999; Cowan, 2008) was in the addition sub-category under the main Additive category. However, from the data it was also used in other categories, i.e. Adversative, Causal and Temporal. For “finally”, the semantic function of this DC was in the ordering sub-category, under the main Temporal category. In this study, however, it was also found to have been used in the summation sub-category under the main Causal category. It was not clear to the researcher as I am not native speaker, whether these differences were errors or these DCs have

multifunctions in the pragmatic aspect. For the sake of reliability and validity, all DCs which did not have a one-to-one relationship between their semantic function and their pragmatic use were reanalyzed by the researcher, and rechecked by the three native experts in Linguistics, English Literature and English Language Teaching. The usage frequency of “and” and “finally” by the three sample groups is reported in Table 4.46.

Table 4.46: The usage frequency of “and” and “finally” in different categories by all three sample groups

Pragmatics							
Main	Sub	AND			FINALLY		
		NSs	NNSHs	NNSLs	NSs	NNSHs	NNSLs
Category	Category	Token	Token	Token	Token	Token	Token
Adversative	Contrast	2	1	0	0	0	0
	Concession	1	1	0	0	0	0
Causal	Result/inference	6	6	5	0	0	1
Temporal	Ordering	0	0	0	0	0	0
	Summation	0	0	0	1	1	0
Continuatives	Transitions	0	0	0	0	0	0
	<b>TOTAL</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>

As seen in Table 4.46, 22 tokens of “and” and 3 tokens of “finally” were used among the three groups. The token “and” was mostly used in the Causal category, accounting for 6 out of 9 tokens in the NS group, 6 out of 8 tokens in the NNSH group, and 5 out of 5 tokens in the NNSL group. For the NSs, “and” was used to show contrast and concession in the text. The use of “finally” was to exhibit summation. Surprisingly, the NNSHs followed a similar pattern to the NSs in the use of “and” and “finally”. Interestingly, for the NNSLs, “finally” was used to express result/inference.

The multiple functions of “and” and “finally” used among the three sample groups are presented in detail in the following section.

#### 4.5.2 The multiple functions of “and” and “finally” by the NSs

From the 38 DCs, there was a total of 260 tokens recorded in the NS data. However, not all of the DCs were used in a one-to-one relationship between their semantic functions pragmatic uses. It was mentioned earlier that in this study there were

two DCs – “and” and “finally” – which did not have a one-to-one relationship. From the NS data, the usage frequency of “and” was 94 tokens, 9 of which had a different pragmatic use. For “finally”, it was used only once, and that usage was in a pragmatic function. Some examples are listed as follows:

**Examples:** “and” as “Adversative: contrast”

(60) The computer has made life easier from a physical standpoint, and it has made life harder from a mental standpoint.

(61) The first computers were expensive monsters that filled an entire room and could perform only a few calculations a second.

From (60) and (61), the functions of “and” were not “Addition”. The DC “and” in both sentences were used to show contrastive ideas between the first clause and the second clause. In these examples, “and” could be replaced by “but”. The rewritten versions are shown as follows (60.1 and 61.1).

(60.1) The computer has made life easier from a physical standpoint, but it has made life harder from a mental standpoint.

(61.1) The first computers were expensive monsters that filled an entire room, but could perform only a few calculations a second.

**Examples:** “and” as “Adversative: concession”

(62) This, realistically, has been quite a new invention, and its short life span has been able to change the world significantly.

From (62), the function of “and” was not to add information. Its function was in the Adversative category, under the sub-category of concession. Here, “and” could be replaced by “however”. The rewritten version is as follows (62.1).

(62.1) This, realistically, has been quite a new invention; however, its short life span has been able to change the world significantly.

**Examples:** “and” used in the function of “Causal: result/inference”

(63) He could not stock or access the inventory fast enough and was laid off because he was viewed as a deficit by the company.

(64) The children grow up watching violence and sex and then become desensitized to it.

(65) There is a tremendous amount of controversy over the beneficial and detrimental aspects of the television and it is anyone's guess if it will ever be resolved.

(66) Every morning I listen for the weather forecast and dress accordingly.

(67) She sits in front of it all day and it keeps her happy

From (63) - (67), “and” were used in the “Causal” function. In these cases, “and” could be replaced by “therefore”, “so that” and “because”. The rewritten versions are shown as follows (63.1, 64.1, 65.1, 66.1 and 67.1).

(63.1) He could not stock or access the inventory fast enough; therefore, he was laid off because he was viewed as a deficit by the company.

(64.1) The children grow up watching violence and sex; therefore, when they grow up, they become desensitized to it.

(65.1) There is a tremendous amount of controversy over the beneficial and detrimental aspects of the television. Therefore, it is anyone's guess if it will ever be resolved.

(66.1) Every morning I listen for the weather forecast, so that I can dress accordingly.

(67.1) She sits in front of it all day because it keeps her happy

**Examples:** “finally” used in the function of “Temporal: summation”

(68) Finally, people need to continue to keep abreast of new developments and uses for computers as they will continue to become a larger part of our society.

From (68), the semantic function of “finally” basically is in ordering sub-category, but in this example, “finally” was used as summation. The rewritten version is shown as follows (68.1).

(68.1) To conclude, people need to continue to keep abreast of new developments and uses for computers as they will continue to become a larger part of our society.

All of eight examples discussed above have been agreed upon by the three native English speaker experts; however, there were some more interesting examples where only two of the three experts agreed with the analysis. These examples are shown as follows:

(69) People also need to be more aware of their accounting statements and they check carefully each month to see no errors have been made.

From (69), I think that “and” served a Causal: result/inference function, but not all three experts agreed with this. One of the experts said that this usage was closer to exemplification. According to the expert, the second clause exhibited an example of “being more aware of their accounting statements”. The speaker was talking about what could happen and not what was happening as a result of the first clause.

(70) Within a few weeks, the excitement had died down and people had turned their attention to more recent news.

From (70), although “and” could have a causal relationship, one of the experts disagreed with this opinion. The expert believed that “and” was used as additive rather than to show any causal relationship between the two clauses.

It is interesting to see that even native English experts interpreted the function of “and” differently. That is because pragmatics deals with the meaning in a given context which is much more complex than the semantic aspect of DCs.

#### **4.5.3 The multiple functions of “and” and “finally” by the NNSHs**

From the NNSH data, the usage frequencies of ‘and’ and “finally” were 66, and 2 tokens, respectively. Among these usages, eight cases of “and” and one case of “finally” could have multiple functions. All eight of the following samples were taken from the NNSH data without changing or correcting any errors:

**Examples:** “and” used in the function of “Adversative: contrast”

(72) You may compare two different brands of computer, one is cheap and another one is the expensive one.



From (72), the function of “and” was used to show a contrastive idea between the first clause and the second clause. In these examples, “and” could be replaced by “but”. The rewritten version is shown as follows:

(72.1) You may compare two different brands of computer. One is cheap but another one is the expensive one.

**Examples:** “and” used in the function of “Adversative: concession”

(73) As you can see in the world today, a lot of people make their new friends via Facebook and some of their friends are from the other side of the world

From (73), the function of “and” was not used to add information. Its function here was under the concession sub-category. In these examples, “and” could be replaced by “though”. The rewritten version was shown as follows:

(73.1) As you can see in the world today, a lot of people make their new friends via Facebook even though some of their friends are from the other side of the world.

**Examples:** “and” used in the function of “Causal: result/inference”

(74) Every family usually buys it for their children or working and it impacts us until nowadays.

(75) It makes them less of communicate and seems to be introverted person.

(76) The light from the computer can damage our corneas and that causes us to be eyes disorder.

(77) This example show that computer made comfortable for two persons in one time one is my brother he already know how to use Microsoft Office and then he use it save the time instead try to write by easier for readers.

(78) It will be a problem for someone who hate his/her real life and spending time lying people on internet.

(79) Facilitator makes people don’t want to do anything. And it makes their life slowly.

From (74) - (79), it was found that “and” in each sentence was used to show a causal relationship between the first clause and the second clause. In these examples, “and” could be replaced by “then” and “therefore”. The rewritten versions are shown as follows:

(74.1) Every family usually buys it for their children or working; it then impacts us until nowadays.

(75.1) It makes them less of communicate; therefore, they seem to be introverted person.

(76.1) The light from the computer can damage our corneas; therefore, it causes us to be eyes disorder.

(77.1) This example show that computer made comfortable for two persons in one time one is my brother he already know how to use Microsoft Office. Therefore, he use it save the time instead try to write by easier for readers.

(78.1) It will be a problem for someone who hate his/her real life; therefore, he or she spends time lying people on internet.

(79.1) Facilitator makes people don't want to do anything. Therefore, it makes their life slowly.

**Examples:** “finally” used in the function of “Temporal: summation”

(80) Finally, using computer is good with our live.

From (80), “finally” was used to give a summation. The rewritten version is shown in (80.1).

(80.1) To sum up, using computer is good with our live.

All of the eight examples above have been agreed upon by the three native English speaker experts that the DCs “and” and “finally” have multiple pragmatic functions. However, there were some more interesting examples where only two of the three experts agreed with the analysis. These sentences are as follows:

(81) Nowadays, people can live more comfortably and the world changes rapidly because of technology.

From (81), I think “and” has a causal relationship, and could be replaced by “due to the fact that”, and two of the experts agreed with me. However, one of the experts disagreed, giving the reason for this disagreement that “and” was used for telling the reader that both things were true.

(82) Nonetheless, this genius tool also have some drawbacks and I would discuss about the advantages and disadvantages of the computer.

From (82), I and other two experts agreed that the DC “and” pragmatic function was Continuatives, and could possibly be replaced by “now”. However, one of the experts thought that “and” in this case showed a causal relationship, and it could be replaced by “therefore”.

#### **4.5.4 The multiple functions of “and” and “finally” by the NNSLs**

From the NNSL data, the usage frequencies of “and” and “finally” were 62 tokens and 4 tokens, respectively. Among these tokens, five cases of “and” and one case of “finally” could have multiple functions. All six of the following samples were taken from the NNSL data without changing or correcting any errors:

**Examples:** “and” used in the function of “Causal: result/inference”

(83) At first, about education; although you use computers to work and search many informations in the internet, your work may not have finished yet because you can’t control yourselves to concentrate on your work: the effect is instead of you go on working, you are watching cartoon, play the game and that make you fail to do your work finished.

(84) So, we can’t reject that computer is not important for our live and there are many impact from computer on people’s live in various way.

(85) It makes them don’t want to do anything and concentrate with computer only.

(86) Most activities always appear on the computer and people will not do anything.

(87) Using the computers mustn't spend a lot of time to do the work and they can edit the work quickly.

From (83) - (87), it was found that “and” rather than its semantic function of “additive” was used in each of these sentences to show a causal relationship between the first clause and the second clause. In these examples, “and” could be replaced by “therefore” and “because”. The rewritten versions are shown as follows:

(83.1) At first, about education; although you use computers to work and search many informations in the internet, your work may not have finished yet because you can't control yourselves to concentrate on your work: the effect is instead of you go on working, you are watching cartoon, play the game; therefore, it makes you fail to do your work finished.

(84.1) So, we can't reject that computer is not important for our live because there are many impact from computer on people's live in various way.

(85.1) It makes them don't want to do anything because they concentrate with computer only.

(86.1) Most activities always appear on the computer; therefore, people will not do anything.

(87.1) Using the computers mustn't spend a lot of time to do the work because they can edit the work quickly.

**Examples:** “finally” used in the function of “Temporal: summation”

(88) Sometimes, finding information from website can make some people be lazy to search it from other resources, such as books. Finally, they plagiarize other work to be their own work by copying and pasting.

From (88), although “finally” generally serves in the pragmatic function of ordering, in this example, it had the meaning of result/inference. The rewritten version is shown in (88.1).

(88.1) Sometimes, finding information from website can make some people be lazy to search it from other resources, such as books. As a result, they plagiarize other work to be their own work by copying and pasting.

All six examples from (83) to (88) above have been agreed upon by three native English speaker experts that the DCs “and” and “finally” have multiple functions. However, there were two more interesting examples for which only two of the three experts agreed with my analysis. One of the experts had a different opinion. These cases are shown as follows:

(89) Computer is used in every age of people and it's very useful.

From (89), I think “and” is used to show a causal relationship, and it could be replaced by “because”. However, one of the experts thought that “and” was used to add information.

(90) Today, many companies like to advertise in website and you can apply for this job on website

From (90), I think “and” is used, pragmatically speaking, as Causal: result/inference and could be replaced by “therefore”. However, one of the experts thought that “and” was used in this case to add information, showing that a person can do both things.

The patterns of DC usage by the NSs, NNSHs, and NNSLs in terms of Pragmatics were reported through this section. For the NSs and the NNSHs, they had a similar pattern of DC usage. That is, both groups used “and” not only in the Additive category, but also in the Adversative and Causal categories. On the other hand, the NNSLs did not use “and” for the Adversative category.

For “finally”, the NSs and the NNSHs used it in the summation sub-category., while the NNSLs used it for the Causal category.

#### **4.6 Errors in the NSs and NNSs**

It was stated in Section 4.4.1.2 – 4.4.1.4 that all three sample groups made errors in the use of Orthography and Syntax. A summary of those errors is presented in Table 4.47.

Table 4.47: Overview of errors in the essays from the three sample groups

Samples	Total DCS (token)	Spelling				Punctuation						Syntax					
		Correct		Incorrect		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%	T.	%
NSs	260	260	100	0	0.00	117	100.00	85	72.65	32	27.35	260	100.00	258	99.23	2	0.77
NNSHs	295	293	99.32	2	0.68	156	100.00	100	64.10	56	35.90	295	100.00	280	94.92	15	5.08
NNSLs	310	306	98.70	4	1.30	171	100.00	116	67.84	55	32.16	310	100.00	300	96.77	10	3.23

Table 4.47 shows that errors were also formed in the NS group. NSs made errors in their use of punctuation at a rate of 27.35% and syntax at a rate of 0.77%. For the NNSs, both the High and Low groups made errors in spelling, punctuation, and syntax. The NNSHs made errors in spelling at a rate of 0.68%, in punctuation at a rate of 35.90%, and in sentence structure at a rate of 5.08%, whereas the NNSLs had errors in spelling at a rate of 1.30%, in punctuation at a rate of 32.16%, and in sentence structure at a rate of 3.23%. Interestingly, the percentage of errors made by the NNSHs in the use of punctuation and syntax aspects was higher than the percentage of errors found in the works of the NNSLs.

In terms of sentence structure, errors were found in all three sample groups, even in the data produced by the native speakers of English.

For the NSs data, there were two ungrammatical sentences which are shown here as sentences (91) and (92).

(91) Although most people who can afford to buy a cellular phone, can afford to pay the bills!

As a subordinating conjunction, “although” is a DC that is used only in a complex sentence containing one independent clause and at least one dependent clause. Both the independent clause and the dependent clause must contain their own subject and verb. Regarding sentence (91), there are two dependent clauses but no independent clause in this fragment.

(92) Due to errors frequently exist in the world of computers simply because humans are ignorant- for whatever reason.

From the descriptive grammar, “due to” is a DC which must be followed by a noun, not a clause. That is why this sentence was considered to be an ungrammatical sentence. These two ungrammatical sentences were from different samples in the NS data.

For the NNSH data, there were 15 ungrammatical sentences. However, in this section, we will look at only two of them in sentences (93) and (94).

(93) Although, computer has too many advantages but it impossible that everything doesn't have disadvantages.

The problem here is that “although” and “but” are both DCs whose semantic meaning is in the Adversative category. From the rules of descriptive grammar, two DCs which are from the same category cannot be used in the same sentence to serve the same purpose. That is to say, “although” and “but” can never be used in the same sentence to show the same contrast. Just as double negatives cannot be used because two negatives cancel the meaning of each other and produce an affirmative meaning, then two Adversative DCs cannot be used together in the same sentence (Gowers, 1986). Sentence (93) uses both “although” and “but” to show the same Adversative meaning, so this sentence is ungrammatical.

(94) For example, Microsoft Word.

As a DC in the exemplification sub-category under the Additive category, “for example” can be used either for introducing a list within the same sentence or as the beginning of a clause. However, it cannot be used alone followed by only a noun. For this reason, sentence (94) was marked as an ungrammatical sentence.

The NNSLs produced ten ungrammatical sentences; this section presents two of them in sentences (95) and (96)

(95) With social media websites, we can chat and share stories feelings and pictures with other even though living not in the same country.

As a subordinating conjunction, “even though” is a DC which can only be used in a complex sentence containing one independent clause and at least one dependent clause. Both the independent clause and the dependent clause must contain their own subject and verb. In sentence (95), there is no subject in the second clause, so this sentence is ungrammatical.

(96) For example, watch movie, listen to music, watch popular clips, read new, see picture, etc.

As a DC in the exemplification sub-category under the Additive category, “for example” can be used either for introducing a list within the same sentence or as the beginning of a clause. However, it cannot be used alone followed by only verb phrases. For this reason, sentence (96) was marked as an ungrammatical sentence.

Sentences (94) and (96) were selected as representative of typical errors arising from the use of “for example” in both Non-native groups. The results also revealed a typical error in the use of “although” and “even though”, which can be seen in sentences (93) and (95).

It could be said from the above section that there were some similarities in the errors made by the NNSHs and the NNSLs. The NNSs use “although” / “even though” and “but” in the same sentence and they do not include a subject and/or verb in the sentences starting with “for example”. These could be summarized that both the NNSHs and NNSLs had a developmental interlanguage stages which could be from the negative L1 transfer, strategies of second language learning, transfer of training and overgeneralization.

#### **4.7 Summary**

This chapter reported the findings of DC usage in the aspects of orthography, syntax and semantics and pragmatics, as well as identifying errors made by the NSs and NNSs in order to determine the patterns and problems in the use of DCs among the three sample groups. It is interesting that NNSHs made less errors compared to NNSLs in spelling. However, they made more errors in their writing in the use of punctuations and syntax. This may imply that NNSHs are prone to be hypothesis testers and more productive than NNSLs (NNSHs 6,394 words, NNSLs 6,172 words). They tried different punctuations and syntactic structures and made more errors than the NNSLs who had limited grammar and used the same structures repeatedly. The findings of problems in the use of DCs were reported in this chapter through both descriptive and inferential statistics. Chapter 5 will conclude and discuss the findings of this study



based on the research questions. Implications for language teaching and suggestions for further research will also be given and discussed in Chapter 5.



## **CHAPTER V**

### **CONCLUSIONS AND DISCUSSIONS**

This study examined the use of English discourse connectors (DCs) in argumentative essays written by native speakers of English (NSs) and non-native speakers of English (NNSs). Based on their level of exposure to English, the non-native speakers were further divided into a high exposure group (NNSH) and a low exposure group (NNSL). The study focused on three main aspects of DC usage: orthography, syntax, and semantics and pragmatics. The aims of the study were (1) to describe the use of English DCs by NSs, NNSHs, and NNSLs; (2) to compare and contrast the DCs used in argumentative essays by the NSs, NNSHs, and NNSLs and to identify the problems of DC usage among the two NNS groups; and (3) to analyze the patterns and problems of DC usage in argumentative essays by NNSHs and NNSLs. The clarification was based on interlanguage study.

For the essays written by the NSs, the English native speaker undergraduate corpus, LOCNESS, was employed. From the LOCNESS corpus, 20 essays out of 43 essays were chosen for analysis. The topic of these essays was “Great inventions and discoveries of the 20<sup>th</sup> century and their impact on people’s lives (choose one per essay: computer, television, etc). For the essays written by the NNSs, 300 students from various universities in and around Bangkok were chosen and given the same topic as the NSs. An English Language Exposure Questionnaire was used to select and separate the NNSs into the two groups: high English exposure (NNSHs) and low English exposure (NNSLs). From the results of the questionnaire, 20 students whose scores ranked from 1-20 were selected as the representatives of the NNSHs, while another 20 students whose scores were in the bottom rank of 280-300 were chosen as the representatives of the NNSLs. The total number of essays provided by the NNSs was 40, comprised of 20 essays from each group. With 20 essays also provided by the NSs, this gave 60 argumentative essays from three sample groups to be analyzed. For the

selection of DCs, the frameworks of analysis of DCs from Halliday & Hasan (1976), Quirk *et al* (1985), Biber *et al* (1999), and Cowan (2008) were employed. Three native English-speaking experts with background knowledge in linguistics, English literature or English language teaching were asked to recheck the identification of DCs in the sentences, and the pragmatic use of the DCs.

This study was different from previous studies of DC usage in terms of the methodologies applied. Firstly, the NNS samples were divided into high and low groups based on scores taken from an English Language Exposure Questionnaire and not by employing English proficiency scores or standardized tests. As mentioned previously in chapter 3, the NNS sample was drawn from 300 students from various universities in and around Bangkok. Thus, categorising the sample into the high and the low groups using standard English language proficiency tests, e.g., TOEIC, IELTS or TOEFL, was not a good option because of the high expenses involved in administering the tests. In addition, the use of the students' English grades could not be considered because the standard of each university could vary. Secondly, most previous studies on DCs aimed to answer questions on the overuse, underuse and misuse of DCs, comparing between NSs and NNSs, but this study looked at the learners' problems in the use of DCs through the processes of interlanguage stages: L1 transfer, transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization. Lastly, this study did not pay attention only to the use of DCs in terms of semantics, but it also introduced a new aspect of DC analysis, which was the communicative meaning in context or pragmatics. It is hoped that the information gained from this study will help language teachers, particularly Thai teachers, find a more effective way to teach English discourse connectors.

From the above objectives, the present study aimed to answer the following research questions addressed in chapter 1:

Question 1: What are the patterns of English discourse connector (DC) usage of English native speakers (NSs), non-native speakers of English with high English exposure

(NNSHs), and non-native speakers of English with low English exposure (NNSLs) in the argumentative essays?

Question 2: Do the patterns and problems in the use of DCs in the two NNS sample groups differ from NS, and if so, how?

Question 3: What are the differences in the patterns and problems of DC usage in NNS argumentative essays when comparing between NNSHs and NNSLs?

The following hypotheses were put forward:

Hypothesis 1: NNSHs use DCs in argumentative essays in a more target like manner, whereas NNSLs use DCs in argumentative essays differently from NSs.

Hypothesis 2: The problems of using DCs in NNSHs and NNSLs lie in not only interlingual factors (L1 transfer), but also other factors (transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization).

Hypothesis 3: NNSHs will have problems in structural orientation while NNSLs will have problems in the use of DCs involving both semantic orientation and structural orientation.

In the following three sections in this chapter, I will firstly conclude and discuss the main findings which will present the patterns of English DCs used by the sample groups in three aspects: orthography, syntax, and semantics and pragmatics. In the second section, I will discuss the theoretical implications and the implications for teaching DCs in English as a foreign language (EFL). The last section will offer some recommendations for further research.

### **5.1 The main findings of the study**

The main findings on the patterns of English DC usage among the three sample groups are divided into three aspects: orthography, syntax, and semantics and pragmatics. The similarities and differences identified in the usage patterns among the three sample groups, including the usage frequency of the DC lexis, are firstly described and explained in the following section.

### 5.1.1 The usage frequency of DCs from the five main categories

In order to answer the research questions, a comparison is first made between the three sample groups in terms of their usage of DCs from the five main categories: Additive, Adversative, Causal, Temporal, and Continuatives. The results are then analyzed and reported in descriptive statistics in the form of percentages. The frequency of DC usage in the five main categories is described in Table 5.1.

Table 5. 1: The frequency of DC usage in the five main categories

Main Category	Sub Category	NSs		NNSHs		NNSLs	
		Token	%	Token	%	Token	%
Additive	Addition	135	51.92	115	38.98	106	34.19
	Exemplification	17	6.54	27	9.15	38	12.26
	Restatement	2	0.77	2	0.68	3	0.97
	<b>Sub total</b>	<b>154</b>	<b>59.23</b>	<b>144</b>	<b>48.81</b>	<b>147</b>	<b>47.42</b>
Adversative	Contrast	24	9.23	33	11.19	33	10.65
	Concession	26	10.00	18	6.10	28	9.03
	<b>Subtotal</b>	<b>50</b>	<b>19.23</b>	<b>51</b>	<b>17.29</b>	<b>61</b>	<b>19.68</b>
Causal	Result/ inference	27	10.38	57	19.32	57	18.39
	<b>Sub total</b>	<b>27</b>	<b>10.38</b>	<b>57</b>	<b>19.32</b>	<b>57</b>	<b>18.39</b>
Temporal	Ordering	4	1.54	23	7.80	21	6.77
	Summation	3	1.15	9	3.05	14	4.52
	<b>Sub total</b>	<b>7</b>	<b>2.69</b>	<b>32</b>	<b>10.85</b>	<b>35</b>	<b>11.29</b>
Continuatives	Transitions	22	8.46	11	3.73	10	3.23
	<b>Sub total</b>	<b>22</b>	<b>8.46</b>	<b>11</b>	<b>3.73</b>	<b>10</b>	<b>3.23</b>
<b>TOTAL</b>		<b>260</b>	<b>100.00</b>	<b>295</b>	<b>100.00</b>	<b>310</b>	<b>100.00</b>

The patterns of all three sample groups were slightly different. Usage of DCs from the Additive category was the highest in all three groups. The usage of Adversative, Causal, Temporal and Continuatives was lower in descending order in the NNS groups but not in the NS group. The NS group used Temporal DCs at the lowest number.

It could be concluded from Table 5.1 that there were two main differences in the frequencies of DC usage among the three sample groups. Firstly, the differences in

the frequency of DC usage between the NSs and NNSs, both the high and the low groups, are most distinctive in the use of Causal and Temporal DCs. The usage of Causal DCs was 10.38% in the NS group compared to 19.32% and 18.39% in the NNSH and NNSL groups, respectively. A similar pattern was observed in the usage of Temporal DCs as well. The NS group's usage of DCs from the Temporal category was only 2.69%, while the NNSH and the NNSL groups used DCs from this group at 10.85% and 11.29%, respectively.

The present study revealed similar results to the previous studies (Milton & Tsang, 1993; Altenberg & Tapper, 1998; Bolton et al., 2003; Narita et al., 2004; Chen, 2006) in that the numbers of DCs and their frequency of usage were much higher in the NNS groups than in the NS group, especially in the Additive category. As mentioned earlier, there were distinctive differences between the NS and NNS groups in the usage frequency of DCs from the Causal and Temporal categories. For the Causal category, Channawongsa (1986) observed that when Thai learners produce written texts or even spoken ones, they usually use Thai conjunctions in the category of Relation of result, for instance, *จึง* /cyŋ/, *ก็* /kô/, *ดังนั้น* /daŋ-nán/, *ดังนั้น...จึง* /daŋ-nán...cyŋ/, *เลย* /lɔɔj/, *ก็เลย* /kô-lɔɔj/, *เพราะฉะนั้น* /phró-chanán/, *เพราะฉะนั้น...จึง* /phró-chanán ... cyŋ/ ('therefore', 'as a result', 'so', 'as a consequence') to show results or consequences throughout their essays. Therefore, they transferred their usage of Thai conjunctions into their argumentative essays written in English, resulting in their essays being full of DCs from the Causal category and consequently creating a significant difference from the usage patterns of the NSs.

For the Temporal category, the problems in the use of NNSs were influenced by the three interlanguage processes: (1) transfer of training, (2) strategies of second language learning, and (3) strategies of second language communication. For (1), the way NNSs learn English is through formal learning. That is to say, both teacher training and teaching materials influence the NNSs' use of DCs. It has been found that the teacher training also affects the usage of DCs creating distinctive differences between NSs and NNSs. Both NNS groups had similar patterns in terms of using DCs from the "Ordering"

category as it is a very good mnemonic device that teachers always use when teaching. The words “first”, “firstly”, “second”, “secondly”, etc. were used widely by the NNSs, but these ordering words were rarely used by the NSs. Teaching materials, especially commercial textbooks, are also another factor of producing overly fancy lexis in inappropriate contexts as mentioned in Crewe (1990, p. 317). Textbook advice creates such confusion in the use of DCs in students’ writing because the way in which lists of DCs are presented is not obviously clear. As mentioned in Zamel (1984, p. 111) “The fact is that non-equivalents are frequently offered as equivalent alternatives in the lists”.

Moreover, the pattern of using Ordering DCs is one technique emphasized under the strategies of second language learning and of second language communication. It was also found that using Ordering DCs like “first”, “second” or “third” was also one of the techniques for helping NNSs to memorize what they have learned and to communicate with NSs because it is easier to understand each other by following such a numerically ordered system.

As can be seen in Table 5.1, there were differences between the NSs and the NNSs in their usage patterns of DCs from the Causal and Temporal categories. This observation was confirmed by the results of the Scheffe inferential statistic test as shown in Table 5.2.

Table 5. 2: The Scheffe results of Causal and Temporal categories among three sample groups

Dependent Variable	(I) G	(J) G	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Causal	1	2	-1.500*	.526	*.022	-2.82	-.18
		3	-1.500*	.526	*.022	-2.82	-.18
	2	1	1.500*	.526	*.022	.18	2.82
		3	.000	.526	1.000	-1.32	1.32
	3	1	1.500*	.526	*.022	.18	2.82
		2	.000	.526	1.000	-1.32	1.32
Temporal	1	2	-1.250*	.442	*.024	-2.36	-.14
		3	-1.350*	.442	*.013	-2.46	-.24
	2	1	1.250*	.442	*.024	.14	2.36
		3	-.100	.442	.975	-1.21	1.01
	3	1	1.350*	.442	*.013	.24	2.46
		2	.100	.442	.975	-1.01	1.21

Note:

1 = NSs, 2 = NNSHs, 3 = NNSLs

\*. The mean difference is significant at the 0.05 level

Table 5.2 reveals a significant difference between the NSs and the two NNS groups in their usage of DCs from the Causal and Temporal categories. The t-test was from .013 - .024 ( $p < 0.05$ ) in both groups. On the other hand, no significant difference was observed between the NNSHs and NNSLs. The t-test was from .975 ( $p < 0.05$ ). For the Temporal category, there was a significant difference between the NSs and NNSs. The t-test was .024 ( $p < 0.05$ ) in the comparison between the NSs and NNSHs, and the t-test was .013 ( $p < 0.05$ ) when comparing between the NSs and the NNSLs. From Table 5.1 and Table 5.2, it was found that there were significant differences between the NSs and NNSs, both the High and the Low group, in their usage of DCs from the Causal and Temporal categories. The hypothesis was that the NNSHs use DCs in a more target-like manner, whereas the NNSLs use DCs differently from the NSs. It was found that this hypothesis was rejected.



### 5.1.2 Orthographic aspect

This aspect was concerned with the rules of transferring speech into writing, such as spelling and punctuation, according to the rules of accepted usage. This study divided the analysis of orthography into two parts: spelling and punctuation. Descriptive statistics were used to explain the DC usage among the three sample groups. Table 5.3 below illustrates a summary of DC usage in the orthographic aspect among the three sample groups.

Table 5.3: The summary of DC usage in the orthographic aspect

Sample	Total DCs in 20 essays	Spelling						Punctuation					
		Total usage		Correct		Incorrect		Total usage		Correct		Incorrect	
		Token	%	Token	%	Token	%	Token	%	Token	%	Token	%
NSs	260	260	100.00	260	100.00	0	0.00	117	100.00	85	72.65	32	27.35
NNSHs	295	295	100.00	293	99.32	2	0.68	156	100.00	100	64.10	56	35.90
NNSLs	310	310	100.00	306	98.70	4	1.30	171	100.00	116	67.84	55	32.16

It can be seen that while the NSs made no errors in spelling, the NNSs did make some spelling errors. For the NNSHs, the two DCs which were found to be incorrectly spelled included “beside” instead of “besides” and “eventhough” rather than “eventhough”, whereas from the NNSL data, the four DCs spelled incorrectly were “in the other hands” and “in the other hand” instead of “on the other hand”, “although” rather than “although”, and “conclusion” instead of “in conclusion”

One interesting point was the erroneous spelling of “on the other hand” by the NNSL group. Incorrect versions of this DC were recorded as “in the other hand” and “in the other hands”. These errors suggest a negative L1 transfer. This transfer was from translating Thai prepositions into English. In Thai, “on the other hand” means ในทางกลับกัน /*nai thāng klapkan*/where ใน /*nai*/ means “in”. This error may also be attributable to strategies of second language learning. Such strategies are used to help learners acquire the target language. In this way, Thai learners think in their mother tongue first, and then write in the target language. Due to this assumption, the NNSLs translated and transferred the use of “in” from the Thai preposition to English DC “on the other hand”.

In terms of punctuation, it was found that the NSs also made errors in the use of punctuation, particularly in the use of commas. For example:

(97) We are limited only by our imaginations and the future of this invention looks "bright" indeed.

(98) Computers do many useful and wonderful things but people have often experienced the drawbacks of such a wonderful invention.

(99) In short, I don't know what life was like before computer but its invention has changed the way we see and do things.

According to Turabian (1996, p. 52), in sentences containing two or more independent clauses joined by a coordinating conjunction, a comma is placed before the conjunction.

Gowers *et al.* (1987, p. 155) stated that “the use of commas cannot be learned by rule”. This comment is supported by the idea of light and heavy punctuation styles (Huddleston & Pullum, 2002). According to Gowers *et al.* (1987, p. 156), learners acquire “the correct use of comma by common sense, observation and taste”.

For the NNSs, both the High and the Low groups, three interlanguage developmental stages were found: (1) L1 negative transfer; (2) overgeneralization; and (3) strategies in L2 learning—avoidance of error. The L1 negative transfer had an effect not only on the spelling, but also on the punctuation. The results show that there was no use of commas in the required positions. This may be due to interference from Thai grammar structure, as in Thai sentences, there is no use of commas or any punctuation to separate phrases, clauses or sentences. When the NNSs applied this rule into their English writing, the results were ungrammatical sentences.

It was also observed that the NNSs not only used more punctuation compared to NSs (NSs 117, NNSHs 156, NNSLs 171), they also used a higher number of wrong punctuation. For example, instead of using a semicolon, the NNSs used a comma to separate two clauses without employing any DCs. This mistake could be due to either their insufficient knowledge of punctuation or their overgeneralization of the comma rule.

In addition, the findings revealed an interesting detail which was the overuse of commas. It could not be said that this was an absolute error because sometimes the rule

of using the comma is optional, as Gowers et al. (1987) referred to as “style”. For example, using the comma too much in an essay can make the writing look “heavy” and unnatural. As mentioned earlier, sometimes the use of the comma is optional, but sometimes it is an obligation, which means it is marked as an error if no comma is used in such a position. Thus, the NNSs employed strategies of L2 learning—avoidance of error in their writing. Through their intention to avoid making errors, they chose to place commas in nearly all positions where DCs were used. For example:

(100) Parent should pay attention, and give them some suggestion.

(101) Otherwise, if we use it in the wrong and improper ways, it’s the disadvantages, and ready to ruin you all time.

From Table 5.3, it can be seen that there were a high rate of errors in the use of punctuation. For the NNSs, they learn how to use punctuations through commercial textbooks and grammar books, so the book authors’ writing styles may have an influence on the learners’ use of punctuation. As Gower *et al* (1987, p.155) stated, the problem of using punctuation is that “conventional practice vary from period to period, but good writers of the same period differ among themselves”.

It could be said that the NSs learn their native language through a communicative context while the NNSs always learn the comma usage from the rules in English grammar texts. Therefore, using common sense in applying English grammar is difficult for NNSs because most of the time they learn the language in the classroom, explicitly through language instruction, particularly from grammar books and not from authentic texts.

From the errors found in the data, it could be summarized that both the NNSHs and NNSLs had developmental interlanguage stages of learning English which could be from the negative L1 transfer, strategies of second language learning, transfer of training, or overgeneralization.

The hypothesis proposed that the NNSHs use DCs in a more target-like manner, whereas the NNSLs use DCs differently from the NSs. It was found that the hypothesis was rejected. Both the NNSHs and the NNSLs had similar patterns in the use of

punctuation. The problems of using DCs for both NNS groups were not only from L1 transfer, but also from strategies of second language learning, transfer of training, and overgeneralization. The results supported the hypothesis only on the use of DCs in terms of the Orthographic aspect.

### 5.1.3 Syntax

Sentence types and sentential positions were the two aspects of Syntax to be analyzed. Sentence types are described first. As mentioned previously, sentence types are divided into three types: Simple (S), Compound (CP), and Complex (CX). The frequency of DC usage in each sentence type is given in percentages. Table 5.4 below illustrates the summary of DC usage in sentence types of the three sample groups.

Table 5. 4: The summary of DC usage in sentence types of the three sample groups

Samples	Number of sentences	Number of Sentence Types					
		S.		CP.		CX.	
		No.	%	No.	%	No.	%
NSs	258	67	25.97	166	64.34	25	9.69
NNSHs	280	104	37.14	148	52.86	28	10.00
NNSLs	298	135	45.30	100	33.56	63	21.14

Table 5.4 shows similar patterns in the use of sentence types among the NSs and the NNSHs. They both produced compound sentences the most, followed by simple and complex sentences. Conversely, the NNSLs produced simple sentences the most, followed by compound and complex sentences. The use of simple sentences in the NNSLs represented a high proportion. This may be a result of their limited English proficiency level. Even though the NNSs in this study were divided by English exposure and not by English proficiency, the English exposure questionnaire has proven that learners with different degrees of language exposure differ significantly in their performances. One of many second language learning techniques which instructors suggest to limited English proficiency learners is to keep their language simple, i.e., keep word choice simple and keep sentences simple (Carteret, 2012). It seems that the

Low group was told to use the avoidance strategy. From the descriptive statistics, it can be said that, in terms of sentence types, DC usage by the NNSHs was similar to that of the NSs. The proposed hypothesis in this respect was that NNSHs use DCs in argumentative essays in a more target-like manner, whereas NNSLs use DCs in argumentative essays in a way this is different from they are used by NSs. In this case, the hypothesis was accepted.

However, in order to identify the similarities and differences among the three sample groups, the inferential statistic, Scheffe, was used to show multiple comparisons. The comparisons could be summarized as (1) the NSs to the NNSHs, (2) the NSs to the NNSLs, and (3) the NNSHs to the NNSLs. Table 5.5 below illustrates the Scheffe results in terms of sentence types.

Table5. 5: The Scheffe results in Sentence Types

Dependent Variable			Mean Difference (I,J)	Std Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
S	1	2	-2.2	0.957	0.08	-4.61	0.21
		3	-3.750*	0.957	*.001	-6.16	-1.34
	2	1	2.2	0.957	0.08	-0.21	4.61
		3	-1.55	0.957	0.278	-3.96	0.86
	3	1	3.750*	0.957	*.001	1.34	6.16
		2	1.55	0.957	0.278	-0.86	3.96
CP	1	2	0.95	1.171	0.721	-1.99	3.89
		3	3.000*	1.171	*.045	0.06	5.94
	2	1	-0.95	1.171	0.721	-3.89	1.99
		3	2.05	1.171	0.225	-0.89	4.99
	3	1	-3.000*	1.171	*.045	-5.94	-0.06
		2	-2.05	1.171	0.225	-4.99	0.89
CX	1	2	-0.55	0.731	0.755	-2.39	1.29
		3	-2.250*	0.731	*.013	-4.09	-0.41
	2	1	0.55	0.731	0.755	-1.29	2.39
		3	-1.7	0.731	0.076	-3.54	0.14
	3	1	2.250*	0.731	*.013	0.41	4.09
		2	1.7	0.731	0.076	-0.14	3.54

Note:1 = NSs, 2 = NNSHs, 3 = NNSLs

\*. The mean difference is significant at the 0.05 level.

Table 5.5 shows that there was a significant difference between the NSs and the NNSLs in their use of Simple sentences. The t-test was .001 ( $p < 0.05$ ). On the other hand,

there was no significant difference between the NSs and NNSHs (0.08,  $p < 0.05$ ) nor between the NNSHs and NNSLs. The t-test was .278 ( $p < 0.05$ ). In the use of Compound sentences, there was a significant difference between the NSs and the NNSLs. The t-test was .045 ( $p < 0.05$ ). There was also a significant difference between the NSs and the NNSLs in the use of Complex sentences. The t-test was .013 ( $p < 0.05$ ). Interestingly, there was no significant difference between the NSs and the NNSHs in the use of all three sentence types. In contrast, there were significant differences between the NSs and the NNSLs in the use of all three sentence types. The results from both the descriptive statistics in Table 5.4 and the inferential statistics in Table 5.5 support the proposed hypothesis that the NNSHs use DCs in argumentative essays in a more target-like manner, whereas the NNSLs used DCs in argumentative essays differently from the NSs.

The second aspect to look into was sentential positions. In this study, there were three sentential positions: initial, medial, and final. The summary of DC usage in the sentential position is analyzed by descriptive statistics in the form of percentages. Table 5.6 below illustrates a summary of DC usage in terms of Sentential positions by the three sample groups.

Table 5. 6: The summary of DC usage in Sentential positions by all three sample groups

Samples	Number of sentences	Number of Sentence Types					
		IN		ME		FI	
		No.	%	No.	%	No.	%
NSs	258	60	23.26	194	75.19	4	1.55
NNSHs	280	97	34.64	175	62.50	8	2.86
NNSLs	298	153	51.34	139	46.64	6	2.01

For the sentential positions, it can be seen that the findings in relation to sentence types as seen in table 5.4 and the findings with regard to sentential positions as illustrated in table 5.6 are correlated with each other. That is, if compound sentences

are used the most, then the medial positions should also be used the most, as well. The NSs and NNSHs also had the same sentential patterns. Their DCs were mostly applied in medial positions, followed by initial and final positions, whereas the NNSLs mostly used initial positions, followed by medial and final positions. One remarkable case of DC usage which was only found in the NNS group was the use of “and” in the initial position.

Even though the idea of avoiding the use of “and” at the beginning of a sentence is outdated (Gowers *et al.*, 1987, p. 98), there were no cases of using “and” in the beginning of a sentence in the data collected from the NSs. Gowers *et al.* (1987) explained that beginning a sentence with “and” may reinforce what you have just said, but using it often may lead to a mannerism. From the findings in Table 5.6, it can be seen that the hypothesis was accepted as the NNSLs exhibited high DC usage in initial positions and this differed from the usage patterns of the NSs and the NNSHs.

Due to the fact that writing is the most difficult language skill for ESL and EFL students, and even for native speakers of English (Norrish, 1983; Hinkel, 2002), it is unsurprising that the results reveal all three sample groups made some errors in their use of sentence structures. The differences and the errors in the use of DCs by the NNSHs and the NNSLs clearly reflected the fact that they adapted interlanguage processes into their English writing. For the errors made by the NNSHs and NNSLs, it could be reported that these were the result of Negative L1 Transfer. Most ungrammatical sentences were in the use of “although” or “even though” in conjunction with “but”, which mirrors a Thai conjunction structure. The word “although” has equal meaning to the Thai conjunction ถึงแม้ว่า /thǎy-n-méε-wâa/. It has been mentioned in Thai cohesive devices in the use of Contrastive relation and Concessive relation (Chanawangsa, 1986) that in Thai sentence structure, ถึงแม้ว่า /thǎy-n-méε-wâa/ is always used with แต่ /tèε/, which is “but” in English. To put it simply, Thai people always use ถึงแม้ว่า...แต่ /thǎy-n-méε-wâa...tèε/ which can be transcribed to “although... but” in

English. This negative L1 transfer clearly had an impact on the use of DC in sentences produced by the Thai learners of English.

#### **5.1.4 Semantics and Pragmatics**

There was a total of 62 DCs Lexis which were used by all three sample groups. However, only two of these DCs did not have a one-to-one relationship between their semantic and pragmatic function. These two DCs were “and” and “finally”.

##### **5.1.4.1 The pragmatic function of “and” and “finally” by the NSs, NNSHs and NNSLs**

The semantic function of “and” is placed in the addition sub-category under the main Additive category by all scholars (Halliday & Hasan, 1976; Biber et al., 1999; Cowan, 2008). However, it was also used by the sample groups in this study to serve some other pragmatic functions, i.e. Adversative, Causal and Temporal. For “finally”, the semantic function of this DC is in the ordering sub-category, under the main Temporal category. In this study, however, it was also found to be pragmatically used in the summation sub-category under the main Causal category. For the sake of reliability and validity, all DCs which did not have a one-to-one relationship between their semantic functions and their pragmatic use were reanalyzed by the researcher, and rechecked by the three native experts in Linguistics, English Literature and English Language Teaching. The usage frequency of “and” and “finally” by the three sample groups is reported in Table 5.7.



Table 5. 7: The usage frequency of “and” and “finally” as the Pragmatic function by all three sample groups

Pragmatics							
		AND			FINALLY		
Main	Sub	NSs	NNSHs	NNSLs	NSs	NNSHs	NNSLs
Category	Category	Token	Token	Token	Token	Token	Token
Adversative	Contrast	2	1	0	0	0	0
	Concession	1	1	0	0	0	0
Causal	Result/inference	6	6	5	0	0	1
Temporal	Ordering	0	0	0	0	0	0
	Summation	0	0	0	1	1	0
Continuatives	Transitions	0	0	0	0	0	0
<b>TOTAL</b>		<b>9</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>

As seen in Table 5.7, 22 tokens (9+8+5) of “and” and 3 tokens of “finally” were used among the three groups. The tokens of “and” were mostly found to have been used in the Causal category, accounting for 6 out of 9 tokens in the NS group, 6 out of 8 tokens in the NNSH group, and 5 out of 5 tokens in the NNSL group. For the NSs, “and” was used to show contrast and concession in the text. The use of “finally” was to exhibit summation. Surprisingly, the NNSHs followed a similar pattern to the NSs in the use of “and” and “finally”. Interestingly, for the NNSLs, “finally” was used to express result/inference.

From descriptive grammar, “and” is used to connect words of the same part of speech, to link clauses or sentences that are to be taken jointly, or to introduce additional comments. In the typical NNSs’ classroom, “and” is rarely explained as being used in a similar way to “but”. Writing experts (PurpleFeather, 2015b) explain that when people use “and”, this word can open up the possibilities in the subconscious mind, whereas “but” always close them down.

For example,

(110) It’s a beautiful day, and I can’t see it.

The “and” in this sentence showed the contrast between the first part of the sentence and the second part. The most appropriate DC in this position should be “but”.

The sentence should, therefore, be rewritten as “It’s a beautiful day, but I can’t see it.” However, if “but” is used here, it will block the positive idea of this sentence.

## 5.2 Implications of the study

### 5.2.1 Theoretical implications

Conjunction is studied and referred to by many different terms, for example, conjunction (Halliday & Hasan, 1976; LaPalombara, 1976), conjuncts (Zamel, 1984; Quirk et al., 1985), connectives (Huddleston & Pullum, 2002), connectors (Granger & Tyson, 1996), discourse markers (Fraser, 1999; Parrot, 2000), discourse connectors (Cowan, 2008; Kalajahi *et al.*, 2012), logical connectors (Milton & Tsang, 1993; Celce-Murcia & Larsen-Freeman, 1999; Pichastor, 2005), logical connectives (Crewe, 1990), and linking adverbials (Biber *et al.*, 1999). The differences are in the reference terms, and their perspectives of use, particularly in the position. Basically, their functional categories are similar as they all categorize their terms by using semantic functions. For example, Halliday and Hasan (1976) grouped conjunctions by their semantic functions. Conjunctions in their framework can be divided into five subtypes: (1) Additive, (2) Adversative, (3) Causal, (4) Temporal, and (5) Continuatives. Later, Biber *et al.* (1999) re-categorized conjunctions (Halliday and Hasan’s term) by their semantic functions as well, which they called “linking adverbials”. The primary function of linking adverbials is to signal the connections between passages of text, and to state the perception of the speaker or writer between two units of discourse. There are six categories of linking adverbials: (1) Enumeration and Addition, (2) Summation, (3) Apposition, (4) Result/Inference, (5) Contrast/Concession, and (6) Transition. Cowan (2008) also adapted the framework of Halliday and Hasan (1976) and Biber *et al.* (1999) by focusing on the semantic use of the conjunctions. He prefers to use the term “discourse connectors” as he explains that DCs are “words and phrases that, typically, connect information in one sentence to information in previous sentences”. In his framework, discourse connectors are subcategorized into seven types based on their semantic function: (1) Ordering, (2)

Summary, (3) Addition, (4) Exemplification and Restatement, (5) Result, (6) Concession, and (7) Contrast. All three frameworks of DCs from Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008) can be summarized as shown in Table 5.8.

Table 5.8: The relationship among the three frameworks: Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008)

<b>Biber <i>et al.</i> (1999)</b>	<b>Halliday &amp; Hasan (1976)</b>	<b>Cowan (2008)</b>
Addition		Addition
Example	Additive	Exemplification
Restatement		Restatement
Contrast		Contrast
Concession	Adversative	Concession
Result/Inference	Causal	Result
Enumeration		Ordering
Summation	Temporal	Summary
Transition	Continuatives	-

Comparing English DCs to the categories their Thai equivalents, Thai conjunctions are divided into three categories: Causal Relation, Relation of Purpose, and Relation of Result. The model may be adapted to the Causal category in English.

All three frameworks of DCs from Halliday and Hasan (1976), Biber *et al.* (1999), and Cowan (2008) categorized DCs by their semantic functions.

However, in this study, it was found that, pragmatically speaking, DCs had multiple functions which varied according to the context of use. This means that each DC may not have a one-to-one relationship between its semantic function and its pragmatic use. For example, “and” in the Additive category can be used to serve an Adversative, Causal or Temporal function as mentioned in the research of Gowers *et al.* (1987). In addition to “and”, it can be said that “but” can also have multiple functions, so all DCs should be observed in terms of their pragmatic function, or to put it another way, the language in the context of use. Interestingly, this pragmatic use is not taught in the descriptive grammar which the NNSs learn. As I mentioned previously, the NSs learn English from a communicative context, so they have an awareness of using DCs

in their pragmatic functions, whereas the NNSs learn language through formal learning, so they learn English from the classroom through instructors and commercial textbooks. There should be more studies on the pragmatic use of DCs from authentic texts of different genres. We may find a theoretical framework of DCs in the study of Discourse Grammar.

### **5.2.2 Pedagogical implications**

The findings of this study have led to a few implications for teaching English DCs to Thai students.

One of the interlanguage developmental stages that was found to be problematic for the NNSs was L1 negative transfer, which could be seen from the use of “although” and “but” in the same sentence. To overcome this, teachers should employ authentic reading and listening materials into the classrooms so that students can become familiar with the communicative functions of the language and learn more about the pragmatic functions of the DCs. For example, a short video on YouTube produced by a user named PurpleFeather (PurpleFeather, 2015a) showed the power of words by using one DC in the sentence: “It’s a beautiful day, and I can’t see it.” In this way, Purple Feather was able to express that “and” here can create a positive connotative idea for readers, whereas if “but” was used instead of “and”, it would block the positive idea of readers with a more denotative semantic meaning of the word “but”.

The transfer of training was also one of the interlanguage developmental stages which was found to be problematic for the NNSs. Teachers who instruct English DCs to Thai students should not only teach the semantic meanings of the DCs, but should also teach the form or syntactic use as not all DCs which have the same or similar meaning are used interchangeably in terms of syntax. Moreover, how meaning is interpreted in context, the so-called pragmatic use, should be introduced when teaching the use of DCs. Due to the fact that the use of DCs is not decontextualized, instructors should teach DCs in the discourse or suprasentential (above the sentence) level. As suggested in Larsen-Freeman and Anderson (2013), students should work with language at the discourse level as they can learn about cohesion and coherence, which

bind the sentences together. This can raise learners' awareness of the use of DCs in their writing.

Commercial textbooks are part of the 'transfer of training', but instructors should not rely only on these semantic teaching materials in the curricula. Authentic texts written by native speakers of English should be introduced into the classroom so that the NNSs gain more awareness of using DCs through reading natural texts, and can apply and assimilate the rules they observe in these texts when writing their own essays. Students could even be given dictation exercises to reinforce the pragmatic usage of DCs before being assigned an essay on a similar topic. This can help them to integrate the skills from reading and listening into writing. If learners understand the use of DCs, their proficiency in reading and writing skills would be improved too as the use of DCs can support reading and writing strategies (Geva, 1992; Susan R Goldman & John D Murray, 1992; Chung, 2000; Ozono & Ito, 2003).

A corpus should be introduced to a classroom as a teaching medium. The use of a corpus has been applied in lexical studies, grammatical studies, semantics, pragmatics, stylistics, sociolinguistics, discourse analysis, and language pedagogy. One of the advantages of using a corpus is that it can help to improve grammatical descriptions (McEnery & Xiao, 2005).

For example, the explanation of grammar in these two dictionaries – the Longman Grammar of Spoken and Written English, and Collins COBUILD English Language Dictionary – were based on a corpus. Instructors may use a corpus to create exercises based on real examples where learners can discover various features of language use, i.e., discourse connectors.

Even though analyzing argumentative essays in order to find the degree of argument in each essay is a small part in this study, it can be broadened to some extent by having the NNSs produce English argumentative essays by following the framework provided in figure 5.1. Moreover, it is beneficial for English instructors to use this framework as a guideline for developing teaching materials on writing argumentative essays based on the understanding of DC usage. In the framework illustrated in Figure

5.1, the importance of DC usage is illustrated through the use of “markers” in nearly all stages of the writing.

Figure5. 1: An example of an argumentative essay framework

Hyland's framework	
<b>1. Thesis Stage</b>	
1.1 <b>Gambit:</b>	to capture the reader's attention
1.2 <b>Informing moves:</b>	to present background material for topic contextualization
1.3 <b>Evaluation:</b>	to support proposition
1.4 <b>Marker:</b>	to identify a list
<b>2. Argument Stage</b>	
2.1 <b>Marker:</b>	to signal the introduction of a claim
2.1.1	listing signals
2.1.2	transition signals
2.2 <b>Claim</b>	
2.2.1	strength of perceived shared assumptions
2.2.2	a generalization based on data or evidence
2.2.3	force of conviction to state reason for acceptance of the proposition
2.3 <b>Support:</b>	to support the claim
<b>3. Conclusion Stage</b>	
3.1 <b>Marker:</b>	to signal conclusion boundary by using “thus”, “therefore”, “to conclude” etc
3.2 <b>Consolidation:</b>	to refer back to previous content of the argument
3.3 <b>Affirmation:</b>	to restatement of the proposition
3.4 <b>Close:</b>	to widen context or perspective of proposition

This kind of writing framework can heighten learners' awareness to learners of DCs as they can clearly see the importance of DCs in writing an essay.

One of the main implications for teaching English is a corpus compilation. This study contributes a corpus of Thai argumentative essays which were compiled from 300 Thai university students aged between 18-23 from in and around Bangkok. The specific criteria for this corpus were as follows: (1) They are timed argumentative essays (90 minutes); (2) They are written with no use of reference tools; and (3) The writers were writing on the same topic. This corpus can be used for other research into the problems of Thai students; in particular, the writers' English Language Exposure scores could also lead to interlanguage studies of different linguistics features such as lexical studies, grammatical studies, semantics, pragmatics, stylistics, discourse analysis, and language

pedagogy. It can be used as in-class activities in writing courses, such as identifying errors, locating cohesive devices, and giving comments.

### **5.3 Recommendations for further research**

There are a few recommendations for further research given herewith. In terms of the materials of study, it is necessary to conduct interlanguage study of DC usage in other kinds of essays, such as Expository, Descriptive, and Narrative essays. This would enable researchers to identify the patterns of DC usage in those other types of essays, and this information could then be used to improve the essays of NNSs to be near-native-like. It would also be challenging to study the pragmatic usage of DCs in professional NS argumentative texts or speeches such as Op-eds or presidential debates. Presidential debates represent a high-level spoken form of argumentative genre, while Op-eds present various degrees of argumentative discourse in a written form. In terms of research methodology, it would be much clearer to have interviews with participants to complement the findings of DC usage from the corpora. This would make it easier to understand whether learners produce DCs to mean something or they just make an error in using them. Further studies can also be set as having a pre-test and a post-test to evaluate learners' understanding of DC usage in argumentative essay writing. More studies using large corpora of the authentic English used by NSs should be done on the use of DCs in spoken and written discourse which would lead to a better understanding of DCs use among native speakers. These studies will increase the awareness of the complexities of DCs to be introduced in English language teaching and learning.

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# APPENDICES



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY



## APPENDIX A

## ENGLISH LANGUAGE EXPOSURE QUESTIONNAIRE

Questionnaire No.....

**Guidance Information**

The questionnaire consisted of 3 parts: 1) Information about English language experience and the amount of its exposure at home and school, including English language proficiency from past till present 2) Information about the amount of time spent on all kinds of learning methods: formal education, extra curriculum and English self-practice activities and 3) Intensive English language exposure

**Part I:** Information about English language experience and the amount of its exposure at home and school, including English language proficiency from past till present

**Direction:** Please answer by placing a checkmark (✓) or writing down your answer *according to your true experiences.*

1. Name \_\_\_\_\_ Surname \_\_\_\_\_ Undergraduate year of study \_\_\_\_\_

2. Faculty \_\_\_\_\_ Major \_\_\_\_\_ University \_\_\_\_\_ Student code \_\_\_\_\_

3. Your high school \_\_\_\_\_

Public school     Private school     International School     Bilingual School

4. Mobile phone No. \_\_\_\_\_ E-mail \_\_\_\_\_

5. You were born in     Thailand     other countries (please specify) \_\_\_\_\_

If you were born in other countries, you live there for \_\_\_\_ month/year. (please specify)

6. The language (s) I usually speak at home (Check all that apply)

Thai language

Dialect (s), i.e., Northeastern Dialect, Southern Dialect (please specify) \_\_\_\_\_

Foreign Language (please specify) \_\_\_\_\_

7. The language (s) I usually speak with my family member is \_\_\_\_ (Check all that apply)

(Ex: I usually speak English language with my father.)

Thai language you speak with \_\_\_\_\_

Dialect (s) (please specify) \_\_\_\_\_ speak with \_\_\_\_\_

Foreign Language (please specify) \_\_\_\_\_ speak with \_\_\_\_\_

8. Except Thai language, the language (s) I comfortably use is/are

8.1. Listening and speaking 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

8.2. Reading and writing 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

9. I have studied English since I was \_\_\_\_

Home school (at home)

Preschool

Kindergarten

Lower Primary (year 1 to 3)

Upper primary (year 4 to 6)

B) Please place a checkmark (✓) to indicate your true experiences at school and university

1. On average, my grade in English courses at school and university is:

Level \ Grades		Grade 0 (F)	Grade 1 to 1.5 (D to D+)	Grade 2 to 2.5 (C to C+)	Grade 3 to 3.5 (B to B+)	Grade 4 (A)
		At School				
	Primary					
	Secondary					
At University						

2. On average, my English teachers at school and university **speak English to me in English courses:**

Level \ Marks		Never	Seldom (mostly Thai)	Sometimes (alternatively with Thai)	Often (Mostly English)	Always
		At School				
	primary					
	secondary					
At University						

**Part II:** In this section, the English language experience questionnaire used for investigating amount of time spent on all kinds of learning methods: formal education, extra curriculum and English self-practice activities.

**Direction:** Please place a checkmark (✓) to indicate the extent to which you think you had/have opportunities to expose to English language in each of the following situations.

Never = 0%    Seldom = 1-25%    Sometimes = 26-50%    Often = 51-75%    Extremely often = 76-100%

Situation	Marks				
	Never	Seldom	Sometimes	Often	Extremely often
1. Have you ever studied English with any foreign teacher at school or university?					
2. Have you ever studied other subjects in English? (except English)					
3. Have you ever studied in English lab?					
4. Have you ever presented any report in English language?					
5. Have you ever read some textbooks, written in English?					
6. Have you ever listened to English self-practice teaching CD or tape?					
7. Have you ever used English-English Dictionary?					
8. Have you ever written a diary or some essays in English?					

Situation	Marks				
	Never	Seldom	Sometimes	Often	Extremely often
9. Have you ever translated Thai documents into English?					
10. Have you ever summarize or take notes in English?					
11. Have you ever taken any courses in which English is the medium of communication with some friends who are native speakers of English?					
12. Have you ever listened to any English songs?					
13. Have you ever joined any extra curriculum activity using English language, i.e., debating, English club etc.?					
14. Have you ever watched any TV programs, news, TV series, documentary etc. in English language?					
15. Have you ever watched international films, dubbed or spoken in English?					
16. Have you ever had any correspondence or communication with the others in English language?					
17. Have you ever had any online communication such as MSN or Skype in English language?					
18. Have you ever read any English medias such as magazine or newspaper?					
19. Have you ever read any novels, comic books in English language?					
20. Have you ever read or accessed any internet-based documents, information or homepages in English language?					
21. Have you ever sent any short messages, i.e., SMS, BBM via mobile phone, using English language?					
22. Have you ever had any correspondence with the others, sending e-mails in English language?					
23. Have you ever used English language for connecting yourself with the others on any social network, i.e., Facebook, Line, Twitter?					
24. Have you ever played any online games using English language?					
25. Have you ever played any game using English language such as scrabbles or crosswords?					

**Part III: Intensive English language exposure**

**Direction:** Please answer by placing a checkmark (✓) or writing down your answer according to your true experiences.

1. During a regular semester, have you ever taken intensive course (s) of English language?

- Yes (answer further in question no. 1.1 - 1.2)  
 No (skip to question no.2)

1.1 Approximately, how many hours did you study English per week?

- 1-3 hours per week       3 - 6 hours per week       more than 6 hours per week

1.2 Your teacher (s) is/are \_\_\_\_

- Thai (answer further in question no. 1.2.1)  
 Foreigner (answer further in question no. 1.2.2)

1.2.1 While studying intensive English class, how much does your **Thai teacher use English to communicate with you?**

Never	Seldom (mostly Thai)	Sometimes (alternatively with Thai)	Often (Mostly English)	Always

1.2.2 While studying intensive English class, how much does your **foreign teacher use English to communicate with you?**

Never	Seldom (mostly Thai)	Sometimes (alternatively with Thai)	Often (Mostly English)	Always

2. Have you ever been abroad in some English - speaking countries?

- No (skip to question no. 3)  
 Yes (please specify) 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

2.1 How long did you stay there in each country?

- |              |  |   |
|--------------|--|---|
| Country No.1 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |
| Country No.2 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |
| Country No.3 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |

2.2 During the stay (s) in the place (s) you reported above, which choice can indicate the average extent that you think you used English.

Country Marks	Never	Seldom (mostly Thai)	Sometimes (alternatively with Thai)	Often (Mostly English)	Always
1					
2					
3					

3. Have you ever done some part-time jobs using English?

- No (skip to question no. 3)  
 Yes (please specify) 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

4. Have you ever taken some English course (s) abroad or English summer camp (s) in English - speaking country?

- No (End of the questionnaire)  
 Yes (please specify) 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

4.1 How long did you stay there in each country?

- |              |  |   |
|--------------|--|---|
| Country No.1 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |
| Country No.2 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |
| Country No.3 | <input type="checkbox"/> less than 1 week to 1 month | <input type="checkbox"/> 1 - 3 month (s)  |
|              | <input type="checkbox"/> more than 3 months          | <input type="checkbox"/> more than 1 year |

4.2 During the stay (s) in the place (s) you reported above, which choice can indicate the average extent that you think you used English.

Country Marks	Never	Seldom (mostly Thai)	Sometimes (alternatively with Thai)	Often (Mostly English)	Always
1					
2					
3					

*Thank you very much for your kind operation*





## APPENDIX C

The IPA system of Thai Transcription (Schoknecht, 2000, pp. 329-336)

## Initial Consonants

Thai	IPA
ป	p
ต,ฏ	t
จ	c
ก	k
อ	ʔ
พ,ภ,ผ	p <sup>h</sup>
ท,ธ,ฒ,ฑ,ถ,ฐ	t <sup>h</sup>
ค,ฆ,ช	tc <sup>h</sup>
บ	b
ด,ฏ	d
ม	m
น,ณ	n
ง	ŋ
ฟ,ฝ	f
ซ,ศ,ษ,ส	s
ฮ,ห	h
ร	r
ล,ฬ	l
ว	w
ย,ญ	j

### Final consonants

Thai	IPA
บ,ป,พ,ภ,ฟ	p
ต,ฏ ,ต,ฏ,ท,ธ,ฒ,ฑ, ถ,ฐ,จ,ช,ซ,ศ,ส ,ช	t
ก,ค,ข,ฆ	k
ม	m
น,ณ,ร,ล,ฬ,ญ	n
ง	ŋ
ว	w
ย	j

### Tones

Thai	IPA
mid	-
low	`
fall	˥
high	˨˩
rise	˨˩˥



**Vowels (Consonant position is indicated by ◌)**

Thai	IPA
◌ิ	i
◌ี	i:
◌ุ	u
◌ู	u:
◌ุ	u
◌ู	u:
◌เอะ	e
◌เี้	e
◌เอ	e:
◌เอือะ	ɤ
◌เอือ	ɤ:
◌โอะ	o
◌โ	o:
◌แะ	ɛ
◌แเี้	ɛ
◌แ	ɛ:
◌ะ	a
◌ั	a
◌า	a:
◌เาะ	ɔ
◌อ	ɔ:

**Diphthongs (Consonant position is indicated by ◌)**

Thai	IPA
เียะ	ia?
เีย	ia
เือะ	ua?
เือ	ua
ัวะ	ua?
ัว	ua
ิว	iw
เัว	ew
เัว	e:w
เัว	ɛw
เัว	ɛ:w
เัว	aw
เัว	a:w
เียว	iaw
ไ◌	aj
ใ◌	aj
เ้าย	a:ɲ
เือย	ɔj
เือย	ɔ:ɲ
ุ้ย	uj
เุย	uɲ
เ้าย	uaɲ
เือย	uaɲ
เือย	o:ɲ

### Other

Thai	IPA
ำ	am
า	a
ออ	o
อร	ɔ:n
อร	an
ฤ	ru
ฎ	ru:
ฤ	lu
ฎ	lu:

### Stress

	IPA
Primary stress	'
Secondary stress	ˈ

## VITA

Ms.Kamophan Jangarun graduated with a Bachelor of Arts degree majoring in English from Faculty of Liberal Arts and Science, Kasetsart University. In 2001, she was granted a scholarship from Commission on Higher Education to pursue her MA in English for Specific Purposes at Kasetsart University. She has been working as a lecturer at the Faculty of Liberal Arts and Science, Kasetsart University since 2004. In 2011, she commenced her doctoral study in the English as an International Language program of the Graduate School at Chulalongkorn University. In October 2014, she presented her research paper at CULI-LITU International Conference in Bangkok, Thailand. In January 2015, she presented her pilot study at “Confluence”, International Conference on English as a Second/Foreign Language in Nagpur, India. Later in December 2015, she also presented her study at the 20th International Conference of Pan-Pacific Association of Applied Linguistics (PAAL 2015) held at Korea University, Seoul, South Korea. Her paper was published in the Journal of PAAL 20(1).