

Matters of Cohesion in L2 Academic Texts

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This study presents a comparative analysis of median frequency rates of explicit cohesive devices employed in academic texts of students who were speakers of such languages as English, Japanese, Korean, Indonesian, and Arabic. Specifically, the study focuses on the median frequency rates of uses of explicit cohesion devices, such as phrase-level coordinators, sentence transitions, logical-semantic conjunctions, demonstrative pronouns, and enumerative and resultative nouns in academic texts of native speakers (NSs) and nonnative speakers (NNSs). The purpose of this study is determine the specific differences and similarities in the uses of explicit cohesion devices in a NS and NNS corpus of 897 academic essays totalling 265,812 words.

This quantitative analysis of common cohesive devices in NS and NNS academic texts indicates that even advanced NNS students who have completed their English as a second language (ESL) and composition training continue to rely on a restricted repertoire of features in constructing unified text. The study shows that, regardless of their native language (L1), speakers of Japanese, Korean, Indonesian, and Arabic employ sentence transitions and demonstrative pronouns at significantly higher median frequency rates than do NSs. However, in second language (L2) texts the sentence transitions do not necessarily mark a contextualized flow of information. In fact, in L2 texts, the preponderance of sentence transitions and demonstratives often reflects NNS writers' attempts to construct a unified idea flow within the constraints of a limited syntactic and lexical range of accessible linguistic means. Another issue that needs to be addressed in L2 writing instruction is the employment of coordinating conjunctions by speakers of Indonesian and Arabic.

Following the publication in 1976 of Halliday and Hasan's seminal work on cohesion in English, various types of cohesive devices in the flow of discourse gained prominence in studies in text linguistics. Halliday and Hasan

identify a system of syntactic and lexical features of language that extend beyond the sentence to make text unified by means of diverse semantic and connective devices, such as lexical ties that include diverse types of words, phrases, and syntactic constructions. According to the authors' classification, text references, e.g., pronouns, articles, lexical substitutions, conjunctions, and occurrences of related lexical items, all serve to contribute to text cohesion. In Halliday and Hasan's view, text cohesion in turn leads to greater text coherence.

While it is difficult to overestimate the importance of Halliday and Hasan's research in bringing text cohesion to the foreground of text analysis, some of their claims did not avoid criticism. For instance, Halliday and Hasan's premise that cohesion contributes to textual coherence was disputed by Carrell (1982). She explained that in her view, text cohesion is not necessarily a textual property that is manifested by means of grammatical or lexical connective ties, but rather that cohesion is an outcome of coherence when readers of text are able to derive the connectivity of ideas from their knowledge of the world (and text schema). Carrell further reported that when readers are able to connect text's ideas without relying on explicit cohesion devices, explicit cohesive ties are not needed to unify text's ideas (as in Carrell's example, *The picnic was ruined. No one remembered to bring a corkscrew* (p. 484)). Although Halliday and Hasan (1976) did not consider issues of language pedagogy in their research, Carrell (1982) further explained that in teaching L2 writing and composition to NNSs, cohesive devices should play a secondary role to instruction on organizing the flow of ideas in a text.

Current L2 pedagogy deals with matters of text cohesion in various ways. While composition and writing instruction continues to focus on the uses and meanings of cohesive devices, the teaching of L2 reading often seeks to address logical connectivity and flow of ideas in discourse and matters of organization in text progression.

In the teaching of L2 composition and writing, text cohesive devices, similar to those identified by Halliday and Hasan (1976), play an important role. Following their detailed study, researchers have undertaken further investigations of cohesion devices in English-language corpora of published texts. Among others, Biber (1988) and Myers (1989) found that in addition to coordinating conjunctions, nouns dealing with classification and categorization and demonstrative pronouns are frequent in written academic discourse because these features establish contextual ties between ideas. Other analyses also report that enumerative nouns, usually associated with categorization and division (*class, type, category, issue, matter, problem*), represent one of the key features of academic text (Tadros, 1994).

Despite these and other research findings, L2 instruction associated with cohesion in academic texts has largely continued to focus on specific and limited types of devices, such as sentence transitions and coordinating conjunctions intended to conjoin ideas and sentences overtly. For instance, Reid (1993) points out that in L2 writing instruction, the teaching of explicit cohesive devices, such as coordinators and sentence transitions, is common

because ESL writers often employ various cohesion conventions differently than native speakers (NSs) of English do and that L2 texts may sometimes appear incoherent to native readers. Reid emphasizes that text cohesion and issues in the coherence of ideas need to be taught to provide learners linguistic means of developing unified text.

Similarly, McCarthy (1991) comments that matters of cohesion and cohesive devices usually play an important role in English texts and that they need to be explicitly taught in L2 reading and writing instruction. He points out that demonstrative pronouns and nouns associated with enumeration and causative/resultative relationships of ideas in text require special attention from L2 teachers and learners. McCarthy also reports that many NNSs have difficulty understanding how cohesive and logical ties are constructed in text and that L2 instruction needs to address the lexical means of marking causative and resultative relationships, which learners may find confusing. Scott (1996) also underscores the importance of teaching L2 linguistic and lexical means of cohesion in written text because L2 learners often transfer from L1 to L2 rhetorical and syntactic devices for constructing unified text, even when proximate cohesion devices cannot be found in L2.

To date, comparatively few studies have addressed specifically how trained NNS writers employ lexical and syntactic devices in their written academic texts, although such an analysis can have various pedagogical uses and implications. The purpose of this study is to analyze the types and frequencies of explicit cohesion devices employed in NS and NNS academic essays included in a corpus of L1 and L2 student academic texts (897 essays/265,812 words). The ultimate goal of the present investigation is to identify the possible instructional foci in the teaching of lexical cohesive devices to academically-bound L2 learners.

The research presented below compares the NS and NNS frequencies of uses of common cohesion devices in academic essay text: coordinating phrase-level conjunctions (*and, but, yet, or*), sentence-level transitions (*however, moreover, in addition, on the other hand*), and logical-semantic conjunctions (*as well, because of, like, unlike, too, instead of*) intended to enhance connectivity of ideas in text. In addition, the analysis of cohesive devices also includes demonstrative pronouns, as well as enumerative (*advantage, disadvantage, problem*) and resultative (*end, outcome, result*) nouns. A full list of the cohesion markers included in the study is presented below.

Text Cohesion in Writing Instruction and Research in English

Discussions of uses of phrase-level coordinating conjunctions and sentence transitions are found in practically every textbook for teaching writing and composition and every manual for academic writing. For instance, Hacker (2000) provides a detailed list of coordinating devices (e.g. *and, but, so, yet*) and notes that these are used to establish a connection between two or more equally important ideas. She also comments that sentence transitions (e.g.,

however, in addition, moreover) and complex conjunctions (*also, besides, otherwise*) have the function of combining “choppy sentences” (p. 103) and coordinating ideas. Similarly, Beason and Lester’s (2000) guide to grammar and usage of features in academic text devotes substantial attention to the uses of conjunctions to organize ideas and indicate logical relationships between portions of text.

Axelrod and Cooper (1996) presented charts of phrase-level conjunction and sentence transitions organized according to their syntactic, semantic, and lexical functions and state that these serve “as a bridge connecting one paragraph, sentence, clause, or word with another” (p. 202). In addition, these authors devote sets of exercises for students to become familiar with the meanings, functions, and uses of various types of conjunctions and sentence transitions because these features play an important role in developing cohesive academic text.

In general terms, a vast majority of textbooks on L2 college-level and academic writing include a unit on the uses of phrase and sentence-level conjunctions which lists them and stresses their importance in text cohesion (Leki, 1999; Raimes, 1992, 1999; Swales and Feak, 1994). Smoke (2000) and Smalley and Ruetten (1995) also discussed various semantic classes of coordinators and sentence transitions to emphasize their importance in the cohesion of academic text. For example, Bates (1998, p. 149) provided detailed explanations that the functions of transitions is to indicate “to the reader a particular logical relationship between two clauses, sentences, or groups of sentences.” Her textbook for L2 writing further supplies detailed lists of sentence transitions accompanied by examples, activities, and exercises intended to promote L2 learners’ understanding of the meanings and uses of these cohesive features. In the teaching of L2 writing, it would be difficult to find an instructional text that does not devote at least some amount of attention to coordinating phrase-level conjunctions and, more importantly, sentence transitions.

On the other hand, demonstrative pronouns and enumerative and resultative nouns have received comparatively little attention in textbooks and guides for academic writers. Hacker’s (1994, 2000) and Lunsford’s (2001) volumes include one paragraph each on demonstratives to state that these pronouns identify or point to nouns and frequently function as adjectives. However, many other popular guidebooks for writers do not even mention the functions of demonstrative pronouns in text. According to Halliday and Hasan (1976), demonstrative pronouns can be classified as determiners that have cohesive and referential functions in English text. Quirk, *et al.* (1985) identified several functions of demonstratives in discourse and comment that these pronouns are often ambiguous in their referential and determinative properties.

Enumerative and resultative nouns are also not included in textbooks for writing. While most writing guides deal with a classification-based organization of ideas in discourse, the importance of enumerative and resultative nouns in developing cohesive text is highlighted almost exclusively

in text-based linguistics research. Corpus analyses of published academic text in English find that these nouns are a prominent characteristic of written academic prose because they introduce information elaborated further in the text (Tadros, 1994). Enumerative and resultative nouns in academic discourse can be associated with clarification in analytical texts, and they function as referential markers that present new ideas or restate the information discussed earlier. The main cohesive functions of enumerative nouns are to classify and categorize ideas or points, and/or to begin an explanation or detailed description (Halliday and Hasan, 1976). Some of these nouns are so common in writing and formal speech that many are often considered to be clichés (Quirk, *et al.*, 1985), e.g., *We will discuss several issues* and *This essay describes many problems with ...*

Cohesive Devices in Written Discourse in non-Anglo-American Rhetorical Traditions

Research on how text cohesion is established in Japanese, Korean, Indonesian, and Arabic rhetorical traditions points to the fact that phrase- and sentence-level conjunctions represent the most ubiquitous means of unifying ideas and information in text. Scollon and Scollon (1995) noted that the ways in which speakers of Korean and Japanese employ coordinators, such as *and* and *but* in English often result in confusing constructions when coordinators are employed in contexts where other types of cohesive devices are expected (such as, for example, subordinating conjunctions in complex sentences). In Japanese, Korean, and Indonesian, coordination of parallel constructions (phrases and sentences) may be indistinguishable from subordination because both types of structures employ particles and conjunctions to connect sentences (Shibatani, 1987; Sneddon, 1996; Kim, 1987).

Similarly, Ostler's (1987) study showed that in formal Arabic prose, coordination between phrases and sentences represents an essential means of establishing cohesion in text. She points out that Arabic rhetoric places high value on parallel and balanced constructions of phrases and sentences and that coordinating conjunctions, such as *and* and *or* are employed to link any type of parallel structures, e.g. nouns, verbs, phrases, and sentences. Ostler further demonstrated that compared to the discourse organization and the syntactic structures of essays written by NSs, the L2 writing of Arabic-speaking students contains a particularly high number of parallel structures, such as main and dependent clauses and complex strings of adjective, verb, and prepositional phrases. Other researchers, such as Sa'adeddin (1989), commented that colloquial Arabic relies on repetition of ideas and lexis, as well as frequent uses of coordinators as sentence and phrase connectors for rhetorical persuasion. Sa'adeddin noted that the L2 writing of many Arabic-speaking students demonstrates the transfer of cohesive features common in their colloquial language use.

In Japanese, demonstratives are not deictic but are objects of singular reference and can refer only to certain designated "objects in the world" rather

than objects in context (Watanabe, 1993, p. 304). Levinson (1983) noted that the use of demonstratives in many non-Indo-European languages, such as Japanese and Korean, can be a great deal more elaborate than in English. He pointed out that in these languages demonstratives can be organized with respect to the discourse roles of the writer and the audience and that similar uses of demonstratives are absent in English. On the other hand, Ostler (1987) noted that in formal Arabic prose, demonstratives and other text-referential pronouns are one of the prevalent means of establishing syntactic cohesion and parallelism in text and information flow. Because the uses of various cohesive devices in text vary in different languages, this study is particularly concerned with how NSs without formal training in writing and composition and NNSs who have completed their training employ overt means of cohesion in academic essays.

The Study

This study examines the ways in which speakers of such languages as English, Japanese, Korean, Indonesian, and Arabic employ overt cohesion markers in their L2 academic essays. Specifically, the study focuses on the median frequency rates of uses of explicit cohesion devices, such as phrase-level coordinators, sentence transitions, logical-semantic conjunctions, demonstrative pronouns, and enumerative and resultative nouns in L1 academic essays of NSs and L2 academic essays of NNSs. Through an analysis of these textual cohesive features together, the study sets out to investigate whether NS and NNS students employed various types of cohesion devices similarly in argumentation/ exposition essays common in university placement and diagnostic tests of students' writing skills.

Overt Cohesion Markers in Text

The explicit cohesion markers of each type in L1 and L2 essays were counted separately to obtain a median frequency of use in the essays for each group of speakers, NSs, Japanese, Korean, Indonesian, and Arabic. Specific cohesive markers are listed below, followed by brief descriptions of their textual uses and functions:

Conjunctions

Phrase-level/Coordinators: *also, and, both ... and, but, either ... or, neither ... nor, nor, not only ... but also, or, (and) then, yet.*

Sentence Transitions (by frequency and meaning): Enumerative—*first(-ly), second(-ly), third(-ly), fourth(-ly) ..., next, then; in the first/second/ third ... place; first/second/third ... of all; for one thing, to begin/start with, in conclusion, to conclude, finally, last(-ly), at last.* Additive—*above all, additionally, (once) again; in addition, likewise, similarly, in the same way, by the same token, even worse, furthermore, moreover; also, besides, then, still, yet, nevertheless, nonetheless, again, then (again),* (distinguished from phrase-level coordinators). Summative—*all in all, altogether, in sum,*

therefore, thus, to summarize, to sum up. **Resultative**—*accordingly, as a result, as a/in consequence, consequently, hence, now, (and) so* (excluding adverbial subordinators). **Concessive**—*after all, all the same, anyhow, anyway(s), at any rate, at the same time, besides, else, however, in any case/event, for all that, nevertheless, nonetheless, on the other hand, (better/and) still, that said, though* (in the sentence final position only), *(but) then/yet* (distinguished from the phrase-level coordinator, in the sentence final or initial position only). **Other** (focusing, contrastive, replacive, temporal, transitional)—*as a matter of fact, by the way, conversely, incidentally, in contrast, in fact, meantime/while, in the meantime/while, eventually, originally, on the contrary, otherwise, rather, somehow, subsequently.*

Logical/semantic conjunctions/prepositions: *as well, because of, besides, despite, except* (+noun phrase), *for that reason, in contrast (to/with), in spite of, instead of, in place of, in that case, in the event of, in this/that way, like, too, unlike.*

The use of phrase conjunctions assume a certain degree of syntactic and systematic interconnectedness among phrases and sentences when parts of text are related in meaning. Halliday and Hasan (1976) emphasize that relationships between ideas are not merely dependent on the presence of conjunctions but are derived from the functional and meaningful basis of text, i.e. text unity relies on the content and ideas in a text rather than on punctuation or other textual conventions. Chafe (1985) similarly points out that merely including coordinating conjunctions in the text without connectivity of ideas and their meanings results in a chaining of phrases/clauses and a fragmented writing style.

In a follow-up study, Halliday (1994) observes that logical semantic conjunctions are particularly useful in academic texts where they can establish meaningful connections between ideas based on logical and semantic relationships, such as causal or resultative. Biber's (1988) analysis identifies conjunctions as relatively common in published academic corpora compared to, for example, newspaper editorials or fiction. Biber *et al.* (1999) found that coordinating conjunctions are particularly prevalent in academic prose and are used at the combined rates of about 3% of all words. In addition, sentence-level conjunctions with various meanings, e.g. *first, second, however, in addition, so, therefore*, are also common but represent of .7% of all words in academic texts.

Demonstrative pronouns: *this, that, those, these*, excluding *that* used as a subordinator, relative pronoun, or complement.

In discourse flow, demonstrative pronouns have a "pointing-like function that may be spatial, temporal, or discursal" (Chafe, 1994, p. 97). Biber (1988) and Biber, *et al.* (1999) note that demonstratives are an important part of spoken genre discourse and are generally less common in academic discourse because demonstratives provide an imprecise textual reference.

Enumerative nouns: *advantage, angle, aspect, attempt, branch, category, circumstance, class, consequence, course [of action/to follow], criterion(a), deal, disadvantage, drawback, element, fact, facet, factor, form,*

item, motive, period, plan, problem, reason, stage, term, type.

Resultative nouns: *finish, effect, end, outcome, result.*

According to Tadros (1994), enumerative and resultative nouns are commonly used in analyses for the purposes of clarification. They function as text referential and cohesive markers that present new content or restate information. Halliday and Hasan (1976) comment that these nouns mark a distinction between given and new information to connect the ideational content of discourse flow. In academic prose, resultative nouns are relatively infrequent and refer to a completion of process, activity, or event (Tadros, 1994).

The Students

The essays analyzed in the study were written by 895 NS and NNS students during routine placement and diagnostic tests in four U.S. universities. All students were admitted to degree programs and were enrolled in mainstream classes. All students were given 50 minutes, i.e. one class period, to write the essays.

The 697 NNSs students who wrote the essays had attained a relatively high level of English language proficiency sufficient for a university admission, and their TOEFL scores ranged from 520 to 617, with a mean of 587. They included 184 speakers of Japanese, 166 of Korean, 183 of Indonesian, and 154 of Arabic. Of the NNS students, 78% were holders of U.S. associate degrees earned in various community colleges, and were admitted as transfers at the junior level in four-year comprehensive universities. These students had received at least three years of ESL and composition instruction in the U.S.: they had completed at least a year in academic intensive programs, followed by two years of academic college training. The remainder included 16% first-year students and 6% graduate students. The first-year students had graduated from U.S. high schools, and the majority had spent at least three years in the U.S. The graduate students had similarly completed their ESL studies in U.S. English for Academic Purposes programs and had resided in English-speaking environments for periods between 18 and 31 months. The 206 NS students were enrolled in required first-year composition classes. The individuals were graduates of U.S. suburban high schools in three states on the east and west coasts and the Midwest.

The Data

The essays were written in response to one of five prompts:

1. Some people believe that when parents make their children's lives too easy, they can actually harm their children instead. Explain your views on this issue. Use detailed reasons and examples..

2. Many people believe that grades do not encourage learning. Do you agree or disagree with this opinion? Be sure to explain your answer using specific reasons and examples.

3. Some people learn best when a classroom lesson is presented in a serious, formal manner. Others prefer a lesson that is enjoyable and entertaining. Explain your views on this issue. Use detailed reasons and examples.

4. Many educators believe that parents should help to form their children's opinions. Others feel that children should be allowed to develop their own opinions. Explain your views on this issue. Use detailed reasons and examples.

5. Some people choose their major field of study based on their personal interests and are less concerned about future employment possibilities. Others choose majors in fields with a large number of jobs and options for employment. What position do you support? Use detailed reasons and examples.

Of the total, 173 essays were written on Prompt (1), 171 on Prompt (2), 176 on Prompt (3), 185 on Prompt (4), and 190 on Prompt (5). The distribution of essays among the five prompts were proximate for students in each L1 group, as presented in Table 1.

Table 1. Distribution of Student Essays by Prompts

<i>L1 Group</i>	<i>Prompt 1 Parents</i>	<i>Prompt 2 Grades</i>	<i>Prompt 3 Manner</i>	<i>Prompt 4 Opinions</i>	<i>Prompt 5 Major</i>
N S s	44	36	40	47	39
Japanese	32	35	34	41	42
Korean	32	33	33	32	36
Indonesian	35	35	37	35	41
Arabic	30	32	32	30	32
TOTALS	173	171	176	185	190

Data Analysis

To determine whether NS and NNS students similarly employed cohesion devices, the occurrences of phrase-level coordinating conjunctions, sentence transitions, and logical-semantic conjunctions, and enumerative and resultative nouns in student essay texts were painstakingly tagged and counted by hand. In addition, the number of words in each essay was counted. Then computations were performed to establish the percentage rate of each feature use. For example, NS essay #1 for Prompt 1 consisted of 300 words and included 18 phrase-level conjunctions (*and, but, yet, or*), i.e. $18/300 = 6\%$, and 3 occurrences of sentence transitions ($3/300 = 1\%$). The computations

were performed separately for each feature and in each essay.

Because the number of essays written to each prompt by each L1 group of students were similar, the analysis of frequency rates of cohesion devices in students' texts was carried out based on pooled data for all essays combined. The Mann-Whitney U Test was selected as a conservative measure of differences between the NS and NNS data. The Mann-Whitney U Test compares two sets of data based on their ranks below and above the median, e.g., NS median frequency percentage rates of phrase-level conjunctions are compared to those in essays of Japanese speakers, then to those of Korean speakers, etc.).

Results and Discussion

The study findings are presented in Table 2. As the results of the analysis demonstrate, speakers of Japanese and Korean employed coordinating conjunctions in rates similar to those identified in NS essays. On the other hand, the essays of Indonesian writers contained significantly fewer of these markers, and the texts of speakers of Arabic included coordinators markedly more frequently than NS texts. Ostler's (1987) study similarly showed that L2 essays of Arabic speakers contained a higher number of coordinating conjunctions *and*, *but*, *or*, which imparted the sense of parallelism and rhythmic balance to text. For example,

1. *We all know that children are the flowers of our life. However, you can destroy these flowers by indulging and making their lives very easy. I believe that children become not independent and depressed people in the future when their parents make their lives very easy and spoil them. For example, the father gives money to his children whenever they ask, and actually, he doesn't ask why they need it or what he is going to do with this money. In fact, he might not even feel the need to go through any experience or work hard to prove himself because he learned that whatever he wanted was granted for him by his parents and that he lived his life and didn't care about anything.* (Arabic)

In (1), the text includes a number of coordinated phrases and sentences that add emphasis and conviction to the writer's points. Another goal of parallel constructions can be clarification and elaboration to cover the bases, e.g., *indulging and making their lives very easy, not independent and depressed, or to go through any experience or work hard.*

Table 2. Median Frequency Rates for Cohesion Markers in NS and NNS Academic Essays (%)

Markers/LIs	NSs	JP	KR	IN	AR
Phrase conjunctions	4.50	4.00	4.20	2.88**	5.97*
Range	8.55	6.06	9.79	3.02	12.78
Sentence Transitions	0.66	2.08**	2.10**	1.60**	1.05*
Range	4.81	5.87	8.85	4.95	3.08
Log/sem conjunctions	1.11	1.11	0.96	0.84	1.20
Range	3.85	3.65	2.00	2.14	17.26
Demonstratives	0.68	1.62**	2.00**	0.67	1.44**
Range	4.46	8.37	10.00	1.82	4.57
Enumerative nouns	0.64	0.42	1.25*	0.37	0.35
Range	4.17	3.67	8.63	1.79	1.44
Resultative nouns	0.00	0.00	0.00	0.26*	0.36*
Range	1.67	0.81	1.33	1.07	1.52

**2-tailed $p \leq 0.05$ * 1-tailed $p \leq 0.05$

Note: all comparisons are relative to NS text.

The essays of Indonesian speakers included relatively few coordinators, often resulting in short sentences without elaboration. For example:

2. *Do children really need parents? Yes, of course. Parents are the first people who really care and love their children. Parents love their children more than anything. They influence their children to build their own character. Sometimes, parents make their children's lives too easy. Never sane parents are happy to watch their children suffer. This is why parents give their children all the facilities they need. This thing basically makes children's lives too easy. The bright sides are if children use all of this facilities that their parents gave to improve their ability and skill for their future life. (Indonesian)*

The text in (2) largely consists of sentences without phrase-level conjunctions that coordinate parallel phrases to provide elaboration and/or detailed description. In fact, only two conjunctions, *and* and *or*, are identified in this 100-word excerpt, compared to seven phrase conjunctions in text (1).

In the texts of NNSs, however, coordinating conjunctions are employed some what differently to add or emphasize particular points in the text. For example,

3. *In almost every society, anywhere on this planet, there are children who have everything handed to them until they are adults. Most never have a job or a car payment or have to pay their own tuition. I know people who are 21 years old, and they have never had a job in their entire life, and you can see that in many ways they are different. The sad thing is, though, that a lot of these people don't care about ever having a job. They have no work ethic, and many don't care about people who are less fortunate than they are. I think that parents should teach their children responsibility and the value of hard work. (NS)*

In (3) the meanings of *and* and *or* vary among additive, resultative (*and you can see that they are different*), and/or emphatic (*have a job or a car payment or have to pay their own tuition*). Another interesting observation is that even in the case of seemingly simple coordinating conjunctions, the NS use of parallel phrases is somewhat syntactically more complex than mere chains of phrases, e.g., *have a job or payment* is a parallel noun phrase followed by a parallel verb phrase (*have or have*), which creates a dual parallelism at two different syntactic levels.

The NNS uses of sentence transitions were significantly higher than those in NS text for all L1 groups. One of the possible reasons for this disparity may lie in the fact that NNSs over-rely on sentence transitions to make their text cohesive. As Reid (1993) mentions, sentence transition devices represent one of the most important means of L2 writing instruction that deals with text cohesion and unity. The median frequency rates for the uses of sentence transitions in the essays of Japanese and Korean speakers were almost triple the number in NS text, and the rates of transitions in essays of Indonesian speakers were more than double of those in NS prose. In many L2 texts, sentence transitions represent the most prevalent overt means of tying portions of text together, even when the ideas in discourse seem to be somewhat disjointed. For example,

4. *Traditionally, grades have been essential for students, and those are only measurements to verify students' academic achievement. However, some students are discouraged when they have not enough scores to achieve their goals. Therefore, grades make students feel uncomfortable in many ways. Thus, grades are fundamental in schools, and the discouraging grade system needs to be changed.* (Korean).

In (4), the sentence transitions are employed in unexpected ways that do not seem to make the ideas cohesive, e.g., the sequence *grades make students feel uncomfortable*, and *thus* (result) *grades are fundamental* is not easy to understand. Although it is possible to guess that the writer probably means that since grades are very important, the discouraging grade system is counter-productive, the use of the sentence transition *thus* does not seem to be appropriate. Similar incongruities in the use of transitions and the flow of ideas can be also noted in (5).

5. *Firstly, today, many schools grade students only the score of exams. Therefore, they only make an effort to get good scores and grades. In addition, grades disregard what students feel. However, the correct answer is not always the best answer for a problem in art and humanities classes because the student has to answer what the teacher expects to answer. Secondly, I don't like to see my grades no matter how much I studied because I couldn't get good grades in some classes.* (Japanese).

In (5), the statement that *grades disregard what students feel* does not provide an easy addition (*in addition*) to the preceding idea that students only make an effort to get good grades. Similarly, *however*, with its meaning of opposition, does not seem to contradict the disregard for students feelings. More importantly, however, the ideas presented in the writer's first point (*firstly*) that discusses the negative impact of grades is only loosely connected to the second point (*secondly*) that the writer does not like to see his or her grades because he or she does not always get good marks.

In general terms, the student examples in (4) and (5), as well as the data in Table 2, demonstrate that despite the NNSs' evident attempts to make their text cohesive by means of employing overt sentence transitions, it may be that even advanced L2 writers lack the skills of using these textual features effectively. The preponderance of sentence transitions in L2 academic essays also shows that the focus on transitions in writing and composition instruction for university level students leads to their misuse in NNS texts. One conclusion that can be made in light of these findings is that academically-bound NNS students need to be taught a greater range of cohesive devices, and lexical and

syntactic means of constructing cohesive text rather than ubiquitous sentence transitions, which cannot make the L2 text appear unified when the ideas in discourse flow are disjointed.

The median frequency rates for the logical/semantic conjunctions (*as well, because of, besides, despite, in spite of, instead of, like, too, unlike*) in NS and NNS texts did not differ significantly because these textual features were not very common in student writing. Although some of these markers may appear a bit more sophisticated and syntactically complex (e.g. *in case of, in the event of, in place of*) than, for instance, *because of, like, too*, overall, most of these features were not found in student texts, with the possible exception of the latter three.

On the other hand, median frequency rates of demonstrative pronoun use in the texts of all NNSs, with the exception of Indonesian speakers, significantly exceeded those in NS prose. In particular, in the texts of Japanese and Arabic speakers, the median rates of demonstratives were twice as great as those of NSs, and three-fold the NS rates in the essays of Korean students. Because the syntactic and lexical properties of English demonstrative pronouns are relatively simple, as with sentence transitions, it appears that L2 writers employed these textual features to develop cohesive text and “point” (Chafe, 1994) to the information or lexical items mentioned earlier. As has been noted, in such languages as Japanese, Korean, and Arabic, demonstratives have various functions that are distinct from those in English. For instance, McCarthy (1991) observed that speakers of these and other languages often attribute English demonstratives textual properties possibly transferred from their L1s. The findings of this study also indicate that L2 writers employ demonstrative pronouns in ways that can make the text somewhat confusing. For example,

6. *In this life, every person has a different task and interest in everything. This also works for education. If people look for jobs with so many positions and didn't have any interests while they work on it, they would not carry on their careers. As we all know, there are a lot of families who confess [sic.] their children to study what they want, but this always has negative influence on the kid's motivation for studying due to the fact that s/he is not interested in that major. Later on, this, somehow, would lead the kid to drop out from college.*
(Arabic)

Although demonstrative pronouns in text frequently function as indexical and deictic markers (Levinson, 1983), it may be a bit difficult to see *this* in *this life* as referential when it is the first phrase in an essay. Similarly, in *this always has a negative influence*, the use of the demonstrative makes the sentence vague and the idea in it indeterminant. The statement that *this ... would lead the kid to drop out of college* may refer to any of the points in the preceding context, e.g., the family's control, a lack of interest in a particular

major, or a loss of motivation (or even all these considerations combined).

In (7), a Korean speaker employs eight demonstrative pronouns in a 170-word excerpt, and demonstratives constitute almost 5% of all words in the text:

7. *It is not appropriate to criticize somebody's choice. Although my opinion is like that, this one point is to be stressed. We should make a choice after fully thinking about the facing problem. Without this step, the choice will be careless, and in many cases, result in some regrets. For me, my major is piano performance. In conclusion, I am not much satisfied with this. I started paying piano in my childhood, at that time, for a hobby. I met a little famous teacher (in my town) who recommended me to go to art middle school (also famous and very competitive). Saying because my talent and ability is good enough to go there. I was just very happy because I was complemented. A few years after that, I got to enter art high school and then was in University majoring in piano. So far, I think I was never fully satisfied with that. The reason that I have been doing that is if I do, at least, I could make money.* (Korean)

In (7), some demonstratives are used appropriately and refer to the context that either precedes or follows (e.g. *this one point*, *this step*, or *at that time*). On the other hand, as in (6), other demonstrative pronouns do not have a text-referential function, e.g. *my opinion is like that*, *I am not much satisfied with this*, or *I have been doing that*. From the examination of examples (6) and (7), it appears that in many NNS texts, demonstrative pronouns do not necessarily refer to specific nouns, phrases, or clauses, but possibly to broader contexts and textual ideas that may not even be explicitly stated but implied. On the other hand, in NS texts, demonstrative pronouns seem to be comparatively infrequent, and their median frequency rates represent only .68%. In addition, when demonstratives are employed in NS texts, they have specific and identifiable referents. In other cases, demonstrative pronouns are used as lexical substitutes in cohesive ties (Halliday and Hasan, 1976) For example,

8. *When a person goes to college, the main focus is what will their major be. People make this decision either based on interests, or based on the amount of money this job will bring to them.* (NS)

The embedded question *what will their major be* is tied to *this decision*, and in a parallel fashion, the noun *major* refers to the noun phrase

this job in the subsequent text. Another example of referential cohesive construction established by means of demonstratives can be found in (9):

9. *The decision a person has to make in which major they will study is very important. It may be the most important decision that some may make. This decision will affect a person for the rest of his/her life.* (NS)

The phrase *this decision* in the last sentence clearly refers to the *decision* mentioned at the outset and *the most important decision* in the second line, thus establishing lexical ties throughout the text (although somewhat repetitiously).

As has been mentioned, the specific properties and textual functions of demonstrative pronouns are not considered to be particularly important in writing and composition instruction (Hacker, 1994, 2000; Lunsford, 2001). Thus, it stands to reason that even advanced NNS students continue to rely on their own understanding of the contextual meanings and functions of demonstratives most likely derived from those in their L1s (McCarthy, 1991). The results of this study show, however, that speakers of Japanese, Korean, and Arabic do not employ demonstratives in contexts in which NS writers would and may misunderstand the relatively limited cohesive and referential functions of these textual features because in English, the effectiveness of demonstrative pronouns as cohesion devices depends on the presence of identifiable referents (nouns, phrases, or clauses) in close proximity to the pronoun (Quirk, *et al.* (1985)).

In particular, in academic texts, it is rare that demonstrative pronouns refer to entire contexts, contextually removed nouns/phrases that are strung in chain-like referential constructions (as in *I ... was in University majoring in piano. ... I was never fully satisfied with that. The reason that I have been doing that ...*). In fact, Biber *et al.*, (1999) found that in academic prose *this* marks “an immediate textual reference” (p. 349), and that is mostly employed as a cataphoric reference to “something following the demonstrative,” e.g., “... that quantity which ...” (p. 273). Another conclusion that can be made is that the uses and functions of demonstrative pronouns in English need to be taught in L2 writing instruction because the apparent simplicity of these cohesive markers may be misleading to L2 writers.

Comparisons of median frequency rates of enumerative and resultative nouns in NS and NNS texts yield only three points that may be of interest. The texts of Korean speakers contained significantly higher frequency rates of enumerative nouns (e.g. *advantage, aspect, class, consequence, disadvantage, element, fact, factor, plan, problem, reason, stage, term, type*) than those of NSs, and the essays of Indonesian and Arabic speakers included substantially higher rates of resultative nouns (*finish, end, outcome, result*). In general, however, both enumerative and resultative nouns were not common in student texts, and the median frequency rates for resultative nouns in the essays of NS, Japanese, and Korean speakers were .00, i.e. these nouns were

encountered in fewer than half of all essays written by students in these L1 groups. Even in the essays of Indonesian and Arabic speakers, median frequency rates of resultatives represented only a fraction of one percent.

In the essays of Korean speakers, enumerative nouns were used at higher median frequency rates than in those of any other L1 group. In English-language texts, enumerative nouns are employed to mark the elaboration and/or clarification which is to follow and, for this reason, they are often considered to be a ubiquitous cohesive device (Quirk, *et al.* (1985). Nonetheless, in Korean-speaker texts, these nouns were often used with the purpose of making general statements and providing vague descriptions without elaborations, which are usually expected to follow lexical classification nouns, such as *fact*, *problem*, *advantage*, *reason* (Chafe, 1994; Swales and Feak, 1994). For example:

10. *If you are a student, perhaps you have a lot of facts related to grades in your school days. I have a lot of facts related to grades, too. When I was a university student in Korea, I studied hard for some courses to give me an advantage in grades, but I didn't study hard for some courses, and they gave me a problem. The biggest problem had many reasons, but I didn't solve it when I was in college. Many students use reasons as excuses for their problems, but actually I think that they don't study hard.* (Korean)

For instance, in (10), after the enumerative nouns *fact*, *problem*, *reason*, the reader may expect that the text includes an explanation of the facts and problems mentioned by the writer. However, such elaborations are not always included, i.e., in many NNS texts, the uses of enumerative nouns are employed for the purposes of generalization-making rather than tying together the essay's main point(s) with detailed descriptions and explanations.

Similarly, in the essays of Indonesian and Arabic speakers, the resultative nouns were often employed in vague generalizations and did not always have summative cohesive functions, which they are usually expected to have (Tadros, 1994).

11. *In Indonesia, a lot of parents supply their children with a lot of money without good judgment what the money is for. This creates the result of many young generations who spend their time drinking and gambling. They don't think about their future with a terrible outcome. This causes not only a gap between the older and younger generation, but also between the rich and the poor.* (Indonesian)

The text in (11) mentions *the result* of parents' giving money to their children and *a terrible outcome* of the fact that young people do not think about their future without an explanation of how or why such a result or an outcome is obtained. In the context of the essay, the reader is thus left with the tasks of inferring the circumstances that lead to the result only briefly noted by the writer. In (12), the nouns *effect* and *result* also do not play the role of cohesive devices but are used to make general statements.

12. *When people think before making a decision, this will have a positive effect. The result will be beneficial for them and their families. It is not easy to get a good result, but people have to try to get the best conclusion for their problems.* (Arabic)

It may be that the writer's uses of the resultative nouns in excerpt (12) imply an enumerative rather than a summative function when effects and results are mentioned without an elaborated discussion of their causes. As with demonstrative pronouns, enumerative and resultative nouns in L2 texts are employed in ways that can be difficult to find in NS essays or published academic texts in English. In fact, it appears that speakers of Japanese, Korean, Indonesian, and Arabic attribute to these three textual features cohesive and elaborative functions and properties that demonstratives, enumeratives, and resultatives may not have in English.

Conclusions and Implications for Teaching

A quantitative analysis of common cohesive devices in NS and NNS academic texts indicates that even advanced NNS students who have completed their ESL and composition training continue to rely on a restricted repertoire of features in constructing unified text. One of the most important results of the study is that regardless of their L1, speakers of Japanese, Korean, Indonesian, and Arabic employ significantly higher median rates of sentence transitions to establish cohesive textual structure. However, the uses of sentence transitions in L2 texts do not necessarily mark a contextualized flow of information when sentence transitions are intended to identify the meaningful relationship of ideas in discourse. Rather, in L2 texts, the preponderance of sentence transitions often reflects NNS writers' attempts to construct a unified idea flow within the constraints of a limited syntactic and lexical range. Thus, it appears that L2 writing and composition pedagogy needs to focus not only on the fact that sentence transitions should be used in constructing cohesive discourse but also on the appropriateness and the pitfalls of using transitions in academic writing.

Similarly, the employment of demonstrative pronouns in the L2 writing of Japanese, Korean, Indonesian, and Arabic speakers may be worth more attention than it is currently given in most L2 instructional text. The results of this study clearly show that many NNS writers employ these

referential features to excess and attribute them text-referential properties that demonstratives do not have in English.

Another issue that needs to be addressed in L2 writing instruction is the employment of coordinating conjunctions by speakers of Indonesian and Arabic. The texts of Indonesian L2 writers may benefit from providing detailed information and elaborations of ideas in their texts, while Arabic speakers may focus on avoiding redundancy and excessive repetition of parallel constructions, such as noun and verb phrases. The classificatory and summative properties of enumerative and resultative nouns are not addressed in detail in L2 writing instruction, and yet, the results of this study show clearly that they are misused in the texts of Korean, Indonesian, and Arabic L2 writers. Specifically, these learners employ enumeratives and resultatives in vague and generalized statements without regard to the actual text-referential properties of these nouns.

A few effective teaching techniques may be useful in instruction dealing specifically with text cohesion in academic writing. All classroom techniques suggested below have been used in writing classes for intermediate and advanced L2 students. To highlight the function of sentence transitions as a relatively superficial cohesive device, students can be asked to produce text without using transitions at all. As the next step, they can be requested to identify meaning-based relationships that exist between sentences or paragraphs in terms traditionally used in the semantic groupings of transitions found in many L2 writing texts, e.g. additional information, result, new idea, or continuation of the same idea. After students identify relationships between portions of the text, they can be asked to decide which sentence or paragraph would be easier to understand with the addition of a sentence transition and which seem to be clear without one. In this way, learners can be taught that sentence transitions alone cannot make the text cohesive but can merely enhance textual cohesion that exists largely independently of transitional words and phrases.

The teaching of demonstrative pronouns needs to concentrate on their limited cohesive power in English. In particular, the fact that demonstratives require the presence of identifiable references in the immediate proximity to the pronoun should be emphasized. Another important factor in the appropriate usage of demonstratives is that they can refer only to nouns, noun phrases, or clauses and cannot be used to refer to entire contexts or implied referents. For this purpose, learners can be asked specifically to identify the nouns or phrases to which demonstratives in their texts refer. For example, drawing arrows in their practice essays greatly facilitates learners' understanding of the vastly limited cohesive power of demonstratives in English. In this case, if an arrow cannot be pointed at any particular noun, phrase, or clause, then a demonstrative probably cannot be used effectively.

As with demonstratives, the uses and functions of enumerative and resultative nouns can also be highlighted by means of drawing "tying strings" in students' essays. For instance, nouns such as *advantage*, *factor*, *problem*, *reason*, *stage*, *term*, *type* are expected to have specific identifiable referents in

text, to which these nouns are “connected.” Thus, students can be asked to “tie” each of the enumeratives and resultatives to the structures or portions of the text to which these nouns refer. If such structures or short contexts cannot be found, then enumerative and resultative nouns may not be the best option as a cohesive device.

Most importantly, however, it seems that matters of syntactic and lexical cohesion need to be addressed in L2 writing instruction, the ubiquitous lists of sentence transitions notwithstanding. To this end, teachers need to work to expand learners’ accessible repertoire of grammatical structures and lexis because all these features play a crucial role in NNSS’ ability to construct cohesive (and coherent) academic essays. No matter how much effort and work is expended on teaching the uses and meanings of discrete cohesive devices, for L2 writers, textual cohesion can be attained only when they have a sufficient language foundation to construct academic text.

Notes

¹ Although some linguists distinguish demonstrative pronouns from demonstrative determiners, the analysis below follows Quirk *et al.*, (1985), who “consider together the uses of the determiners and of the pronouns” (p. 372) under the umbrella term of demonstrative pronouns.

² In many L2 essays, although incorrectly used in place of *finally/last(-ly)*, this conjunction was relatively frequent.

³ Excluding those that occurred in sentence transitions *in the end* and *as a result*.

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