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An Analysis of Linguistic Accuracy in Korean University Students' Narrative and Argumentative Writing*

Soo-Kyung Park
Korea University

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The purposes of this study were to investigate (1) the effects of two different modes of discourse, i.e., narrative and argument, on the level of linguistic accuracy of compositions written by Korean university EFL students; (2) the relationship between the level of writing proficiency and linguistic accuracy of compositions written in each mode. The writing samples were obtained from 78 Korean university students, rated using a holistic rubric, and then divided into three groups on the basis of writing proficiency. Analysis of data revealed no significant influence of two modes of discourse on the overall frequency of errors. Yet, paired *t*-test analysis showed, of the 64 subcategories of error classification, statistically significant discourse mode effects were observed for 16 subcategories. One-way ANOVA, Welch ANOVA, and Pearson correlation analysis illustrated that EFTs (the number of error-free T-units) best discriminated between different proficiency levels and seems to be the most reliable measure of linguistic accuracy. In addition, group comparison of error types with Welch ANOVA test demonstrated that group differences were significant for four error types in narrative mode and for seven error types in argumentative mode. Implications for L2 writing instruction and assessment are discussed.

[linguistic accuracy/discourse mode/narrative/argument/writing proficiency/ 언어정확도/담화유형/서사문/논설문/작문능력]

I. INTRODUCTION

Writing in a second language (L2) has been regarded as "a complex process involving the ability to communicate in L2 and the ability to construct a text in order to express one's

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ideas effectively in writing" (Myles, 2002, p. 9). A considerable amount of research has been conducted to investigate the factors associated with L2 writing performance and characteristics of L2 writing. One area that has been the subject of much research is the linguistic accuracy of L2 writing. Research in this area has demonstrated that lack of grammatical knowledge is the most frequently cited properties of L2 text and L2 writers' limited ability to produce accurate grammar disadvantages the quality of their written text. (Hinkel, 2010). Besides, in rubrics of many standardized writing proficiency tests (e.g., TOEFL iBT independent writing, IELTS writing, etc.), linguistic accuracy has been one of the components that determine the overall quality of L2 written text.

Error analysis is a type of linguistic analysis that focuses on the errors learners make (Abisamra, 2003). Error analysis was established in the 1960s by Corder (1967) and since then it has been the main area of second language acquisition research. Corder claimed that learners' errors provide valuable information both on the learning process, by allowing the learners to test hypotheses regarding the language they are learning, and on teaching process, by providing the teacher with evidence of what has or has not been learned. Since Corder's seminal work, much attention has been devoted to error analysis to identify the systematic patterns of grammatical errors made by L2 learners.

In contrast to a large body of literature on linguistic accuracy and error analysis, the role of mode of discourse in L2 writing has been overlooked and thus underexplored. Relatively few studies have looked into the discourse mode as one variable affecting diverse features of L2 writing. Quellmalz, Capell, and Chou's (1982) comment is worth quoting in this context: "a single sample taps student performance in only one type of discourse. This limitation presents a measurement problem since the generic methods of text development in particular forms of discourse differ substantially from one another" (p. 2).

Therefore, the present study was designed to investigate the effects of two different discourse modes (i.e., narrative and argumentative) on linguistic accuracy of compositions produced by Korean university EFL learners. Linguistic accuracy was analysed using four objective measures (i.e., the number of error-free T-units, the percentage of error-free T-units per T-units, the number of errors per T-unit, and the total number of errors per essay) and error classification. In addition, the relationship between holistic ratings and linguistic accuracy was examined in order to identify differences and similarities of linguistic accuracy across different writing proficiency groups in each discourse mode. Specifically, the following research questions guided the present study:

1) How do the two different discourse modes, i.e., narrative and argument, affect linguistic accuracy of the written texts produced by Korean university EFL learners?
   (1) To what extent do the two discourse modes influence four objective measures of

accuracy?
(2) To what extent do the two discourse modes influence the frequency and the distribution of errors across different categories?

2) How does the level of writing proficiency as judged by holistic rating relate to linguistic accuracy of the written texts produced by Korean university EFL learners?
(1) To what extent does the level of writing proficiency correlate with four objective measures of accuracy?
(2) To what extent does the level of writing proficiency correlate with the frequency and the distribution of errors across different categories?

II. LITERATURE REVIEW

1. Linguistic Accuracy

Error analysis is one of the areas that have been extensively studied in the field of L2 learning and writing since Corder (1967) introduced the notion that errors are a necessary part of linguistic development. According to Richards, Platt and Platt (1992), the systematic analysis of L2 learner's errors can be of great value in that it can help identify the causes of learners' errors, obtain information on common difficulties in L2 learning, and discern the strategies which learners use. Similarly, Dulay, Burt, and Krashen (1982) contend that analysis of errors made by L2 learners can help to better understand L2 learning process; in addition, it will help teachers and curriculum designers to develop teaching materials that are tailored to specific learning needs of L2 learners.

Linguistic accuracy has been used as an indicator of writing development and an important aspect of L2 writing assessment. This is based on the assumption that L2 learners write more accurately or make fewer errors in their writing as their proficiency level increases (Wolfe-Quintero, Inagaki, & H. Y. Kim, 1998). Previous studies suggested several measures that can be employed to evaluate linguistic accuracy in a quantifiable way.

Some studies employed objective measures of linguistic accuracy such as the number of error-free T-units (EFTs), the number of error-free clauses (EFCs), the percentage of error-free T-units to the number of T-units (EFT/T), and the number of errors per T-unit (E/T). Although research findings in this area are not conclusive, a number of studies revealed a significant relationship between the level of L2 writing and three measures: EFTs, EFT/T, and E/T (Knoch, 2009; Larsen-Freeman, 1978; Larsen-Freeman & Strom, 1977; Vann, 1979; Wolfe-Quintero et al., 1998). For instance, Larsen-Freeman and Strom (1977) examined L2 compositions and reported that the total number of error-free T-units (EFTs)

distinguished well among different levels of proficiency. In a later study, Larsen-Freeman (1978) found that the percentage of error-free T-units (EFT/T) was significantly correlated with the level of proficiency. Another study by Wolfe-Quintero et al. (1998) analyzed 39 studies and concluded that the best and most reliable measures of accuracy were the number of error-free T-units (EFTs), the percentage of error-free T-units (EFT/T), and the number of errors per T-unit (E/T).

Other studies examined linguistic accuracy using another quantitative measure, error count. Studies with error count have dealt with the number of errors in relation to several aspects of L2 writing: the effects of two different tasks with different cognitive complexity upon the number of errors in L2 writing (Zhang, 1987), the correlation between the type of program (bilingual vs. submersion) and error frequency (Carlisle, 1989), and the relationship between the type of written feedback on surface-level error count (Kepner, 1991).

In another line of study, researchers measured accuracy by counting the number of errors using error taxonomies (Bardovi-Harlig & Bofman, 1989; Chastain, 1990; Dulay et al., 1982). Using both error count and classification, several studies have analyzed the frequency and distribution of errors across different categories. Dulay et al. (1982), for example, classified errors into four major categories of addition, omission, misformation, and misordering based on surface strategy taxonomy which emphasizes the ways surface structures are altered. Another classification comes from Bardovi-Harlig and Bofman's (1989) study that employed linguistic taxonomy in which errors are categorized according to the language component and the particular linguistic constituent the error affects. They classified errors into three main groups of syntactic, morphological, and lexical-idiomatic errors.

2. Discourse Mode

Not much research has been carried out to investigate the role of discourse mode as one aspect of assignment variables in L2 writing. Research findings, however, suggest that discourse mode has more effect than variations in topic (Braddock, Lloyed-Jones & Schoer, 1963). Previous studies reported the impact of mode of discourse on diverse features of L2 learners writing which include the quality of student's writing (Carrell & Conner, 1991; Pollitt & Hutchinson, 1987), syntactic complexity (Sinclair, 1984; Yau & Belanger, 1984), the use of cohesive devices (Norment, 1994), and linguistic accuracy (Foster & Skehan, 1996; Tarone & Parrish, 1988; Watcharapunyawong & Usaha, 2013).

Several researchers have investigated specifically linguistic accuracy of L2 learners across different modes of discourse and different task types and indicated that linguistic accuracy and error types in L2 writing are associated with the type of text students are

asked to produce. For instance, Tarone and Parrish (1988) noted that narratives tended to generate more accurate use of articles than non-narrative tasks. Based on the findings, they suggested that L2 learners' accuracy in their written texts varies depending on the task types. Similarly, Foster and Skehan (1996) revealed that narrative writing elicited the lowest level of accuracy than the other two discourse modes, description and argumentation. In a more recent study, Watcharapunyawong and Usaha (2013) analyzed the types of error in Thai L2 students' writing and reported that verb tense error was the most frequent error in narrative writing, and subject-verb agreement error was much more frequently observed in descriptive and argumentative writing than in narrative writing.

A majority of the studies on the role of discourse mode have been conducted using narrative and argumentative mode, and the findings suggest that narrative writing is easier than argumentative writing. Researchers contended that narrative writing task elicited higher ratings than argumentative writing task (Carrell & Conner, 1991; Crowhurst, 1990; Engelhard, Gordon, & Gabrielson, 1992; Pollitt & Hutchinson, 1987). Another finding observed was that students wrote shorter essays in argumentative mode than in narrative mode (Crowhurst, 1987; Freedman & Pringle, 1980). In an effort to explain the source of this discrepancy, researchers argue that argumentative mode is commonly considered to be more cognitively demanding than narrative mode (Rog, 2011).

The two discourse modes, narrative and argumentative, were selected for investigation in the current study based on the above mentioned previous research findings. As research findings suggest that narration and argumentation call for different levels of cognitive ability and thus elicit different levels of L2 writing performance, the present study aimed to examine the role of these two discourse modes on the linguistic accuracy of Korean L2 students' writing.

III. METHOD

1. Writing Samples

Writing samples were obtained from 78 Korean university EFL students (51 males and 27 females) whose age ranged from 18 to 27 years (M = 22.9) at the time of the data collection. Students were enrolled in required English courses in two separate universities in Seoul majoring in diverse fields of study. Each student was asked to write one narrative and one argumentative essay during regular class periods, with a 30-minute time limit. These two discourse types were chosen on the basis of previous studies, demonstrating that each type elicits different levels of performance in terms of cognitive demands and a variety of textual features (Crowhurst, 1990; Freedman & Pringle, 1980; Kegley, 1986).

The narrative essay prompt was to describe a memorable event and the argumentative essay prompt[1] was to state a position on the issue of choosing a major at university, whether it should be based on personal interests or future employment possibilities. All essays were randomly ordered and numbered using different codes for each text type (e.g., N-01 for narrative and A-01 for argumentative); two essays written by the same student were coded with the same number. The text length of narrative essays ranged from 40 to 423 words with a mean length of 166.37 words. For argumentative essays, the text length ranged from 50 to 380 words and the mean length was 163.63 words. On average, the length of narrative essays was slightly longer than that of argumentative essays. A comparative analysis of total number of words in an essay between three writing proficiency levels indicated that students composed longer essays in both discourse modes as the proficiency level increased; the mean length of essay was 93.14, 148.0, and 280.0 in narrative mode and 103.9, 165.6, and 282.6 in argumentative mode for Groups 1, 2, and 3 respectively.

2. Research Procedure

1) Scoring Rubric and Rating Procedure

A total of 156 essays were scored by eight raters: four native English speaker raters and four Korean raters. The raters had a mean teaching experience of 8.75 years. The writing samples were rated with a holistic scoring rubric of TOEFL iBT independent writing on a six-point scale, where "0" indicates the lowest score and "5" corresponds to the highest one. In order to determine the quality of written compositions, a mean holistic score of four raters with high intraclass correlation coefficient (ICC)[2] was awarded to each essay. Then, for statistical analysis, each composition was assigned to one of the three writing proficiency groups: Group 1 (Low), Group 2 (Intermediate), and Group 3 (High). The number of writing samples in each proficiency group was 22 for Group 1, 36 for Group 2, and 20 for Group 3 in narrative mode. For argumentative mode, the number of each group was 31 for Group 1, 32 for Group 2 and 15 for Group 3.

2) Data Analysis

An error analysis was undertaken with four linguistic accuracy variables: the number of

[1] The argumentative prompt was adopted from Hinkel (2009).

[2] The highest intraclass correlation coefficient was .749 for narrative essays and .760 for argumentative essays.

error-free T-units (EFTs), the percentage of error-free T-units (EFT/T), the number of errors per T-unit (E/T), and the total number of errors per essay (TE). The first three measures were taken from Wolfe-Quintero et al.'s (1998) study which suggested these three as the best measures of accuracy. The last measure, the total number of errors, was added following previous research findings which proposed that the total number of errors in L2 composition was often linked to rating scores and proficiency level (Chapman, Collins, Dame, & Elliott, 2014; Holling, 2004; Santos, Verspoor, & Nerbonne, 2012). In addition, the errors were categorized and analyzed using the error taxonomy proposed by M. S. Kim (2009). M. S. Kim (2009) adapting Dulay et al.'s (1982) error taxonomy classified errors into four main categories (omission, addition, misformation, and others) with a total of 64 subcategories (See Appendix A for a detailed description of error categories). First, all the errors in the written essays were identified and corrected by a native speaker of English who also participated in rating process. Then, all identified errors were coded using QSR NVivo, a qualitative data analysis software, by the researcher. Based on the coding results, four linguistic accuracy variables and the frequency and distribution of errors were compared across two discourse modes and three proficiency groups using SPSS 12.0.1. The effects of discourse mode were investigated using paired *t*-tests. In order to examine the group differences, each variable was first tested for homogeneity of variances using a Levene's test for equality of variances. Group comparison was conducted using a one-way ANOVA when the results of the Levene's test revealed equal variances. On the other hand, when the results indicated unequal variances, a Welch's ANOVA test was employed. In addition, Pearson correlation analyses were carried out in order to assess the relationship between four objective measures of linguistic accuracy and the level of writing proficiency.

IV. RESULTS AND DISCUSSION

1. Linguistic Accuracy Variables

Based on the coding results of each student's frequency of error, four linguistic accuracy variables were calculated: the number of error-free T-units (EFTs), the percentage of error-free T-units per T-units (EFT/T), the number of errors per T-unit (E/T), and the total number of errors per essay (TE).

Table 1 presents the descriptive statistics of four linguistic accuracy variables. Three measures (TE, EFTs, and EFT/T) were slightly higher in narrative than in argumentative writing. On the other hand, E/T was higher in argumentative mode. Paired *t*-tests results, however, revealed no statistically significant differences between two discourse modes in

terms of four accuracy variables ($p < .05$).

TABLE 1

Descriptive Statistics of Linguistic Accuracy Variables

Discourse mode	Variable	N	Min.	Max.	Mean	S.D.
Narrative	TE	78	2.00	60.00	19.82	12.92
	EFTs	78	0.00	26.00	4.83	3.88
	EFT/T	78	0.00	74.29	28.67	18.91
	E/T	78	0.20	2.58	1.19	0.55
Argumentative	TE	78	4.00	46.00	18.50	10.06
	EFTs	78	0.00	14.00	4.00	3.09
	EFT/T	78	0.00	66.67	26.70	16.50
	E/T	78	0.44	3.00	1.32	0.53

Table 2 shows that in two discourse modes, three accuracy variables (TE, EFTs, and EFT/T) increased as the proficiency level increased. By contrast, E/T decreased as the proficiency level went up. One-way ANOVA[3] and Welch ANOVA tests were carried out to test whether the observed group differences were significant or not. Statistically significant group differences were found in TE and EFTs for the two discourse modes ($p < .05$). A positive correlation was predicted between EFTs and proficiency level. However, of importance to note is that on average, lower level students from Group 1 (narrative: 2.95, argument: 2.35) and Group 2 (narrative: 3.97, argument: 4.22) produced a very small number of error-free T-units compared to high level students from Group 3 (narrative: 8.45, argument: 6.93). This finding provides support to the previous research (Wolfe-Quintero et al., 1998), which suggested that the number of error-free T-units (EFTs) may be useful for more advanced learners since it is not easy to find any error-free units in the performance of relatively low level students.

Another noteworthy finding is the positive correlation between the total number of errors (TE) and proficiency level. On average, essays received high holistic scores contained more errors than those rated low. The total number of errors per essay increased as the proficiency level went up in both narrative (25.25 > 20.33 > 14.05 for Groups 3, 2, and 1 respectively) and argumentative mode (23.20 > 20.47 > 14.19 for Groups, 3, 2, and 1 respectively). This might be concerned with the fact that the composition length is correlated with the number of errors in an essay. Furthermore, the fact that students from high proficiency group produced more error-free T-units (EFTs) indicates that as students wrote longer essays, they produced more errors (TE), but at the same time more error-free T-units (EFTs).

[3] A one-way ANOVA test was conducted on the four linguistic accuracy variables in narrative mode and EFT/T variable in argumentative mode. For the other three variables in argumentative mode, a Welch ANOVA test was employed.

TABLE 2

Group Differences of Grammatical Accuracy Variables

Discourse mode	Variable	Group	Mean	S.D.	S.E.	Min.	Max.	F value	Sig
Narrative	TE	1 (22)	14.05	8.66	1.85	3.00	32.00	4.339	0.016*
		2 (36)	20.33	13.92	2.32	2.00	60.00		
		3 (20)	25.25	12.90	2.88	6.00	50.00		
	EFTs	1 (22)	2.95	2.48	0.53	0.00	9.00	17.308	0.001*
		2 (36)	3.97	2.51	0.42	0.00	9.00		
		3 (20)	8.45	4.83	1.08	2.00	26.00		
	EFT/T	1 (22)	25.74	20.30	4.33	0.00	69.23	2.009	0.141
		2 (36)	26.46	18.51	3.09	0.00	70.00		
		3 (20)	35.87	17.00	3.80	9.09	74.29		
	E/T	1 (22)	1.25	0.58	0.12	0.38	2.56	1.021	0.365
		2 (36)	1.24	0.55	0.09	0.20	2.58		
		3 (20)	1.04	0.49	0.11	0.34	2.14		
Argumen-tative	TE	1 (31)	14.19	6.37	1.14	5.00	34.00	9.570	0.001*
		2 (32)	20.47	12.47	2.21	4.00	46.00		
		3 (15)	23.20	7.21	1.86	13.00	38.00		
	EFTs	1 (31)	2.35	1.94	0.35	0.00	6.00	14.074	0.001*
		2 (32)	4.22	2.87	0.51	0.00	14.00		
		3 (15)	6.93	3.31	0.85	3.00	12.00		
	EFT/T	1 (31)	21.78	15.65	2.81	0.00	54.55	2.676	0.075
		2 (32)	28.71	18.19	3.22	0.00	66.67		
		3 (15)	32.58	11.87	3.06	15.79	54.55		
	E/T	1 (31)	1.41	0.57	0.10	0.56	2.43	2.608	0.084
		2 (32)	1.32	0.57	0.10	0.44	3.00		
		3 (15)	1.13	0.30	0.08	0.76	1.90		

2. Correlation between Linguistic Accuracy Variables and Quality Scores

The correlation between four linguistic accuracy variables and holistic scores was investigated using Pearson's correlation analysis. Similar correlation patterns were observed across the two discourse modes. Table 3 demonstrates that among four linguistic accuracy variables, modest but the highest positive correlations were found between EFTs and holistic scores (narrative, $r = 0.553$; argument, $r = 0.504$, $p < .05$). Besides, a modest positive correlation was observed between TE and holistic scores in narrative ($r = 0.331$, $p < .05$) and argumentative mode ($r = 0.365$, $p < .05$). The other two variables (EFT/T, E/T) were not significantly correlated with the holistic scores and thus failed to distinguish students from different proficiency levels. Taken together with the analysis of group differences, the correlation data provide strong support for previous studies (Larsen-Freeman & Strom, 1977) in which EFTs was shown to discriminate well among different proficiency levels. Yet, other two variables (EFT/T, E/T) proposed by Wolfe-Quintero et al. (1998) as best measures of accuracy were found to be not reliable. The findings of the current study suggest that of the four accuracy variables investigated, the number of error-

free T-units (EFTs) is the best discriminating measure for linguistic accuracy of different proficiency groups and the best predictor of L2 writing proficiency.

TABLE 3
Correlation Between Grammatical Accuracy Variables and Holistic Scores

	Narrative	Argumentative
TE	0.331*	0.365*
EFTs	0.553*	0.504*
EFT/T	0.198	0.214
E/T	-0.147	-0.167

*Correlation is significant at the 0.05 level (2-tailed).

3. Error Classification

Adopting M. S. Kim's (2009) error classification, the present study analyzed four major types of errors with 64 subcategories.

1) Error Comparison in Four Major Categories

First, the number of errors in four major categories was compared across two discourse modes. As can be seen from Table 4, a total of 1,546 errors were found in narrative and 1,443 errors in argumentative mode. As can be seen from the third and sixth column of the Table 4, which demonstrates the percentage of a specific error category per total number of words (%/TW), regardless of the type of discourse mode, most frequent errors were in the category of misformation followed by omission, others, and addition. These results are consistent with those of M. S. Kim's (2009) study, which revealed that the most frequent categories of errors in narrative writing produced by Korean university students, in order of frequency, were misformation, omission, others, and addition. This suggests that Korean learners in general show identical patterns of errors when writing a specific mode of discourse. The findings of the present study and M. S. Kim's (2009) study provide support for this pattern at least in the case of narrative writing. Discourse mode effects on four error categories were examined using paired *t*-tests and the results indicated that significant discourse mode effect was found only in the category of others, but not in three other categories ($p < .001$). The finding further suggests that Korean learners of English exhibit similar patterns of errors across different types of discourse mode, at least for the types of discourse mode and error classification considered in the present study.

TABLE 4

Error Frequency Comparison between Two Modes (Four Categories)

Error category	Narrative			Argumentative		
	Freq.	%/TW	TE%	Freq.	%/TW	TE%
Misformation (MIS)	601	4.63	38.9	630	4.94	43.7
Omission (OMI)	445	3.43	28.8	472	3.70	32.7
Addition (ODD)	166	1.28	10.7	134	1.05	9.3
Others (OTH)	334	2.57	21.6	207	1.62	14.3
Total	1546	11.91	100.0	1443	11.31	100.0

TABLE 5

Group Differences of Error Types (Four Categories)

Discourse mode	Variable	Group	Mean	S.D.	S.E.	F value	Sig
Narrative	Misfor-mation	1 (22)	0.062	0.037	0.008	4.325	0.017*
		2 (36)	0.052	0.033	0.005		
		3 (20)	0.034	0.017	0.004		
	Omission	1 (22)	0.045	0.032	0.006	9.015	0.001*
		2 (36)	0.040	0.028	0.005		
		3 (20)	0.023	0.013	0.003		
	Addition	1 (22)	0.010	0.010	0.002	0.593	0.555
		2 (36)	0.013	0.011	0.002		
		3 (20)	0.012	0.010	0.002		
	Others	1 (22)	0.031	0.019	0.004	3.036	0.054
		2 (36)	0.028	0.017	0.003		
		3 (20)	0.019	0.012	0.003		
Argumentative	Misfor-mation	1 (31)	0.065	0.039	0.007	10.505	0.001*
		2 (32)	0.052	0.026	0.005		
		3 (15)	0.036	0.009	0.002		
	Omission	1 (31)	0.052	0.034	0.006	8.862	0.001*
		2 (32)	0.037	0.026	0.005		
		3 (15)	0.022	0.015	0.004		
	Addition	1 (31)	0.006	0.007	0.001	3.456	0.037*
		2 (32)	0.012	0.011	0.002		
		3 (15)	0.009	0.007	0.002		
	Others	1 (31)	0.021	0.014	0.003	1.993	0.143
		2 (32)	0.015	0.010	0.002		
		3 (15)	0.015	0.008	0.002		

Table 5 demonstrates that in three categories of error types, misformation, omission, and others, as the proficiency level went up, there was a decrease in the number of errors students made, irrespective of discourse type. An interesting finding is that in two discourse modes, higher level students (Groups 2 and 3) made more addition errors than low level students (Group 1). One-way ANOVA[4] and Welch ANOVA tests revealed

[4] A Welch ANOVA test was conducted on the omission category in narrative mode and on misformation and omission categories in argumentative mode. For the other five variables, a one-way ANOVA test was employed.

statistically significant group differences in the categories of misformation and omission in both discourse modes ($p < .05$). In the case of argumentative writing, an addition error type also showed significant group differences ($p < .05$).

A further analysis of addition errors in argumentative essays indicated that the students in Group 1 made a total of 21 addition errors and the most frequent error was found in the subcategory of unnecessary word (7 occurrences) followed by preposition (4) and article (3). Of a total of 72 addition errors produced by the students in Group 2, the highest frequencies of error occurred in the area of article (16), unnecessary word (15), and preposition (13). In the case of the students from Group 3, out of a total of 41 addition errors, the most frequent errors were unnecessary word (12), preposition (10), and article (8). This suggests that even high level students have difficulty in using English articles and prepositions correctly. The findings are in line with previous research which suggests that English prepositions and articles are the most difficult for many English language learners regardless of L1 background (Reid, 1997). Researchers attributed frequent preposition errors to the fact that prepositions do not behave grammatically in the same way for each language (Celce-Murcia & Larsen-Freeman, 1999). As for article errors, studies provided evidence that acquiring English article system poses a challenge to L2 learners, in particular to learners whose first languages do not have article systems, including Korean, Japanese, and Chinese (Master, 1990; Mizuno, 1999; S. B. Park, 2006).

2) Error Comparison in 64 Subcategories

Table 6 lists the comparison of the top 20 errors across two discourse modes, which indicates that a total of 1,273 errors occurred, accounting for 82.3% of the total number of errors (1,546) in narrative mode. In the case of argumentative mode, a total of 1,113 errors were produced, accounting for 77.1% of the total number of errors (1,443). This difference demonstrates that students made errors from the top 20 error types more repeatedly in narrative than in argumentative mode. A comparison of the top 10 errors makes this pattern more distinctive; the top 10 errors occurred a total of 1,000 times, accounting for 64.8% in narrative, whereas a total of 801 errors accounted for 55.3% in argumentative. A full list of error frequency comparison in 64 subcategories between two modes is presented in Appendix B.

TABLE 6

Comparison of Top 20 Errors between Two Modes (64 Subcategories)

Narrative				Argumentative			
Rank	Error Type	Freq.	%	Rank	Error Type	Freq.	%
1	**Incorrect tense**	233	15.1	1	**Omission of article**	142	9.8
2	Wrong vocabulary	151	9.8	2	Wrong vocabulary	103	7.1
3	**Omission of article**	147	9.5	3	Omission of plural suffix -s	93	6.4
4	Omission of plural suffix	83	5.4	4	Ill-formed sentence structure	87	6.0
5	Awkward sentence	77	5.0	5	**Incorrect tense**	84	5.8
6	Omission of preposition	72	4.7	6	Incorrect use of preposition	77	5.3
7	Incorrect use of preposition	70	4.5	7	Incorrect use of article	57	4.0
8	Ill-formed sentence structure	63	4.1	8	Incorrect subject verb agreement	56	3.9
9	Addition of unnecessary word	57	3.7	9	Incorrect use of pronoun	51	3.5
10	Misordering	47	3.0	9	Omission of preposition	51	3.5
11	Addition of article	34	2.2	11	Omission of 'be' verb	37	2.6
11	Not clear	34	2.2	12	Not clear	36	2.5
13	Omission of conjunction	32	2.1	13	Addition of unnecessary word	34	2.4
14	Incorrect use of article	29	1.9	14	**Omission of modal verb**	33	2.3
15	Omission of possessive adjective	25	1.6	14	Misordering	33	2.3
					Incorrect use of adjective form	29	2.0
15	**Addition of modal verb**	25	1.6	16	Incorrect use of possessive	29	2.0
15	Fragment	25	1.6	16	adjective		
18	Omission of 'be' verb	24	1.6	18	Omission of conjunction	27	1.9
18	Omission of preposition	24	1.6	18	Addition of article	27	1.9
20	Incorrect use of determiner	21	1.4	18	Addition of preposition	27	1.9
	Total	1273	82.3		Total	1113	77.1

Incorrect tense (15.1%) was the most frequent error type in narrative writing whereas omission of article (9.8%) was most observed in argumentative writing. These results are somewhat different from those found in M. S. Kim's (2009) study in which the most frequent error type was omission of article and the second most frequent error type incorrect tense in Korean students' narrative writing. One possible explanation for this discrepancy could be the topics chosen for each study. A further investigation which includes multiple topics in each discourse mode would be needed in order to more accurately assess the role of discourse mode in L2 writing.

As already discussed, the students in the present study demonstrated difficulty using English articles. In particular, omission of articles was present with high frequency in both discourse modes. This corroborates previous observations that English learners whose L1 does not have articles omit articles more often than those whose L1 contains articles (Ionin, Zubizarreta, & Maldonado, 2008).

Incorrect tense error is also worth reviewing since noticeable differences between two modes were observed. Students made significantly more incorrect tense errors in narrative (15.1%) than in argumentative (5.8%). The findings of previous studies, based on a corpus

analysis, demonstrate that the distribution of simple present and past tense verbs differs considerably across registers; fictional narratives show a strong preference for past tense verbs while conversation and academic prose present the opposite pattern (Biber, Johansson, Leech, Conrad, & Finegan, 1999). The findings of the present study are also in line with those of Biber et al.'s study in that as students wrote a narrative essay about a memorable past experience, they had to use past tense frequently. This might increase the errors of incorrect tense in narrative mode.

It is noteworthy that the students employed incorrect use of the present tense when the past tense was expected. As can be seen from the below examples of tense errors, a majority of tense errors were concerned with cases where the simple present tenses were improperly used instead of the simple past tenses (examples 1 to 4 are good illustrations of this error type). The findings are in accordance with those obtained from previous studies in which Thai and French EFL students often incorrectly used present tense verbs instead of the required past tense verbs (Granger, 1999; Watcharapunyawong & Usaha, 2013). A further analysis with learners of other L1 backgrounds would be necessary to determine whether or not this pattern is a cross-linguistic feature of ESL/EFL writing. The examples of tense error in narrative writing are given below and the tense errors are underlined:

1. **I have a good experience in childhood when I was young.* [N-11, Group 1]
2. **When I was young, I had learned swimming.* [N-58, Group 2]
3. **I can't say it was a miserable time because I gain something from that experience.* [N-49, Group 3]

Another noteworthy difference was found in the area of modal verb error. In narrative mode, addition of modal verb was frequently observed. Of a total of 25 occurrences of addition of modal verb, modal verb *could* or *can* occurred most frequently: 22 occurrences accounting for 88% of addition of modal verb error. As can be seen from the below examples of addition of modal verb, students added the modal verb *could* or *can* to indicate possibility where simple past tense is needed to express an action started and finished at a specific time in the past. The addition of possibility or ability modals seems to be transferred from the L1, Korean since *hal su itta* (translated as "can") and *hal su isseo tta* (translated as "could") are frequently used in Korean language. The followings are examples of addition of modal verb in students' narrative writing:

1. **For a month after, I could travel all around the contury.* [N-23, Group 1]
2. **I recommend you have to go Australia*. [N-30, Group 2]
3. **And finally, I could be reached where my mom was working*. [N-48, Group 3]

By contrast, omission of modal verb was frequently found in argumentative mode. A closer look revealed that students often omitted modal verbs such as *will* (indicating future action) and *should* (expressing personal obligation). One of the main goals of argumentative writing is to persuade readers to agree with what the writer has written (Lannon, 1986). As such, the use of modal verbs is a key factor producing an effective argument. As will be discussed in the following section of group differences, high level students made few errors in the category of omission of modal verb whereas relatively low level students produced this error with high frequency. This finding suggests that low level students need more instructions on modal verb use in order to effectively deliver the intended meaning in their argumentation. Examples of omission of modal verbs in students' argumentative writing are given in the following:

1. * *Now I (will) explain three reasons.* [A-01, Group 2]
2. **We (should) choose our major field of study based on own personal interests.* [A-32, Group 1]
3. **If I get a job with this company, I (will) make the most of my subject.* [A-54, Group 1]

Investigation of discourse mode effects indicated that the above mentioned two error types, i.e., omission and addition of modal verbs, showed significant differences across the two discourse modes. A further analysis demonstrated that in narrative mode, modal verb errors including subtypes of addition, omission and incorrect use of modal verbs occurred a total of 37 times accounting for 2.4% of the total number of errors. In argumentative mode, however, slightly more modal verb errors were observed with a total of 52 occurrences accounting for 3.6%.

Hyland and Milton (1997) illustrated the difficulty of L2 writers with modal expressions and contended that the source of this difficulty might lie in the fact that English modal verbs are "polypragmatic, that is, they can simultaneously convey a range of different meanings" (p. 185). They further argued that the problems with modal verbs can be detrimental to the performance of L2 writers since such errors often impede readers' understanding of argument (Hyland & Milton, 1997). As such, English writing instruction needs to be designed carefully to help Korean students understand the subtle differences in meaning and usage conveyed by the modal verbs.

The number of errors in 64 subcategories was compared across two modes using paired *t*-tests. The mean frequency of each error type was adjusted for the total number of words in an essay. Due to space limitation, the results presented in Table 7 include only the error types found to be statistically significant.

TABLE 7

Discourse Mode Effects on Error Types (64 Subcategories)

Error type	Paired differences			t	df	Sig. (2-tailed)
	Mean	S.D.	S.E.M.			
IAF (N) – IAF (A)	-0.0014	0.0057	0.0007	-2.100	77	0.039*
IADL (N) – IADL (A)	0.0007	0.0025	0.0003	2.521	77	0.014*
IM (N) – IM (A)	-0.0009	0.0027	0.0003	-2.781	77	0.007*
IN (N) – IN (A)	-0.0006	0.0024	0.0003	-2.295	77	0.024*
IPA (N) – IPA (A)	-0.0025	0.0071	0.0008	-3.128	77	0.002*
IPAV (N) – IPAV (A)	0.0013	0.0054	0.0006	2.122	77	0.037*
IPN (N) – IPN (A)	-0.0031	0.0121	0.0014	-2.231	77	0.029*
ISS (N) – ISS (A)	-0.0026	0.0097	0.0011	-2.341	77	0.022*
ISV (N) – ISV (A)	-0.0034	0.0068	0.0008	-4.371	77	<0.001*
IT (N) – IT (A)	0.0143	0.0253	0.0029	4.975	77	<0.001*
OI (N) – OI (A)	-0.0005	0.0023	0.0003	-2.083	77	0.041*
OM (N) – OM (A)	-0.0023	0.0066	0.0007	-3.041	77	0.003*
AM (N) – AM (A)	0.0010	0.0036	0.0004	2.403	77	0.019*
AUW (N) – AUW (A)	0.0016	0.0065	0.0007	2.236	77	0.028*
WVY (N) – WVY (A)	0.0043	0.0139	0.0016	2.729	77	0.008*
AWK (N) – AWK (A)	0.0046	0.0095	0.0011	4.286	77	<0.001*

Of 64 subcategories of error type, significant differences between two discourse modes were observed in 16 subcategories ($p < .05$). The above-mentioned three error types—incorrect tense (IT; $t = 4.975$, $p < 0.001$), omission of modal verbs (OM; $t = -3.041$, $p = 0.003$), and addition of modal verbs (AM; $t = 2.403$, $p = 0.019$)—showed statistical differences between two discourse modes. In addition, significant discourse mode effects were present in 13 other areas. Among them, nine errors were subtypes of misformation: incorrect use of adjective form (IAF; $t = -2.100$, $p = 0.039$), adverbial (IADL; $t = 2.521$, $p = 0.014$), modal verb (IM; $t = -2.781$, $p = 0.007$), noun (IN; $t = -2.295$, $p = 0.024$), possessive adjective (IPA; $t = -3.128$, $p = 0.002$), passive voice (IPAV; $t = 2.122$, $p = 0.037$), pronoun (IPN; $t = -2.231$, $p = 0.029$), ill-formed sentence structure (ISS; $t = -2.341$, $p = 0.022$), and subject-verb agreement (ISV; $t = -4.371$, $p < 0.001$). The last four types were omission of infinitive (OI; $t = -2.083$, $p = 0.041$), addition of unnecessary word (AUW; $t = 2.236$, $p = 0.028$), wrong vocabulary (WVY; $t = 2.729$, $p = 0.008$), and awkward sentence (AWK; $t = 4.286$, $p < 0.001$).

A positive mean of the differences in the second column and a positive *t*-value in the fifth column of Table 7 indicates that a specific type of error occurred more frequently in the narrative mode. On the other hand, a negative mean of the differences and *t*-value demonstrates that students produced a particular error type more frequently in the argumentative mode. As can be seen from Table 7, of the 16 error types, seven error types were more frequent in narrative essays while nine error types were found more frequently in argumentative essays. As mentioned earlier, the findings of the present study are in line with those of previous research, which reported that error types and the level of linguistic

accuracy were affected by the type of discourse mode students were asked to write (Foster & Skehan, 1996; Tarone & Parrish, 1988; Watcharapunyawong & Usaha, 2013).

Group differences in the number of errors in 64 subcategories were examined using Welch ANOVA tests. Again, the results of the analysis were limited to those of variables with statistical significance ($p < .05$). Table 8 illustrates that in the narrative mode, group differences were significant for four error types: incorrect tense (IT), omission of preposition (OP), addition of article (AA), and awkward sentence (AWK) at the .05 level. On average, the number of three error types (IT, OP and AWK) decreased as the proficiency level increased. However, in the case of addition of article, the mean number of errors was the highest in Group 2 followed by Groups 1 and 3. As already noted, omission of article has been said to be one of the most common mistakes for ESL or EFL learners (Ionin et al., 2008; Myers, 1992). This might be the reason for not finding group differences for this category in either discourse mode. With regard to addition of article, the findings of the present study provide support to those of previous studies which showed that intermediate and advanced L2 learners of English tended to overuse the indefinite article and/or the definite article in specific contexts (E. H. Lee, 2007; Moore, 2004). The present study suggests that contrary to the initial expectation, the frequency of errors in the category of addition of article does not exhibit a negative linear correlation with the proficiency level.

In the argumentative mode, significant group differences were found in seven error types: incorrect tense (IT), subject-verb agreement (ISV), omission of modal verb (OM), omission of plural suffix (OPL), not clear (NCS), fragment (FGT), and awkward sentence (AWK) at the .05 level. Of the seven error types, on average, students made fewer errors in four error types (IT, NCS, FGT, and AWK) as proficiency level went up. In contrast, for three types of error (ISV, OM, and OPL) the mean number of errors was the highest in Group 2 followed by Groups 1 and 3.

An unexpected finding is that students from Group 2 produced more errors than lower level students in Group 1 in the categories of ISV, OPL, and OM. This suggests that these types of errors may occur persistently in the L2 writing of relatively higher level students. It is also possible that students in Group 2 might make more errors in these areas as they produced longer essays than low level students. Another plausible explanation would be "u-shaped learning curve," which is a common feature of writing and diverse aspects of language acquisition (Feldman & Benjamin, 2004; Perrault, 2011; Plunkett & Marchman, 1991). Students in Group 2 might be experiencing temporary regression in the above three areas that they had mastered in the early stage of L2 acquisition. The findings indicate that although errors in these categories are less likely to affect comprehension and communication, students with intermediate-level proficiency still need instruction on subject-verb agreement, plural suffix, and modal verb.

TABLE 8

Group Differences of Error Types (64 Subcategories)

Discourse mode	Error type	Group	Mean	S.D.	S.E.	F value	Sig
Narrative	IT	1 (22)	0.0312	0.0361	0.0077	9.017	0.001*
		2 (36)	0.0228	0.0209	0.0035		
		3 (20)	0.0091	0.0080	0.0018		
	OP	1 (22)	0.0115	0.0125	0.0027	5.934	0.005*
		2 (36)	0.0059	0.0075	0.0013		
		3 (20)	0.0030	0.0033	0.0007		
	AA	1 (22)	0.0022	0.0048	0.0010	4.051	0.025*
		2 (36)	0.0042	0.0071	0.0012		
		3 (20)	0.0008	0.0018	0.0004		
	AWK	1 (22)	0.0081	0.0085	0.0018	3.228	0.049*
		2 (36)	0.0069	0.0068	0.0011		
		3 (20)	0.0039	0.0041	0.0009		
Argumentative	ISV	1 (31)	0.0040	0.0067	0.0012	4.650	0.014*
		2 (32)	0.0064	0.0059	0.0010		
		3 (15)	0.0026	0.0028	0.0007		
	IT	1 (31)	0.0122	0.0142	0.0026	4.641	0.015*
		2 (32)	0.0043	0.0055	0.0010		
		3 (15)	0.0040	0.0037	0.0010		
	OM	1 (31)	0.0030	0.0064	0.0011	4.828	0.012*
		2 (32)	0.0038	0.0061	0.0011		
		3 (15)	0.0007	0.0015	0.0004		
	OPL	1 (31)	0.0085	0.0099	0.0018	6.665	0.003*
		2 (32)	0.0093	0.0129	0.0023		
		3 (15)	0.0022	0.0044	0.0011		
	NCS	1 (31)	0.0050	0.0072	0.0013	3.359	0.043*
		2 (32)	0.0028	0.0062	0.0011		
		3 (15)	0.0015	0.0020	0.0005		
	FGT	1 (31)	0.0038	0.0065	0.0012	3.865	0.028*
		2 (32)	0.0010	0.0022	0.0004		
		3 (15)	0.0005	0.0012	0.0003		
	AWK	1 (31)	0.0037	0.0075	0.0014	3.405	0.041*
		2 (32)	0.0008	0.0026	0.0005		
		3 (15)	0.0003	0.0010	0.0003		

Another notable finding is that the wrong tense errors were found to be statistically significant regardless of the type of discourse mode. Moreover, even high level students from Group 3 made incorrect tense errors in narrative (a mean percentage of 0.91% out of total number of words) and argumentative mode (a mean percentage of 0.40%). This may suggest that as previous research has indicated, the English past tense is acquired at a relatively later stage by L2 learners, and the learning of the English past tense meanings and usages is a complicated issue (Dulay & Burt, 1974; Larsen-Freeman, 1975; McCarthy, 1991).

V. CONCLUSION

The results of the present study demonstrated no significant differences between two discourse modes, i.e., narrative and argument, in four objective measures of linguistic accuracy (EFTs, EFT/T, E/T, and TE). However, mode of discourse had a significant influence on the frequency and distribution of errors across different error categories. The findings suggest that mode of discourse affects the types of errors students make in their L2 writing, but not the overall frequency of errors. Further analysis of group differences revealed that EFTs (the number of error-free T-units) showed a significant correlation with the quality of L2 writing and thus was found to be the best objective measure of linguistic accuracy. Besides, an analysis of error categories illustrated clear patterns and differences between proficiency groups.

Several pedagogical suggestions for teaching and assessment of second language writing arise from these results. One important issue that needs to be addressed is that the type of discourse mode should be considered as an important factor affecting students' L2 writing performance. The current study identified common types of errors produced by students in a specific mode of discourse. Linguistic accuracy has been regarded as one of the major components of L2 writing competence in both classroom-based and standardized assessments in which not all errors are perceived as equal by raters and teachers. That is, different types of errors are given different degree of gravity and therefore certain types of errors are taken more seriously than other types. As such, for a more accurate and valid assessment of L2 writing performance, the type of discourse mode needs to be taken into account. Besides, incorporation of diverse modes of discourse would be necessary to precisely measure L2 writing competence. Cooper's (1984) comment is worth noting here: "Obviously, any given writing exercise will provide an incomplete and partially distorted representation of an examinee's overall writing ability" (p. 5).

Another suggestion involves curriculum design and instructional practices in L2 writing classes. The results revealed how linguistic accuracy of L2 compositions was correlated with the students' writing performance and the type of discourse mode. In addition, error-prone categories were observed in relation to the level of students' writing proficiency and the specific discourse mode examined in the study. The findings of this study are of significant importance since these will help teachers design effective teaching strategies for overcoming a specific type of errors and improving linguistic accuracy of students' L2 composition. Moreover, based on the observed error patterns, material developers will be able to create necessary tasks and exercises tailored to L2 learners' writing proficiency. As with L2 writing assessment, L2 writing instruction also needs to include diverse modes of discourse since this will help teachers to identify distinctive types of errors across different modes of discourse.

The present study has several limitations. A major limitation pertains to the interplay of various aspects of task. Second language writing performance and linguistic accuracy may be affected by a wide variety of aspects which includes task difficulty, task familiarity, etc. The present study investigated only one topic for two discourse modes and therefore, the findings should be interpreted with caution. A further research involving a more varied topics and discourse modes would be needed to support the effects of different discourse modes on linguistic accuracy. Another limitation concerns the length of the texts: the compositions investigated in the present study significantly varied in length. The frequency and distribution of errors may be influenced by the length of text students produce. Thus, an analysis of linguistic accuracy with essays of the same length would provide a more solid ground for revealing Korean EFL students' linguistic accuracy. The last limitation relates to the small number of participants in the current study and thus the findings may not generalizable to the overall target population, i.e., Korean college EFL learners. It would be beneficial to further examine linguistic accuracy with a large number of students who demonstrate a broader range of L2 writing proficiency.

REFERENCES

Abisamra, N. (2003). *An analysis of errors in Arabic speakers' English writings*. Paper submitted to American University of Beirut. Retrieved from the World Wide Web: http://abisamra03.tripod.com/nada/languageacq-erroranalysis. html.

Bardovi-Harlig, K., & Bofman, T. (1989). Attainment of syntactic and morphological accuracy by advanced language learners. *Studies in Second Language Acquisition, 11*, 17-34.

Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Harlow: Pearson Education.

Braddock, R., Lloyd-Jones, R., & Schoer, L. (1963). *Research in written composition*. Champaign, IL: National Council of Teachers of English.

Carlisle, R. (1989). The writing of Anglo and Hispanic elementary school students in bilingual, submersion, and regular programs. *Studies in Second Language Acquisition, 11*, 257-280.

Carrell, P. L., & Connor, U. (1991). Reading and writing descriptive and persuasive texts. *Modern Language Journal, 75*(3), 314-324.

Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book: An ESL/EFL teacher's course* (2nd ed.). Boston, MA: Heinle and Heinle.

Chapman, M., Collins, C., Dame, B., & Elliott, H. (2014). A discourse variable approach to measuring prompt effect: Does paired task development lead to comparable writing

products? *Research Notes, 55*, 22-28.

Chastain, K. (1990). Characteristics of graded and ungraded compositions. *Modern Language Journal, 74*(1), 10-14.

Cooper, P. L. (1984). *The assessment of writing ability: A review of the research.* Princeton, NJ: Educational Testing Service.

Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics, 5,* 160-170.

Crowhurst, M. (1987). Cohesion in argument and narration at three grade levels. *Research in the Teaching of English, 21*(2), 185-201.

Crowhurst, M. (1990). Teaching and learning the writing of persuasive/argumentative discourse. *Canadian Journal of Education, 15*(4), 348-359.

Dulay, H., & Burt, M. (1974). Natural sequences in child second language acquisition. *Language Learning, 24*, 37-53.

Dulay, H., Burt, M., & Krashen, S. (1982). *Language Two*. New York: Oxford University Press.

Engelhard, G., Gordon, B., & Gabrielson, S. (1992). The influences of mode of discourse, experiential demand, and gender on the quality of student writing. *Research in the Teaching of English, 26*, 315-335.

Feldman, D. H., & Benjamin, A. C. (2004). Going backward to go forward: The critical role of regressive movement in cognitive development. *Journal of Cognition and Development, 5*(1), 97-102.

Foster, P., & Skehan, P. (1996). The influence of planning and task type on second language performance. *Studies in Second language acquisition*, *18*(3), 299-323.

Freedman, A., & Pringle, I. (1980). Writing in the college years: Some indices of growth. *College Composition and Communication, 31*, 311-324.

Granger, S. (1999). Uses of tenses by advanced EFL learners: Evidence from an error-tagged computer corpus. In H. Hasselgard & S. Oksefjell (Eds.), *Out of corpora-Studies in Honour of Stig Johannson* (pp. 191-202). Amsterdam & Atlanta: Rodopi.

Hinkel, E. (2009). The effects of essay topics on modal verb uses in L1 and L2 academic writing. *Journal of Pragmatics, 41*, 667-683.

Hinkel, E. (2010). What research on second language writing tells us and what it doesn't. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (Vol. 2, pp. 523-538). New York: Routledge.

Holling, J. C. (2004). *Evaluating the impact of errors made by English language learners on a high-stakes, holistically scored writing assessment*. Unpublished master's thesis, University of Texas at Austin, Austin

Hyland, K., & Milton, J. (1997). Qualification and certainty in L1 and L2 students' writing. *Journal of Second Language Writing, 6*(2), 183-205.

Ionin, T., Zubizarreta, M. L., & Maldonado, S. B. (2008). Sources of linguistic knowledge in the second language acquisition of English articles. *Lingua, 118*(4), 554-576.

Kegley, P. H. (1986). The effect of mode of discourse on student writing performance: Implications for policy. *Educational Evaluation and Policy Analysis, 8*, 147-154.

Kepner, C. (1991). An experiment in the relationship of types of written feedback to the development of second-language writing skills. *Modern Language Journal, 75*(3), 305-313.

Kim, Mi-Sook. (2009). *An error analysis of a learner corpus of written and spoken English produced by Korean university students.* Unpublished doctoral dissertation, Korea University, Seoul.

Knoch, U. (2009). *Diagnostic writing assessment: The development and validation of a rating scale*. Frankfurt: Peter Lang.

Lannon, J. M. (1986). *The writing process: A concise rhetoric*. Boston: Little, Brown and Company.

Larsen-Freeman, D. (1975). The acquisition of grammatical morphemes by adult ESL students. *TESOL Quarterly, 9*(4), 409-419.

Larsen-Freeman, D. (1978). An ESL index of development. *TESOL Quarterly, 12*(4), 439-447.

Larsen-Freeman, D., & Strom, V. (1977). The construction of a second language acquisition index of development. *Language Learning, 27*(1), 123-134.

Lee, Eun-Hee. (2007). *English article usage in online graduate forums by non-native EFL teachers*. Unpublished doctoral dissertation, Indiana University, Bloomington.

Master, P. (1990). Teaching the English articles as a binary system. *TESOL Quarterly, 24*(3), 461-478.

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

Mizuno, M. (1999). Interlanguage analysis of the English article system: Some cognitive constraints facing the Japanese adult learners. *International Review of Applied Linguistics in Language Teaching, 37*(2), 127-153.

Moore, J. M. (2004). *Articles and proper names in L2 English.* Unpublished doctoral dissertation, Northwestern University, Evanston.

Myles, J. (2002). Second language writing and research: The writing process and error analysis in student texts. *TESL-EJ, 6*(2), 1-20. Retrieved from the World Wide Web: http://www.tesl-ej.org/wordpress/issues/volume6/ej22/ej22a1/?wscr

Myers, S. A. (1992*). In search of the genuine article: A cross-linguistic investigation of the development of the English article system in written compositions of adult ESL students.* Unpublished doctoral dissertation, Florida State University, Tallahassee.

Norment, N. (1994). Contrastive analyses of cohesive devices in Chinese and Chinese ESL

in narrative and expository written texts. *Chinese Language Teaching Association Journal*, *29*(1), 49-81.

Park, Sung-Bae. (2006). *The acquisition of written English articles by Korean learners*. Unpublished doctoral dissertation, Southern Illinois University, Carbondale.

Perrault, S. T. (2011). Cognition and error in student writing. *Journal on Excellence in College Teaching, 22*(3), 47-73.

Plunkett, K., & Marchman, V. (1991). U-shaped learning and frequency effects in a multi-layered perception: Implications for child language acquisition. *Cognition, 38*, 43-102.

Pollitt, A., & Hutchinson, C. (1987). Calibrating graded assessments: Rasch Partial Credit Analysis of performance in writing. *Language Testing, 4*(1), 72-92.

Quellmalz, E. S., Capell, F. J., & Chou, C. P. (1982). Effects of discourse and response mode on the measurement of writing competence. *Journal of Educational Measurement, 19*, 241-258.

Reid, J. (1997). Which non-native speaker: Differences between international students and U.S. resident (language minority) students. *New Directions for Teaching and Learning, 70*, 17-27.

Richards, J. C., Platt, J., & Platt, H. (1992). Longman dictionary of language teaching & applied linguistics. London: Longman.

Rog, L. J. (2011). *Marvelous minilessons for teaching intermediate writing, grades 4-6*. Newark, DE: International Reading Association.

Santos, V. D., Verspoor, M., & Nerbonne, J. (2012). Identifying important factors in essay grading using machine learning. In D. Tsagari (Ed.), *Selected papers in memory of Dr Pavlos Pavlou—Language testing and assessment round the globe: Achievements and experiences* (pp. 295-309). Frankfurt: Peter Lang.

Sinclair, V. E. (1984). *The effect of mode variation on syntactic complexity in adult ESL composition writing.* Unpublished doctoral dissertation, University of British Columbia, Vancouver.

Tarone, E., & Parrish, B. (1988). Task-related variation in interlanguage: The case of articles. *Language Learning*, *38*(1), 21-44.

Vann, R. (1979). Oral and written syntactic relationships in second language learning. In C. Yorio et al (Eds.), *On TESOL '79* (pp. 322-329). Washington, D.C.: TESOL.

Watcharapunyawong, S., & Usaha, S. (2013). Thai EFL students' writing errors in different text types: The interference of the first language. *English Language Teaching*, *6*(1), 67-78.

Wolfe-Quintero, K., Inagaki, S., & Kim, H. Y. (1998). *Second language development in writing*: *Measures of fluency, accuracy, and complexity*. Honolulu, HI: University of Hawaii Press.

Yau, M., & Belanger, J. (1984). The influence of mode on the syntactic complexity of EFL students at three grade levels. *TESL Canada Journal, 2*(1), 65-76.

Zhang, S. (1987). Cognitive complexity and written production in English as a second language. *Language Learning, 37*(4), 469-481.

APPENDIX A

Error Classification

(Adopted from M. S. Kim, 2009)

Misformation		4	Omission of auxiliary verb
1	Incorrect use of adjective	5	Omission of 'be' verb
2	Incorrect use of adjective form	6	Omission of conjunction
3	Incorrect use of adverb	7	Omission of determiner
4	Incorrect use of adverb form	8	Omission of gerund
5	Incorrect use of adverbial	9	Omission of infinitive
6	Incorrect use of article	10	Omission of modal verb
7	Incorrect use of auxiliary verb	11	Omission of noun
8	Incorrect use of conjunction	12	Omission of object
9	Incorrect use of determiners	13	Omission of preposition
10	Incorrect use of gerund	14	Omission of possessive's
11	Incorrect use of infinitive	15	Omission of possessive adjective
12	Incorrect use of modal verb	16	Omission of plural suffix-s
13	Incorrect use of noun	17	Omission of relative pronoun
14	Incorrect use of noun form	18	Omission of subject
15	Incorrect use of preposition	19	Omission of verb
16	Incorrect use of possessive adjective	Addition	
17	Incorrect passive voice construction	1	Addition of article
18	Incorrect use of plural marker -s	2	Addition of auxiliary verb
19	Incorrect use of pronoun	3	Addition of 'be' verb
20	Incorrect use of pronoun inflection	4	Addition of conjunction
21	Incorrect use of possessive -'s	5	Addition of modal verb
22	Incorrect parallel structure	6	Addition of object
23	Incorrect use of phrasal verb	7	Addition of preposition
24	Incorrect use of relative pronoun	8	Addition of possessive-'s
25	Ill-formed sentence structure	9	Addition of possessive adjective
26	Incorrect subject verb agreement	10	Addition of plural suffix-s
27	Incorrect tense	11	Addition of unnecessary word
28	Incorrect use of verb	Others	
29	Incorrect use of verb inflection	1	Misordering
Omission		2	Not clear
1	Omission of article	3	Fragment
2	Omission of adjective	4	Wrong vocabulary
3	Omission of adverb	5	Awkward sentence

APPENDIX B

Error Frequency Comparison between Two Modes in 64 Sub-categories

Narrative				Argumentative			
Rank	Error Type	Freq.	%	Rank	Error Type	Freq.	%
1	Incorrect tense	233	15.1	1	Omission of article	142	9.8
2	Wrong vocabulary	151	9.8	2	Wrong vocabulary	103	7.1
3	Omission of article	147	9.5	3	Omission of plural suffix -s	93	6.4
4	Omission of plural suffix	83	5.4	4	Ill-formed sentence structure	87	6.0
5	Awkward sentence	77	5.0	5	Incorrect tense	84	5.8
6	Omission of preposition	72	4.7	6	Incorrect use of preposition	77	5.3
7	Incorrect use of preposition	70	4.5	7	Incorrect use of article	57	4.0
8	Ill-formed sentence structure	63	4.1	8	Incorrect subject verb agreement	56	3.9
9	Addition of unnecessary word	57	3.7	9	Incorrect use of pronoun	51	3.5
10	Misordering	47	3.0	9	Omission of preposition	51	3.5
11	Addition of article	34	2.2	11	Omission of 'be' verb	37	2.6
11	Not clear	34	2.2	12	Not clear	36	2.5
13	Omission of conjunction	32	2.1	13	Addition of unnecessary word	34	2.4
14	Incorrect use of article	29	1.9	14	Omission of modal	33	2.3
15	Omission of possessive adjective	25	1.6	14	Misordering	33	2.3
15	Addition of modal verb	25	1.6	16	Incorrect use of adjective form	29	2.0
15	Fragment	25	1.6	16	Incorrect use of possessive adjective	29	2.0
18	Omission of 'be' verb	24	1.6	18	Omission of conjunction	27	1.9
18	Omission of preposition	24	1.6	18	Addition of article	27	1.9
20	Incorrect use of determiner	21	1.4	18	Addition of preposition	27	1.9
20	Incorrect use of passive voice	21	1.4	21	Omission of possessive adjective	22	1.5
20	Incorrect use of verb inflection	21	1.4	22	Incorrect use of gerund	20	1.4
23	Incorrect use of gerund	18	1.2	23	Incorrect use of determiner	19	1.3
23	Incorrect use of pronoun	18	1.2	24	Fragment	18	1.2
23	Subject verb agreement	18	1.2	25	Awkward Sentence	17	1.2
26	Incorrect use of noun form	13	0.8	26	Incorrect use of noun form	16	1.1
27	Incorrect use of adjective form	12	0.8	27	Incorrect use of infinitive	15	1.0
27	Incorrect use of conjunction	12	0.8	28	Incorrect use of verb	14	1.0
27	Omission of object	12	0.8	29	Addition of 'be' verb	13	0.9
30	Incorrect use of adverbial	11	0.7	30	Incorrect use of modal verb	12	0.8
31	Omission of subject	10	0.6	31	Omission of object	11	0.8
31	Addition of 'be' verb	10	0.6	31	Addition of plural suffix -s	11	0.8
33	Omission of adverb	8	0.5	31	Addition of possessive adjective	11	0.8
33	Omission of modal verb	8	0.5	34	Incorrect use of conjunction	10	0.7
35	Omission of noun	7	0.5	34	Incorrect use of noun	10	0.7
35	Addition of plural suffix -s	7	0.5	34	Incorrect use of verb inflection	10	0.7
37	Incorrect use of pronoun inflection	6	0.4	34	Omission of subject	10	0.7
38	Incorrect use of infinitive	5	0.3	38	Omission of verb	9	0.6
38	Incorrect use of possessive adjective	5	0.3	39	Incorrect use of pronoun inflection	7	0.5
38	Incorrect use of parallel structure	5	0.3	39	Incorrect use of relative pronoun	7	0.5
38	Incorrect use of verb	5	0.3	39	Omission of noun	7	0.5
38	Omission of verb	5	0.3	39	Addition of modal verb	7	0.5
38	Addition of conjunction	5	0.3	43	Incorrect use of passive voice	6	0.4
44	Incorrect use of adverb form	4	0.3	43	Omission of adjective	6	0.4
44	Incorrect use of modal verb	4	0.3	43	Omission of infinitive	6	0.4
44	Incorrect use of relative pronoun	4	0.3	46	Omission of gerund	5	0.3
47	Omission of determiner	3	0.2	46	Omission of relative pronoun	5	0.3
47	Omission of gerund	3	0.2	48	Incorrect use of auxiliary verb	4	0.3

47	Omission of relative pronoun	3	0.2	49	Incorrect use of adverb	3	0.2
47	Addition of possessive adjective	3	0.2	49	Incorrect use of adverb form	3	0.2
51	Incorrect use of adjective	1	0.1	49	Omission of adverb	3	0.2
51	Incorrect use of noun	1	0.1	49	Omission of auxiliary verb	3	0.2
51	Incorrect use of plural marker -s	1	0.1	53	Incorrect use of adverbial	2	0.1
51	Omission of adjective	1	0.1	53	Omission of possessive 's	2	0.1
51	Omission of infinitive	1	0.1	53	Addition of conjunction	2	0.1
51	Omission of possessive 's	1	0.1	56	Incorrect use of possessive 's	1	0.1
51	Addition of object	1	0.1	56	Incorrect use of parallel structure	1	0.1
58	Incorrect use of adverb	0	0.0	56	Addition of auxiliary verb	1	0.1
58	Incorrect use of auxiliary verb	0	0.0	56	Addition of possessive 's	1	0.1
58	Incorrect use of possessive 's	0	0.0	60	incorrect use of adjective	0	0.0
58	Incorrect use of phrasal verb	0	0.0	60	Incorrect use of plural marker -s	0	0.0
58	Omission of auxiliary verb	0	0.0	60	Incorrect use of phrasal verb	0	0.0
58	Addition of auxiliary verb	0	0.0	60	Omission of determiner	0	0.0
58	Addition of possessive 's	0	0.0	60	Addition of objet	0	0.0
	Total	1546	100		Total	1443	100

Examples in: English
Applicable Language: English
Applicable Levels: College

Soo-Kyung Park
Department of English Education,
College of Education, Korea University
Anam-ro, Seongbuk-gu
Seoul, 136-701, Korea
Phone:+82-10-9263-1030
Email: soo0723@empal.com

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