Cohesive Devices in CMC Texts Produced by American and Korean EFL Writers*

Yoon-Hee Na

(Chonnam National University)

Na, Yoon-Hee. 2011. Cohesive Devices in CMC Texts Produced by American and Korean EFL Writers. *Linguistic Research* 28(3), 743-771. This study presents a comparative analysis of cohesive devices employed in computer-mediated communication (CMC) texts of native speakers (NSs) and nonnative speakers (NNSs) of English. Specifically, the study focuses on the five categories of cohesive devices including reference, substitution, ellipsis, conjunction, and lexical devices in CMC texts jointly created by Korean EFL learners and American college-level students in an intercultural CMC project. The purpose of this study is to determine the specific differences and similarities in the uses of such cohesion devices in a NS and NNS corpus of 161 CMC texts. This study also aims to identify common features and errors produced by NNSs by using samples of NSs for comparison. The analysis of common cohesive devices in NS and NNS CMC texts indicates that NNSs employ certain cohesive devices (conjunction and lexical cohesion) at significantly higher frequency rates than do NSs. It also indicates that Korean EFL learners rely on a restricted repertoire of cohesive features as well as displaying misuses of some cohesive devices in constructing CMC texts. Based on the results of the study, teaching implications for L2 writing are presented. **(Chonnam National University)**

Key Words cohesion, cohesive devices, CMC

1. Introduction

Over the last few decades, interest in written English discourse - both the native speaker (NS) and non-native speaker (NNS) texts - has grown dramatically. Most studies of various features of NS and NNS written discourse have been motivated by pedagogically driven needs of particular groups of second language (L2) learners in the use of longer discourse units in contrast to smaller units such as sentences and isolated syntactic forms (Eun & Jeon, 2009; Granger & Tyson, 1996; Hinkel, 2001;

Johnson, 1992). This reflects an awareness that "becoming a competent member of a discourse community involves more than internalizing its grammar and linguistic forms" and that units beyond words and sentences need to be addressed to help L2 learners create appropriate written discourse (Kang, 2005, p. 260). In particular, widespread studies of cohesion, one way of examining longer discourse units, have been carried out, sparked off by the publication of Halliday and Hassan (1976). For Halliday and Hasan, cohesion depends upon the lexical and grammatical relationships that allow sentence sequences to be understood as connected discourse rather than as autonomous sentences. Halliday and Hasan's concept of textuality, defined with reference to relationships that obtain across "sentence boundaries," suggests "a number of possibilities for extending L2 writing research beyond its frequent moorings in sentence-level operations and features" (Witte & Faigley, 1981, p. 190).

Motivated by this suggestion, a substantial body of early L2 writing research has examined the use of cohesive devices in NS and NNS texts and demonstrated that L2 writers differ from L1 writers in important ways. For example, it was found that L2 writers had a higher percentage of lexical reiteration and fewer collocations and synonyms than first language (L1) writers (Cornor, 1984), and used far more pronouns and coordinating conjunctions than the L1 writers (Reid, 1992), supporting the notion that the effectiveness of L2 written texts may be impaired by the L2 writer' overuse, underuse, or misuse of certain cohesive devices. More recently, a growing number of studies have been conducted not only on how non-native writers use cohesive devices differently from their native counterparts, but also on why they use these different devices, and what kind of teaching might be helpful for them (Aktas & Cortes, 2008; Eun & Jeon, 2009; Hinkel, 2001). From these more qualitatively oriented studies, various misuses of cohesive devices were reported and analyzed and potential reasons for the misuses were speculated including the low proficiency of English of L2 writers, interference by the mother tongue, insufficient knowledge about the readers and discourse community, and hyper-corrections, etc.

Although much has been learned about cohesive features of L2 written texts produced by L2 writers, a more comprehensive picture of cohesive features of L2 texts produced in different contexts and for a variety of academic, social, and communication purposes has yet to emerge. Thus, the present study has chosen to investigate the computer-mediated communication (CMC) texts produced by Korean EFL university students and American students primarily for two reasons. Firstly, the

decision to investigate cohesive features in CMC texts was based on Tella's (1992) and Biesenbach-Lucas, Meloni and Weasenforth's (2000) recommendation for further investigations of the role of cohesion in CMC texts, since few studies on cohesion in L2 writing have been carried out with CMC texts produced by both NS and NNS students in academic settings. Secondly, especially for college-level students, this emerging genre of CMC has been increasingly recognized as one of the most widespread academic discourse types and many more students are expected to produce CMC texts as part of their course work in the future (Blake, 2007).

To date, comparatively few studies have addressed specifically how NS and NNS writers employ cohesive devices in their CMC texts, although such an analysis can have various pedagogical uses and implications. Therefore, this study attempts to identify, compare, and analyze the differences or similarities found in the CMC texts written by Korean students and by American college students and to provide some pedagogical implications to help Korean EFL students improve their writing proficiency. Specifically, it aims to analyze the types and frequencies of cohesive devices employed in NS and NNS CMC texts and identify the possible instructional foci in the teaching of cohesive devices to L2 learners by identifying common patterns and problems in NNS CMC texts as compared to NS texts.

2. Literature Review

2.1 Theoretical Background on Cohesion and Cohesive Devices

Cohesion has gained prominence in studies on discourse analysis as well as L1/L2 writing research following Halliday and Hasan's (1976) seminal work on *Cohesion in English*. Halliday and Hasan defined cohesion as "the set of possibilities that exist in the language for making text hang together" (p. 18). In a similar vein, Hinkel (2003) conceptualized cohesion as "the connectivity of ideas in discourse and sentences to one another in text, thus creating the flow of information in a unified way" (p. 279). For Halliday and Hasan (1976) and other researchers in Hallidaian tradition, the organization of text is made up of relationships among items in the text and those relationships are realized through the use of cohesive devices. Reid (1992) further extrapolated cohesion devices as "words or phrases that act as signals to the

reader; those words or phrases make what is being stated relate to what has already been stated or what soon will be stated" (p. 81). Those signals are divided into five categories: reference, ellipsis, substitution, conjunction, and lexical cohesion.

Reference occurs whenever an item indicates that the identity of what is being talked about can be retrieved from the immediate context. Pronouns, determiners, definite articles, and comparatives such as *he, this, the, less* are reference items. The interpretation of the reference elements depends upon presupposed information contained in the sentences immediately above it. Second and third major cohesive categories - substitution and ellipsis - are considered more frequent in conversation than in written discourse. Substitution replaces one element with another and ellipsis involves a deletion of a word, phrase, or clause. The effect of both substitution and ellipsis is to extend the textual or semantic domain of one sentence to a subsequent sentence by using the words such as *one* (in the case of substitution) and *do* (in the case of ellipsis). A fourth major category of cohesive devices which is considered as frequent in writing is conjunction. Conjunctive elements are not in themselves cohesive, but they do "express certain meanings which presuppose the presence of other components in the discourse" (Halliday & Hasan, 1976, p. 226). Conjunctions are used by writers to mark the semantic relationships between the sentences like *in addition, however, firstly*, and *of course*. The last major category of cohesive devices, lexical cohesion, includes a variety of semantic relationships that can exist between lexical items. It is categorized into two sub-classes, reiteration and collocation. Reiteration is concerned with repetition of the same item and the use of a synonym, a superordinate item, or a general item. All the lexical cohesive relationships which cannot be properly subsumed under lexical reiteration are included in a "miscellaneous" class called collocation. Collocation refers to lexical cohesion "that is achieved through the association of lexical items that regularly co-occur" (Halliday & Hasan, 1976, p. 284).

According to Halliday and Hasan (1976), such cohesive devices as references, substitutions, ellipses, conjunctions, and occurrences of related lexical items mentioned above all serve to contribute to text cohesion. In their view, text cohesion leads to greater text coherence which in turn enhances quality of writing. Although Halliday and Hasan (1976) did not consider issues of language pedagogy in their research, the effective use of cohesive devices has been identified as one of the important criteria for good writing and thus considered as something to be treated in

a pedagogical context (Hinkel, 2001).

2.2 Empirical Studies on Cohesion and Cohesive Devices

Many of earlier cohesion studies conducted in the 1980s within a pedagogical context attempted to discover whether there is a significant correlation between use of cohesive devices and quality of writing in L1 texts. For example, Witte and Faigly (1981) compared the cohesive devices in poor and good writing of college freshmen and found that well-written essays had twice as many instances of reference, conjunctions, and lexical collocation. McCulley (1985), in his analysis of persuasive essays, found that, although writing quality did not correlate with the total number of cohesive ties, there was a positive correlation between writing quality and specific cohesive ties such as the lexical cohesive features of synonym, hyponym, and collocation. In another study, Neuner (1987) analyzed 20 good essays and 20 poor essays and found that the number of cohesive devices did not distinguish good from weak essays, but longer cohesive chains, greater lexical variety, and effective word choice characterized well-written essays.

Inspired by the studies on cohesion in L1 writing, a number of studies have been conducted in L2 contexts as well in an attempt to investigate the relationship between cohesion and quality of writing. Zhang (2000), for example, in a study on the use of cohesive devices in the expository writing of undergraduates in two Chinese universities, found no statistically significant difference between the highly-rated and poorly-rated essays in the frequency of use of cohesive devices. In another study, Liu and Braine (2005) investigated cohesive features in argumentative writing produced by Chinese undergraduates. In this study, the quality of writing was revealed to significantly co-vary with the number of lexical devices and the total number of cohesive devices used, indicating that the use of certain cohesive devices might be a factor for the high quality of writing. These studies, taken together, support the notion that the overall quality of writing is correlated with the skillful, if not frequent in some cases, use of cohesive devices.

In addition to research efforts to investigate the relationship between cohesion and quality of writing, a comparative research framework which aims to investigate differences or similarities between native English speakers' texts and non-native English speakers' texts has been adopted to shed insight on L2 learners' overuse,

underuse, or misuse of cohesive devices in comparison to that of native speakers. Such comparative studies of cohesion in L2 writing have shown that there are differences between native- and non-native English writers' texts in the number and types of cohesive devices used. For example, Reid (1992) examined referential and conjunctive cohesion in a corpus of 768 essays written in English by L1 and L2 writers (Arabic, Chinese, and Spanish writers) and found that non-native writers used significantly more pronouns, more coordinate conjunctions, fewer subordinate conjunctions than did native English writers. Milton and Tsang (1993), in their corpus-based study of Hong-Kong students' use of conjunctive devices, found that there is a high ratio of overuse of the entire range of logical connectors in NNSs' writing, in comparison to published English. Hinkel (2001) conducted a comparative analysis of explicit cohesive devices employed in academic texts of native speakers of English and nonnative speakers of English (Japanese, Korean, Indonesian, and Arabic speakers) and found that NNSs employ sentence transitions and demonstrative pronouns at significantly higher rates than do NSs.

Recently, the same comparative research framework has been applied to the analysis of Korean EFL writers' texts in comparison to native speakers' texts. For example, Lee (1996) found that differences and similarities existed in Korean and American students' essays in terms of cohesive variables such as pronouns, prepositions, conjunctions, and subordinate conjunction openers. The findings of this study show that the Korean students' lower holistic scores on their writings resulted from their weakness and difficulty in using proper cohesive devices. Suh (2000), in her analysis of cohesion of texts produced by native English speakers and non-native Korean EFL learners, also found that compared to the native speakers' compositions, the non-native speakers' compositions lacked not only in the amount and frequency of any or all cohesive devices but also in their ability to use appropriate cohesive devices. In another study, focusing on two categories of cohesive devices (reference and substitution), Eun and Jeon (2009) analyzed research articles written by advanced Korean EFL writers and English native writers in an attempt to investigate the similarities and differences in the use of the two cohesive devices between two language groups. They found that there was not much difference in the overall use of the selected cohesive devices between the two groups. They attributed the reasons for the similarities to high English proficiency of Korean writers, and their hyper-correction, indicating that advanced Korean writers are as good as native

speakers of English at using cohesive devices and that they seemed to overcome the L1 interference and successfully convert cohesion devices between L1 and English. These studies, taken together, support the notion that the effectiveness of L2 written texts may be impaired or enhanced by the writer' use of cohesive devices.

Overall, the research on Korean students' writing in English have not been conducted extensively. Even though a small number of studies on Korean students' English written texts exist, they have focused on one or two variables of cohesion, causing the lack of broad understanding on Korean students' overall use of cohesive devices. Moreover, there have been virtually no studies that analyzed the patterns of the use of cohesive devices in constructing CMC texts in English written by Korean EFL learners and native English speakers. Therefore, this study aims to add to the growing number of comparative studies on cohesion in NS and NNS texts, focusing on a special discourse genre of CMC.

3. Methodology of the Study

In order to investigate the cohesive features that appeared in CMC texts of Korean EFL learners in comparison to those of American students, this research was led by the following research questions:

(1) How frequently are cohesive devices used in the CMC texts of Korean EFL learners and American students?
(2) What are the differences and similarities in the use of cohesive devices between the Korean EFL learners' CMC texts and American students' CMC texts?
(3) What are the common features and problems identified in the Korean EFL learners' CMC texts in using cohesive devices in comparison to those of American students' texts?

3.1 The Setting and the Participants

The CMC texts examined in this study were the outcome of CMC activities offered as a partial requirement of a coursework in *Second Language Education*

jointly conducted by a Korean university and an American university. Connected through an asynchronous internet bulletin board system, graduate-level Korean students and college-level American students exchanged their opinions regarding the subject matter of language education over a semester's period. The Korean and American professors in charge of the course at each university participated in and monitored the discussions throughout the semester.

The raw data were compiled from CMC interactions between 25 native speakers and 22 non-native speakers of English comprising 511 messages with 133,031 words. Given that the number of messages and their length are all arbitrary, a decision was made to screen and sample those messages according to several criteria. In order for the data to be comparable in terms of cohesion of the text, first, those of exchanging greetings and dealing with the private lives of participants were excluded. Second, to allow the frequency of cohesive devices as an important measure of this study, the first five lines of a message excluding routine phrases were extracted for the fairness in message length. Through this trimming process, 126 NNS texts and 45 comparable NS texts ranging 80-120 words for each sample were prepared for the analysis of this study, most of which are content-oriented and faithfully addressing the assigned topic.

3.2 Data Analysis Procedures

The screened samples from both NS and NNS CMC texts were identified and coded for every single use of cohesive devices. A native-speaker of English who has the master's degree in applied linguistics performed the coding based on the classification of Table 1, which is an adapted version of Halliday and Hasan's (1976) model known as the most comprehensive framework for the analysis of the cohesive features in writing. Approximately one third of the coding result was double-checked by the researcher.

Table 1. Type of Cohesion

	Reference	
RP	Pronominals	*he, him, his, she, her, hers, it, its, they, them, their, theirs*
RD	Demonstratives	*this/these, that/those, here, there,*
RA	Definite article	*the*
RC	Comparatives	*same, identical, similar(ly), such, different, other, else, additional*
	Substitution	
SN	Nominal	*one/ones, the same, so*
SV	Verbal	*do, be, have, do the same, do so, be so*
SC	Clausal	*so, not*
	Ellipsis	
EN	Nominal	*quite a few (quite a few people)*
EV	Verbal	*Why should I? (Why should I recognize her?)*
EC	Clausal	*Yes. (Yes, I have a photograph of this girl.)*
	Conjunction	
CA	Additive	*and, nor, or, or else, furthermore, in addition, alternatively, that is, thus, likewise, in other words,*
CD	Adversative	*yet, though, only, but, however, on the other hand, instead, on the contrary, rather, at least, either case,*
CC	Causal	*so, then, therefore, consequently, with this in mind, for, because, it follows, arising out of this, to this end, under the circumstances,*
CT	Temporal	*then, next, just then, before that, in the end, at first/originally/formerly, at once, soon, next time, meanwhile, until then, up to now, from now on*
CO	Continuative	*now, of course, well, anyway,*
	Lexical Cohesion	
LA	Repetition	*repetition of the same word*
LY	Synonym	*solitude(being alone), pain(hurts)*
LU	Superordinate /General	*floating out(wafting out), exit(door)*

The cohesive devices used in this study include five categories (reference, substitution, ellipsis, conjunction, and lexical cohesion) and 18 sub-categories. There

are two points to be noted in the examination of the types of cohesion used in this study. Firstly, research into cohesive devices, though relying on Halliday and Hasan's (1976) model in most part, tended to neglect substitution and ellipsis devices and center on the rest of the features (Liu & Braine, 2005; Zhang, 2000). It may be attributed to the fact that most studies on cohesion deal with writings and rarely spoken discourse, as Halliday and Hasan (1976) noticed those features are commonly found in dialogues rather than in written register. Given that the data for this research are the result of a CMC forum, this study included substitution and ellipsis as well as the other three categories of cohesion because CMC is considered as possessing both writing and spoken features (Herring, 1996). In fact, investigating the characteristics of CMC as a hybrid register, Murray (2000) argues that CMC displays speech-like interpersonal involvement using active voice, personal pronouns, emotive diction, and hedging and vagueness, and at the same time displays writing-like detachment by use of the more formal pronoun and the use of highly technical language and definiteness.

Another point in reference to the cohesive devices examined in this study versus those in Halliday and Hasan (1976) is the exclusion of collocation, a sub-category of lexical cohesion. Collocation within the issue of cohesion primarily refers to the relationship of connected discourses created by the close co-occurrence of words that tend to appear in similar contexts. However, it was noted that the habitual association is largely independent of semantic structures, being a relationship between words forming a chunk unit, not necessarily contributing to textual cohesion. In other words, collocation may constitute an essential part of lexical competence in language learners, yet does not always exert cohesive power (Tanskanen, 2006); hence it was excluded from the cohesion taxonomy of this study.

In order to examine the differences/similarities between CMC texts produced by NS and NNS students in terms of the employment of cohesive devices, the number of occurrence for each cohesive device was manually counted. The taxonomy, with the detailed coding system as tagged in different colours, helped the researcher meet the required level of accuracy in counting and in turn obtain objectivity of the study. SPSS 18.0 was used for data analysis to see statistically significant differences between NS and NNS CMC texts, if any. *T*-tests were conducted for the mean number of cohesive devices, for five categories of cohesion and then for 18 sub-categories respectively comparing NS and NNS data.

After the quantitative analysis of the data, a qualitative investigation on common features and problems in the use of cohesive devices were also conducted to provide a more in-depth analysis of cohesion in Korean EFL students' CMC texts. When studying learner language in particular, it is necessary to "combine a quantitative and a qualitative approach, comparing frequency and semantic/syntactic use." (Granger & Tyson, 1996, p. 17). The qualitative analysis of the common features and problems of the use of cohesive devices identified across the EFL writers will shed some important light on Korean EFL learners' overuse, underuse, or misuse of cohesive features in CMC texts.

4. Findings of the Study

4.1 Frequency in the Use of Cohesive Devices

The number of cohesive devices in CMC texts produced by Korean EFL students and American students was counted according to Halliday and Hasan's (1976) cohesive framework presented in Table 1. The first step taken to analyze the data set was to compute the descriptive statistics of the variables including the mean number of cohesive devices used in five categories of reference, substitution, ellipsis, conjunction, and lexical devices. The mean number and percentage of five classes of cohesive devices used by two different linguistic groups are presented in Table 2.

Table 2. Descriptive Statistics: Use of Cohesive Devices

Categories of cohesion	NS (n=45)			NNS (n=126)		
	Mean	Standard deviation	Percentage	Mean	Standard deviation	Percentage
Reference	5.11	4.56	42.28	5.95	3.29	38.02
Substitution	.18	.49	1.47	.08	.35	.51
Ellipsis	.24	.57	2.02	.12	.35	.76
Conjunction	3.09	2.42	25.55	4.95	2.25	31.68
Lexical	3.47	2.85	28.68	4.54	2.76	29.04
All devices	12.09	8.32	100.00	15.64	5.65	100.00

Table 2 shows that both the American and Korean students used various

cohesive devices and that certain types of cohesive devices are used more frequently than others in the CMC texts. On the basis of the percentage of major categories of cohesive devices, it was apparent that, in American students' CMC texts, the reference devices had the highest percentage (42.28%), followed by the lexical devices (28.68%) and the conjunction devices (25.55%). Substitution and ellipsis devices had a relatively low percentage, accounting for 1.47% and 2.02% respectively.

The similar pattern in the use of cohesive devices was found in Korean students' CMC texts. Among the five categories of cohesive devices, reference devices (38.02%) had the highest percentage of use, followed by conjunctions (31.68%), lexical devices (29.04%), ellipsis (0.76%) and substitution (0.51%) devices.

For both native and non-native speakers, references were the most frequently used, accounting for 42.28% and 38.02% respectively. In fact, the extensive use of reference devices was expected. Studies in L2 writing have found that referential cohesion referring to a previous referent in the text is more frequent in spoken discourse than in written discourse and more frequently found in L2 learners' writing (Biesenbach-Lucas, 1994; Kang, 2005). Since the discourse genre investigated in this study was CMC, which is considered as a hybrid of spoken and written discourse, the finding that reference takes up the highest percentage of the cohesive devices in this study may reflect the spoken features of CMC texts. However, the fact that lexical and conjunctive devices, which reflect written discourse features, were also extensively used by both linguistic groups may again point to a hybrid genre of CMC, both written and spoken. It is also important to note that, since CMC texts in this study were created on the basis of content-area topics and their major functions were to share writers' ideas and defend their positions with relevant theories, ellipsis and substitution devices, which were identified as characteristic of spoken language, were rarely used in both the American and Korean students' CMC texts. However, American students used these two devices more often than the Korean students, which might indicate that American students were more aware of the informal features of the CMC medium embedded in the academic discourse community.

Although the overall pattern for the use of cohesive devices was similar across both linguistic groups, there were differences in the mean number of cohesive devices used in their CMC texts. As can be seen from Table 2, except for substitution and ellipsis, the mean number of all cohesive devices as well as the

mean number of reference, conjunction, and lexical device was larger in Korean students' CMC texts compared to American students' texts. In order to examine if there are statistically significant differences in the use of cohesive devices, *t*-tests were conducted and Table 3 shows the results of the tests.

Table 3. Independent samples *t*-test between NS and NNS

	t-test for Equality of Means			
	t	Sig. (2-tailed)	Mean Difference	Std. Error difference
Reference	-1.126	.265	-.833	.740
Substitution	1.239	.220	.098	.079
Ellipsis	1.385	.171	.125	.091
Conjunction	-4.672	.000[*]	-1.863	.399
Lexical	-2.222	.028[*]	-1.073	.483
All devices	-2.649	.010[*]	-3.546	1.338

* *p*<0.05

Obviously, there was a tendency for Korean EFL learners to overuse cohesive devices. Out of five categories of cohesive devices, statistically significant differences between NS and NNS texts were identified in areas of conjunctions and lexical devices as well as overall cohesive devices. This finding is in line with other studies where conjunctions were overused by non-native speakers of English compared to native speaker counterparts (Hinkel, 2001) and lexical cohesion, repetition in particular, was overused by non-native speakers of English (Castro, 2004).

4.2 Similarities and Differences in the Use of Cohesive Devices

The same set of data was further analysed in order to investigate the similarities and differences between the two groups in the use of sub-categories of each cohesive domain. An analysis will be presented in terms of (1) occurrence rates of sub-categories and (2) common features and problems in that particular cohesive device. Examples will be cited from the students' texts as illustrations.

4.2.1 Reference

As can be seen in Table 4, among the four sub-categories of reference, pronominals (NS: 48.70%, NNS: 41.79%) had the highest percentage of use, followed by the definite articles (NS: 26.09%, NNS: 38,58%), demonstratives (NS: 21.73%, NNS: 12.42%) and the comparatives (3.48%, 7.21%). Significant differences between the two groups were found in the two subcategories of definite articles and comparatives, indicating that NNSs overused these two devices compared to NSs.

Table 4. Types of Reference and Occurrence Rates

Types of reference	NS (n=45)		NNS (n=126)		t-test for Equality of Means	
	Mean occurrence	%	Mean occurrence	%	t	Sig. (2-tailed)
Pronominals	2.49	48.70	2.48	41.79	.011	.992
Demonstratives	1.11	21.73	.73	12.42	1.696	.095
Definite articles	1.33	26.09	2.29	38.58	-3.053	.003*
Comparatives	.18	3.48	.43	7.21	-2.837	.005*
Total	5.11	100.00	5.95	100.00	-1.126	.265

* $p<0.05$

The predominance of pronominals in both groups might be due to the informal nature of CMC texts. In their quantitative investigations between informal speech and formal written discourse, Guindon and Shuldberg (1987) argue that pronouns appear 10 times more in informal speech. The use of pronominals was similar across the two groups as can be illustrated in the following excerpts.

(1) NS: I agree with everything everyone else has said about judging people before they actually get to know _them_. I think Mrs. Denter just did not know how to handle these kinds. I also think Mrs. Denter should have kept _her_ opinion to _herself_ and let the new teacher form _her_ own opinions about the children. I agree with what _she_ said on page 196 about change. Children will be children, but as a teacher you need to let _them_ know the rules as far as what is expected of _them_.

(2) NNS: Students are so young so _they_ are premature and fragile affectively and cognitively. _They_ get hurt easily and the scar can be left forever. We have to be careful when we teach _them_. I think warm-hearted caring from teachers can be a great help to _them_. I like to listen to my students' problems on _their_ friends, family, and unsettled future. Even when perfect solutions are not derived, _they_ feel better than before. Students love to talk about _themselves_ and want to be cared.

Occasionally, mismatch between the referent and the pronoun was found in Korean students' texts. Example (3) illustrates this use of disagreeable reference.

(3) NNS: Fundamentally, two articles are developed from the same starting point, I think. That is the learner-centered view. Also, it is said _moral education_ should be focused on, like many people say. _They_ can be carried out through conversations. [No agreement with the immediate previous referent]

The second sub-category of reference, demonstratives, have a "pointing-like function that may be spatial, temporal, or discoursal" in discourse flow, (Chafe, 1994, p. 97). In most of NNS texts, demonstratives are used appropriately and refer to the immediate context that either precedes or follows.

(4) NS: In the class I am observing, my teacher pointed out _one student_ the first day and told me _he_ was a troublemaker and probably needed medication. Automatically I made judgements about _this_ student and treated him as if he were the class clown.

(5) NS: Some kids are scared to talk with their teachers in a regular conversation but I think if we, future teachers, show interest in the students and are caring enough to put forth that extra effort, _that_ will effect children tremendously.

In example (4), the phrase _this student_ in the last sentence clearly refers to _one student_ mentioned at the outset and _he_ in the second line, thus establishing lexical

ties throughout the text. In example (5), the demonstrative *that* in the second sentence refers to the immediately identifiable preceding clause (*if we, future teachers, show interest in the students and are caring enough to put forth that extra effort*). As such, when demonstratives are employed in NS texts, they have specific and identifiable referents.

On the other hand, many of the demonstrative pronouns NNSs used do not have an explicit text-referential function. From the examination of examples (6), (7) and (8), it appears that in many Korean students' 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 or vague. Note that most of the demonstrative pronouns typically appeared in the form of *like that*, *this kind of*, and *these kinds of.*

(6) NNS: I was really surprised at your hard work as an elementary school students. And you're lucky to have fantastic class ***like that.*** I thought that ***these kinds of projects*** would be really interesting and fun for my students.

(7) NNS: Actually, it's hard to find out some good sides of students. As far as I experienced, unfortunately, may teachers speak in a cynical negative way about their students in teachers' gathering ***like that.***

(8) NNS: I thought of making my students do some research, writing, or a discussion. I thought it would be both enjoyable and informative. But I wasn't sure if I could remain objective and that my students hae real interest in political issues. And also, I was wondering about my skills to organize ***this kind*** of activity.

This finding shows that Korean students may not understand the fact that 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), thus misusing this device as a vague and implied marker.

As for the use of definite articles as referential cohesion, it was found that the

Korean students used significantly more definite articles in their CMC texts than the American students did in their CMC texts (t = -3.053, p < 0.05). The obvious overuse of definite articles by Korean students is worth noticing, because the result is counter-intuitive. It is often assumed that because articles (definite and indefinite) do not exist in the Korean language, Korean learners will have difficulty in marking the definiteness of referents by the overt surface marking system of the definite article (Kim, 1992). Surprisingly, the Korean participants in this study utilized definite articles more frequently than the American students did. A closer examination, however, revealed that in several cases, there was no explicit referent when Korean students used this device, as can be seen from the examples below.

(9) NNS: I admit the article presented really good frameworks to widen students' thought. Questions are needed when they're eager to know *the* uncertain things. It means they're ready to accept and think. My students never ask questions. It's our mistake not to get them to open their lips, but while reading this article, I wonder how long the unit takes and whether the picture book "Rose Blanche" is *the* real textbook or an additional book in Language Arts. If they had studied that topic for more than one month, it would be possible to lead their class like that.

(10) NNS: I definitely sympathize with Graves, and reading his article, I nodded many times. To me, the most important thing in my 14-year teaching experience has been colleagiality, the relationship with other teachers. When I was *the* novice teacher, I felt exhausted everyday because of the matter of class management. At that time I taught *the* second grade boys in middle school, they were always noisy and sometimes beyond my control. I felt helpless to make any attempt to make it *the* satisfactory class.

In examples (9) and (10), Korean students showed a tendency to use definite articles where zero articles (*uncertain things*, *second grade boys*) or indefinite articles (*a real textbook*, *a novice teacher*, *a satisfactory class*) are appropriate because there were no explicit referents in the preceding text. This overuse and thus

misuse of the definite articles by Korean students might be due to the participants' status as in-service or pre-service English teachers who teach grammar at a secondary school level and thus show a tendency to overuse the definite article.

As for the last subcategory of reference, it was found that although comparatives were also more frequently used by Korean students, this particular device was seldom used by both groups, mean occurrences of these devices being less than 0.5 time per text.

4.2.2 Substitution and Ellipsis

Substitution and ellipsis devices were the least frequently used categories in both groups. Analyzing the data using *t*-tests showed that there were no significant differences between the two groups' use of subcategories of substitution and ellipsis, as can be seen in table 5 and 6.

Table 5. Types of Substitution and Occurrence Rates

Types of substitution	NS (n=45)		NNS (n=126)		*t*-test for Equality of Means	
	Mean occurrence	%	Mean occurrence	%	*t*	Sig. (2-tailed)
Nominal	.11	62.50	.06	80.00	.798	.426
Verbal	.04	25.00	.01	10.00	1.139	.260
Clausal	.03	12.50	.01	10.00	.762	.447
Total	.18	100.00	.08	100.00	1.239	.220

* *p*<0.05

Table 6. Types of Ellipsis and Occurrence Rates

Types of ellipsis	NS (n=45)		NNS (n=126)		*t*-test for Equality of Means	
	Mean occurrence	%	Mean occurrence	%	*t*	Sig. (2-tailed)
Nominal	.18	72.73	.06	53.33	1.482	.144
Verbal	.02	9.09	.02	13.33	.277	.782
Clausal	.04	18.18	.04	33.34	.138	.891
Total	.24	100.00	.12	100.00	1.385	.171

* *p*<0.05

Although the use of substitution is a convenient cohesive device to avoid needless repetition, both groups did not employ substitutions much. Substitution is a speaker/writer choice and not a compulsory feature (McCarthy, 1991, p. 43), especially in written discourse. Accordingly, substitution seldom occurred in these CMC texts, except that several students demonstrated an elegant use of substitutions. Examples below illustrate the use of substitution by both groups in CMC texts.

(11) NS: I agree that locking children in a specified role, can harm them for the rest of their lives. Many teachers *do this* and I think it is a terrible thing to do. [verbal substitution: lock children in a specified role]

(12) NNS: A well-organized lesson plan speaks louder than a mere conceptual idea, I think. That's why we are required to make out a lesson plan. We don"t need to make a standardized *one*, but there should be essential elements for each unit. [norminal substitution: lesson plan]

Biesenbach-Lucas and Weasenforth (2001) notice that ellipsis is often used to compact the surface structure without reducing the clarity of text. Typically, ellipsis is known to occur in responses in spontaneous conversations but is seldom used in formal writing. As such, ellipsis had far fewer occurrences than other devices. Examples below illustrate the use of substitution by both groups in CMC texts.

(13) NS: Many students are likely to be shy and reluctant to ask a question in class even when they have *some*. [norminal ellipsis: some questions]

(14) NNS: Until just recently I believed that I could be a good teacher in institution. Of course, I *have tried to*. But I seem to lose confidence in my own ability by degrees. [verbal ellipsis: have tried to be a good teacher]

4.2.3 Conjunction

As for the use of conjunctions, almost five conjunctive devices (mean occurrence: 4.95) were used on average per message in Korean students' texts whereas only three (mean occurrence: 3.09) were used in American students' texts.

Table 7. Types of Conjunction and Occurrence Rates

Types of conjunction	NS (n=45)		NNS (n=126)		t-test for Equality of Means	
	Mean occurrence	%	Mean occurrence	%	t	Sig. (2-tailed)
Additive	1.27	41.01	1.94	39.26	-2.571	.011[*]
Adversative	.62	20.14	.67	13.46	-.319	.750
Causal	.51	16.55	.56	11.38	-.388	.699
Temporal	.38	12.23	1.12	22.60	-5.209	.000[*]
Continuative	.31	10.07	.66	13.30	-2.849	.006[*]
Total	3.09	100.00	4.95	100.00	-4.672	.000[*]

[*] *p<0.05*

T-tests reveal that statistically significant differences between the two groups were found in the three sub-categories of conjunctions: additive, temporal, and continuative devices. In all three subcategories, a significantly higher number of cohesive devices was found in Korean students' CMC texts. This limited use of conjunctions in NS texts is consistent with NS discourse research. For example, Johns (1980) examined NS letters, annual reports, and business and economics textsbooks and found that conjunctions represented fewer than 10% of the cohesion items in any discourse type. Crowhurst (1987) studied NS writing from Grades 6, 10, and 12, and found that conjunctions occurred, but infrequently, at all grade levels.

On the other hand, NNS were reported to use conjunctions more often than NSs. In Hinkel's (2001) study, Koreans in general tended to use significantly more conjunctions than the NSs did. For example, the median frequency rates for the uses of sentence transitions in the essays of Korean speakers were almost triple the number in NS text, which suggests that Koreans rely heavily on conjunctions to achieve textual coherence. (Lee, 1996). The writing samples below represent the

general difference in the use of conjunctions between American students and Korean EFL learners.

(15) NS: I definitely agree with what is being said about conversations. Engaging students in various types of conversations offers wide variations of topics to be discussed. This ***in return*** offers the students the ability to research on their own or to simply add to the discussion their own knowledge. ***For instance***, if you give students a topic and tell them you want to discuss it, the discussion may be boring to them ***because*** they are limited as to what they can say.

(16) NNS: I'm totally dissatisfactory with the fact that we have to give a multiple choice test to students. I like to do diverse activities in classes, but there is time limitation and big curriculum. ***And*** there are mid-term and final exam in each semester. ***And*** they must be multiple choice exams because of many reasons. I think the multiple choice exam doesn't fit the purpose of my instruction. ***And*** students don't want to do diverse activities which are not connected with the tests.

(17) NNS: As Ayers said, standardized tests would be "stupid." According to him, it made teaching mindless and weak, and it was racist in fact. And it can't measure initiative, creativity, imagination, or a host of other valuable dispositions. I know he is right. But think about it practically.

(18) NNS: I teach middle school students ***and*** there are about forty students in each class. Their English language proficiency is very low level ***but*** their intelligence level is much higher than that. ***So*** it's difficult to choose an adequate topic.

In terms of the distribution of the conjunctive devices, it was found that different conjunctions were used in the NS texts as in example 15, whereas, the same conjunction device or a limited range of devices (e.g., *and*, *but*, *so*) were overused in the Korean students' texts as shown in example 16, 17 and 18.

Interestingly, the significantly higher occurrences of continuatives in Korean EFL students' texts was a little surprising at the initial analysis of the mean numbers, but a closer examination revealed that in this sub-category again, only one of the continuative devices, *of course*, was dominantly used in NNSs' texts.

(20)   NNS: I've met some teachers like Mrs. Dentner (in chapter 6). ***Of course***, they intended to help me by talking about some students' character, personality, background, etc.

(21)   NNS: Maybe I was thinking too much about the harmony of the whole group in the school. ***Of course***, if I have a really best friend who established a strong emotional connection, it will be great.

In sum, although the density of conjunctive devices in Korean students' texts is remarkably higher than that of American students' texts, the variety of conjunctions of Korean students' texts is limited. This result is in line with Reid (1992) and Hinkel (2001)'s observation that, in many L2 texts, conjunctions represent the most prevalent overt means of tying portions of text together, even when the ideas in discourse seem to be somewhat disjointed. The limited variety and high density of conjunctions may be due to the Korean students' lack of sensitivity to conjunction variety and their insufficient understanding of the usage of conjunctions or the influence of EFL teaching where the use of overt cohesive devices, especially conjunctions is over-emphasized.

4.2.4 Lexical Cohesion

In this study, lexical devices were divided into 3 sub-categories: repetition, synonymy and superordinate. As can be seen in table 8, the *t*-test on the means of occurrence of the use of the same items revealed that the differences between the two groups were statistically significant ($t= -2.746$, $p <0.05$) while there was no difference between the two groups in the use of the other two subcategories of lexical cohesion. The result indicates that NNSs tend to overuse the same items compared to NSs. The findings in the study are consistent with McGee's (2009) observation identifying word repetition as one of the most frequently used lexical

device by English learners.

Table 8. Types of Lexical Cohesion and Occurrence Rates

Types of lexical cohesion	NS (n=45)		NNS (n=126)		*t*-test for Equality of Means	
	Mean occurrence	%	Mean occurrence	%	*t*	Sig. (2-tailed)
repetition	2.13	61.54	3.21	70.63	-2.746	.007[*]
Synonyms	1.23	35.25	1.21	26.75	.037	.971
Superordinate	.11	3.21	.12	2.62	-.134	.894
Total	3.47	100.00	4.54	100.00	-2.222	.010[*]

[*] *p<0.05*

Examples (22), (23), and (24) illustrate Korean students' overuse of lexical repetition in their CMC texts. Korean students' predilection for lexical reiteration is demonstrated at the expense of other types of lexical devices such as superordinates or synonyms.

(22) NNS: I think teachers in general doesn't seek *collaboration* actively. Especially among the same subject teachers, it's not easy to *collaborate*. I often ask some *collaboration* from math teachers, history teachers, and so on, but I don't seek *collaboration* from English teachers.

(23) NNS: *Portfolios* help students see their learning and assess their own learning development. But, for Korean teachers, it would be a big burden to conduct *portfolios* under constraints such as large student numbers, jammed learning progress. If students are over 40 in a class, keeping track of every student is impossible. *Portfolios* in this situation might be superficial, overlooking the meaning of *portfolios* which focus on a growth in learning. I really want to adapt *portfolios* in my future class, but it doesn't seem to be easy to ignore educational circumstances.

(24) NNS: I definitely think test as a *part of learning* itself. That's what

the *formative test* is for. I think it can be a good way to use the *formative test* as *part of learning.* When I teach something, I should check whether my students know it or not. **Formative test** can be an alternative test, I think.

Korean students tend more toward reiteration of previously introduced information than do the NS students. Indeed, many of the NNS texts included a good deal of what Witte and Faigley (1981) called conceptual and lexical redundancy. Although for purposes of attaining cohesion in a text some redundancy is a virtue, the redundancy in some NNSs' texts seems to be a flaw because these texts failed to supply additional information at the point where it would be expected to appear. In fact, "frequent repetition of lexical items does not necessarily increase readability" (Witte & Faigley, 1981, p. 202).

One of the most important ways for a writer to avoid needless repetition is by means of synonym and superordinate. In their study of investigating graduate students' email messages, Biesenbach-Lucas and Weasenforth (2001) have noticed that non-native students of English fail to use a variety of synonyms which demonstrates their lack of verbal flexibility to select appropriate synonym. Compare the previous NNS examples with the following NS texts.

(25) NS: I liked the Galzer's *article* because it discussed how teachers can help the *students* see their own learning process. This *paper* talked about *kids* keeping journals this way they can visually see the progress they are making.

(26) NS: I think when we talk about *being caring*, there are many things that we have to consider. Like, we need to think about where to draw the line of work/profession and personal/home life. I am still struggling with *this concept*.

Notice that in the example (25) from the NS corpus, *article* is replaced by the synonymous word *paper*, and *students* were substituted by the synonym *kids*. In example (26), *being caring* is reiterated with the superordinate word, *this concept*.

In summary, the NNS texts repeated ideas instead of elaborating them by using

the same words while the NS texts showed flexibility to select appropriate synonyms and superordinates.

5. Discussion and Conclusion

The purpose of the study was to examine differences or similarities in CMC texts produced by Korean students and American students in terms of cohesive devices. The mean difference in the use of overall cohesive devices between these two linguistic groups was significantly different to each other, indicating that the Korean students used a significantly higher number of overall cohesive devices in their CMC texts than the American students.

Out of the five major categories of cohesion including reference, substitution, ellipsis, conjunction, and lexical cohesion, significant differences between NS and NNS texts were identified in the categories of conjunction and lexical device. In a further analysis of the use of 18 subcategories of cohesion, the results show that there were significant group differences for 6 out of the 18 cohesion variables, definite articles and comparatives in the reference category, additive, temporal, and continuative conjunctions in the conjunction category, and repetition in the lexical cohesion category. Overall, the results indicate the significant overuse of these cohesive variables by Korean students compared to the American students. The findings of this study are in line with those of previous studies which reported the overuse of certain cohesive devices by non-native speakers of English (Hinkel, 2001; Milton & Tsang 1993; Reid, 1992). In addition to the overuse of certain cohesive devices, this study also found that the high percentage of use in certain cohesive devices does not always mean that the devices were used correctly and appropriately.

The excessive overuse of certain devices (e.g., conjunctions and repetitions) and thus misuse in those devices displayed in Korean students' texts indicate that L2 writing and composition pedagogy needs to focus not only on the fact that cohesive devices should be used in constructing texts but also on the pitfalls of using them too much in academic contexts.

To highlight the function of conjunctions as a relatively superficial cohesive device, students can be asked to produce a text without using conjunctions at all or employing fewer conjunctions than they usually do. For example, by using Korean

students' original text, a revised version without conjunctions or with a limited number of conjunctions can be presented as an illustration. The example below was extracted from the CMC texts used in this study.

> Original version: *After* reading your message, I thought you were so great teacher. *On the contrary*, I reflected on my conduct. *Until now*, I always just concentrated on teaching English. In case of the first-year students in middle school, especially the girls want to say their personal lives to me. *Of course*, I also want to have some ordinary conversation with them. *But*, because once the conversation was begun, it seldom ended easily. I tried to cut off all conversation with the exception of the formal conversation in class.

> Revised version: Your message reminded me of how great a teacher you are. I then reflected on my conduct. I had concentrated on teaching English. First year middle school students want to speak about their personal lives. Involving ordinary conversation in class is good, but once these conversations begin, it is hard to end them naturally. I found myself cutting off all but the formal conversations in class.

By using these samples, students can be asked to decide which text would be easier to understand with the addition of multiple conjunctions or with a limited number of conjunctions. In this way, students can be taught that superficial conjunctions alone cannot make the text cohesive.

As in the case of conjunction, it seems that matters of lexical repetition need to be addressed in L2 writing instruction. To tackle the issue of overuse in lexical repetition by Korean learners, teachers need to work to expand students' accessible repertoire of lexis. For example, teachers can make learners aware of the significance of lexical choice and lexical strategies. In this regard, native speakers' texts can be used to identify and generate lexical sets. As Carter and McCarthy (1988) point out, one way of making notions such as synonyms and superordinates accessible to learners is to show them how such relations occur over sentence boundaries in texts. After raising the learners' consciousness of lexical cohesion through the close examination of texts generated by native speakers, teachers can encourage the

learners to analyze their own texts and compare their own lexical choice with that of native speakers'.

While this study provides insights into the cohesive devices employed by Korean EFL learners in their CMC texts, it cannot be ascertained whether the results can be generalizable to other populations working in different academic contexts. In order to ascertain to what extent the Korean EFL learners' choice of cohesive devices differ from that of native speakers, the findings should be confirmed with a larger sample of participants involved in CMC writings as well as other types of texts (i.g., narrative, expository, argumentative) and topics in a variety of academic contexts.

References

Aktas, R. N., & Cortes, V. 2008. Shell nouns as cohesive devices in published and ESL student writing. *Journal of English for Academic Purposes* 7: 3-14.

Biesenbach-Lucas, S. 1994. *A comparative genre analysis: The research article and its popularization.* Unpublished doctoral dissertation, Georgetown University.

Biesenbach-Lucas, S., & Weasenforth, D. 2001. E-mail and word-processing in the ESL Classroom: How the medium affects the message. *Language Learning and Technology* 5(1): 135-165.

Biesenbach-Lucas, S., Meloni, C., & Weasenforth, D. 2000. Use of cohesive features in ESL students' e-mail and word-processed texts: A comparative study. *Computer Assisted Language Learning* 13(3): 221-237.

Blake, R. J. 2007. New trends in using technology in the language curriculum. *Annual Review of Applied Linguistics* 27: 76-97.

Carter, R., & McCarthy, M. 1988. *Vocabulary and language teaching.* New York: Longman.

Castro, C. D. 2004. Cohesion and the social construction of meaning in the essays of Filipino college students writing in L2 English. *Asia Pacific Education Review* 5(2): 215-225.

Chafe, W. 1994. *Discourse, consciousness, and time.* Chicago: University of Chicago Press.

Connor, U. 1984. A study of cohesion and coherence in English as a second language students' writing. *International Journal of Human Communication* 17: 301-316.

Crowhurst, M. 1987. Cohesion in argument and narration at three grade levels. *Research in the Teaching of English* 21: 185-201.

Eun, H., & Jeon, B. 2009. Reference and substitution as cohesion devices in EFL writing. *English Language & Literature Teaching* 15(4): 23-36.

Granger, S., & Tyson, S. 1996. Connector usage in the English essay writing of native and

non-native EFL speakers of English. *World Englishes* 15: 17-27.

Guindon, R. & Shuldberg, K. 1987. Grammatical and ungrammatical structures in user-adviser dialogues: Evidence for sufficiency of restricted languages in natural language interfaces to advisory systems. *Proceedings of the Annual Meeting of the ACL,* 41-44.

Halliday, M., & Hasan, R. 1976. *Cohesion in English.* London: Longman.

Herring, S. C. 1996. *Computer-mediated communication: Linguistic, social and cross-cultural perspectives.* Amsterdam: John Benjamins.

Hinkel, E. 2001. Matters of cohesion in L2 academic texts. *Applied Language Learning* 12: 111-132.

Hinkel, E. 2003. Simplicity without elegance: Features of sentences in L1 and L2 academic texts. *TESOL Quarterly* 37(2): 275-301.

Johns, A. 1980. Cohesion in written business discourse: Some contrasts. *The ESP Journal* 1: 35-43.

Johnson, P. 1992. Cohesion and coherence in compositions in Malay and English language. *RELC Journal* 23(2): 1-17.

Kang, J. Y. 2005. Written narratives as an index of L2 competence in Korean EFL learners. *Journal of Second Language Writing* 14(4): 259-279.

Kim, H. 1992. *Clause combining in discourse and grammar: An analysis of some Korean clausal connectives in discourse.* Unpublished doctoral dissertation, University of Hawaii.

Lee, S. B. 1996. Different cohesive devices in English prose by Korean and American college students. *English Teaching* 51(3): 3-19.

Liu, M., & Braine, G. 2005. Cohesive features in argumentative writing produced by Chinese undergraduates. *System* 33: 623-636.

McCarthy, M. 1991. *Discourse analysis for language teachers.* Cambridge: Cambridge University Press.

McCulley, G. A. 1985. Writing quality, coherence, and cohesion. *Research in the Teaching of English* 19: 269-282.

McGee, I. 2009. Traversing the lexical cohesion minefield. *ELT Journal* 63: 212-220.

Milton, J., & E. S. C. Tsang, E. S. C. 1993. A corpus-based study of logical connectors in EFL students' writing: Directions for future research. In R. Pemberton & E. S. C. Tsang (Eds.), *Studies in Lexis,* 215-246. Hong Kong: The Hong Kong University of Science and Technology Language Centre.

Murray, D. E. 2000. Protean communication: The language of computer-mediated communication. *TESOL Quarterly* 34(3): 397-42.

Neuner, J. L. 1987. Cohesive ties and chains in good and poor freshman essays. *Research in the Teaching of English* 21: 92-105.

Quirk, R., Greenbaum, S., Leech, G. and Svartvik, J. 1985. *A comprehensive grammar of the English language.* New York : Longman.

Reid, 1992. A computer text analysis of four cohesion devices in English discourse by na-

tive and nonnative writers. *Journal of Second Language Writing* 1(2): 79-107.

Suh, K. H. 2000. A cohesion analysis of native and non-native speakers' texts: Implications for ESL writing. *The Sociolinguistic Journal of Korea* 8(1): 289-305.

Tanskanen, S.-K. 2006. *Collaborating towards coherence*. Amsterdam/Philadelphia: John Benjamins.

Tella, S. 1992. *Talking Shop via E-mail: A Thematic and Linguistic Analysis of Electronic Mail Communication* (Research Report 99). Helsinki: University of Helsinki. (ERIC ED 352015)

Witte, S., & Faigley, L. 1981. Coherence, cohesion, and writing ability. *College Composition and Communication* 32: 189-204.

Zhang, M. 2000. Cohesive features in expository writing of undergraduates in two Chinese universities. *RELC Journal* 31: 61-95.

Yoon-Hee Na
Department of English Language and Literature
Chonnam National University
77 Yongbong-ro, Buk-gu,
Gwangju 500-757, Korea
Tel: 062-530-3168
E-mail: yhna04@hanmail.net