

The Role of Semantic Factors in the Acquisition of English Articles*

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This study examines the roles of semantic factors in the acquisition of English articles by Korean secondary school students. First, this study shows that semantic feature specificity plays a role in the acquisition of the indefinite article *a* and the zero article \emptyset . Second, it shows that different uses of the definite article *the* present different levels of difficulty for Korean students of English. Third, noun countability is shown to affect L2-English learners' article choice, while the structural factor, modification, is not. Overall, this research reveals that Korean secondary school students' acquisition of English articles is nonrandom, and it implies that Universal Grammar is relevant for L2 acquisition of English articles by Korean secondary school students whose L1 lacks articles. Finally, this study presents some pedagogical implications for teaching L2 English articles.

I. INTRODUCTION

English has three types of articles: the indefinite *a*, the definite *the*, and the zero article \emptyset . It has been reported that learners of L2 English have great difficulty learning articles. The difficulty seems to be related to two major factors: English articles involve complex and delicate semantics, and some of the learners' first languages lack articles. In English Determiner Phrases (DPs), there is a complex interplay between these articles and nouns, and the article of a DP is determined by properties like countability, count/non-count or

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singular/plural; the interpretation of the DP, whether it is specific or not; and whether it is known to the hearer or not, from the discourse or from general knowledge (Hawkins, 2001). Several studies report that [-article] L1 learners of L2 English have more difficulty than [+article] L1 learners do (Ionin, Zubizarreta, & Maldonado, 2008; Ki-Hwa Park, 1996; Zdorenko & Paradis, 2008).

The definite article *the* is reported to be acquired more easily than the indefinite article *a* since the definite article can be used with less limited conditions. It can appear with countable or non-countable nouns and singular or plural nouns, while the indefinite article can be used only with countable singular nouns. However, the definite article has complex semantics and it is reported that the different uses of the definite article *the* are not equally difficult for ESL learners (Liu & Gleason, 2002). Then, one question to ask is whether the most difficult use of the definite article is acquired earlier than the indefinite article *a*.

Recently, Ionin, Ko and Wexler (2004) presented a universal grammar approach to the acquisition of English articles where the semantic feature, specificity, is claimed to be a universal semantic feature. They claim that L2 English learners have access to Universal Grammar, but they fluctuate in their article choice until the input leads them to set the parameter to the appropriate value. But they did not investigate the role of specificity in the acquisition of *a* and \emptyset by the young or secondary school subjects.

The present research with a cross-sectional design based on level of proficiency aims to show which semantic factors affect Korean secondary school students' acquisition of English articles to what extent. First, this research aims to look at how the feature definiteness affects L2 acquisition of English articles. It will show that the feature definiteness is not a simple single feature but that its different uses pose different levels of difficulty for L2 English learners. The different uses of *the* are anaphoric use (or second-mentioned), the situational use, associative use, and conventional use. The results will be compared with Liu and Gleason's (2002).

Second, this study will see whether feature specificity plays a role with the indefinite articles, and how Korean secondary school students acquire the zero article, which is not reported in the literature. Specificity is not investigated with the zero article in the literature; most of the studies have focused on the definite article *the* and the indefinite article *a*. For example, Ionin *et al.* (2004) do not include the zero article \emptyset in their research.

Finally, this study will see the roles of noun countability and modification in the article acquisition. Several studies (Butler, 2002; Ogawa, 2008; Taesook Park & Mi-Jeong Song, 2008) report that noun countability affects L2 learners' acquisition of English articles. Taesook Park and Mi-Jeong Song (2008) suggest that advanced L2-English learners tend to choose *the* when a DP is modified, whereas Ionin *et al.*, (2008) show that modification does not affect L2-English learners' article choice. But there have been few reports to show whether countability or modification affects Korean secondary school students' acquisition

of English articles.

II. ARTICLE SEMANTICS AND ACQUISITION OF ENGLISH ARTICLES

The features considered in this study, definiteness and specificity, are based on the definitions below given by Ionin, Ko and Wexler (2004).

- (1) If a Determiner Phrase (DP) of the form [D NP] is ...
- a. [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP.
 - b. [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP and considers this individual to possess some noteworthy property.

The article form for a definite DP is *the*, and the form for an indefinite DP is *a*. The feature definiteness considers the speaker and hearer both, and specificity, the speaker only. The two features and the two values are combined to produce four different contexts as shown below.

- (2) a. [+definite, +specific]
I ordered a glass of milk, but I think something dropped into the milk.
- b. [+definite, -specific]
The reporter is eager to interview the winner of tomorrow's 100 meter race, whoever it is.
- c. [-definite, +specific]
When I woke up this morning, I saw a bird on a tree and it soon flew away.
- d. [-definite, -specific]
I am looking for a book for my son's birthday. Can you help me find one?

English articles do not encode the feature specificity. In (2), only the feature definiteness determines the article forms, regardless of the values of specificity. Thus, *the* is chosen with [+definite] in (2a) and (2b), and *a* with [-definite] in (2c) and (2d).¹

The definite article is reported to be the easiest among the three articles to acquire since it can be used with singular or plural nouns and count or mass nouns, while the indefinite

¹ According to Lyons (1999) and Ionin *et al.* (2004), Samoan language marks specificity in its articles; *le* is used with specific DPs and *se* with nonspecific DPs.

article *a* is used only with singular countable nouns (Butler, 2002; Hawkins, 2001; Eun-Hee Lee, 2008; Taesook Park, 2005). The definite article has several uses: generic uses and non-generic uses, and the non-generic uses have several uses (Celce-Murcia & Larsen-Freeman, 1999; Hawkins, 2001; Quirk *et al.*, 1985, among others). This study will examine the four uses: anaphoric use, associative use, situational use, and conventional use. Examples of each are illustrated in (3).^{2,3}

(3) a. anaphoric use

I ordered a glass of milk, but I think something dropped into the milk.

b. associative use

Mr. Kim bought a car last week. All of his family liked it very much, but yesterday he found a problem with the engine.

c. situational use

A: Yes, she is here. She is sitting over there on the couch and wearing a red dress.

B: Oh, I see her. She is the woman with long hair! She is very pretty.

d. conventional use

Yes, he went back home to rest. I think he also needs some medicine for his cough and fever. He must have caught the flu.

In anaphoric use, *the* is used with a noun that has been previously referred to, and in associative use, *the* is used with a noun that is related to a previously mentioned noun and the relation requires both linguistic and non-linguistic information. In situational use, *the* is used where the referent of a first-mentioned noun can be sensed directly in a given situation by the interlocutors, and in conventional use, *the* is used with a noun that is a unique and well-known referent in a speech community. Definiteness is based on information regarding the referent shared by the speaker and hearer. The speaker and hearer easily share such information when it is easy to get linguistically and non-linguistically.

In anaphoric use (3a), only a linguistic factor is considered since the same form of the noun is mentioned previously, which is enough information to determine the use of *the*.

² Specificity is not tested with the definite DPs in this study since they, especially the non-specific definite DPs, are known to be difficult for L2 English learners.

³ The uses in (3) differ somewhat from those of Hawkins (1978) and of Liu and Gleason (2002). Note that Hawkins (1978) presents eight types of the definite article: (1) anaphoric use, (2) visible situation use, (3) immediate situation use, (4) larger situation use relying on specific knowledge, (5) larger situation use relying on general knowledge, (6) associative anaphoric use, (7) unfamiliar use in NPs with explanatory modifiers, and (8) unfamiliar use in NPs with nonexplanatory modifiers. Liu and Gleason (2002) present four types: (1) cultural use, (2) situation use, (3) structural use, and (4) textual use.

Associative use (3b) considers linguistic and non-linguistic knowledge. The interlocutors need to know that the noun *the engine* is related to the previously mentioned noun *a car* and that a car has a unique engine, which is non-linguistic knowledge. Situational use (3c) considers a physical condition, a non-linguistic factor, which is that the interlocutors can both see the referent of the DP. Conventional use (3d) requires consideration of a wider spatial condition and the knowledge shared by the people in the community, which is a non-linguistic factor.

On the other hand, definiteness is not enough to determine correct article forms in English. The feature value combinations below, which are the same as (2c) and (2d), can take the zero article, as shown in (4).

(4) a. [-definite, +specific]

Last year I had dogs that were very big and very noisy. And I had a hard time taking care of them. I had to sell them quickly.

b. [-definite, -specific]

You are very tired and you need sleep.

Although the underlined DPs in (4) are indefinite, the article forms are not *a* but \emptyset . In (4), specificity doesn't play a role in choosing the correct article forms. There has been little work about acquisition of DPs without an article, like *dogs* or *sleep*, by Korean secondary school students. Ionin *et al.* (2004) do not consider the article, and Taesook Park (2005) examines only very advanced learners' acquisition of English articles, including the zero article.⁴ This study will investigate how the indefinite articles *a* and \emptyset are acquired by Korean secondary school students, and show whether specificity plays a role in the subjects' choosing *a* and \emptyset .

Noun countability is known to be a factor affecting L2 learners' acquisition of English articles (Butler, 2002; Taesook Park & Mi-Jeong Song, 2008). Only singular nouns can be used with *a* and non-countable mass nouns can't be used with *a*, while non-countable or plural nouns can be used with *the* or \emptyset . On the other hand, some languages such as Korean lack grammatical number systems, and thus speakers of the language will predictably face difficulty with learning L2 English articles.

Some pedagogical grammar books often include the required usage of the definite article *the* when the noun has some modifier. In the example *The movies that are shown here are all rated R* (Hawkins, 1978, cited from Liu & Gleason, 2002), the use of *the* with the noun *movies* is accounted for by saying that *the* is required since the noun *movies* has a

⁴ Some DPs without any article, like *America*, are said to be definite, which is called the null article. This study will not be concerned with the null article.

clausal modifier. Taesook Park and Mi-Jeong Song (2008) report that advanced Korean adult learners of English tend to choose *the* for a noun with a modifier, especially a clausal modifier. We will see that this structural or syntactic factor does not affect Korean secondary school students' acquisition of English articles.

III. METHOD

1. Participants

The participants of this study are 172 Korean middle and high school students in Seoul and Gyeonggi areas, who study English as a foreign language. Students of each grade, from 7th to 11th, are chosen, as shown in Table 1.

TABLE 1
Distribution of Participants (N=172)

Grade	7th	8th	9th	10th	11th
Number	35	45	31	26	35
Mean age	13	14	15	16	17

The students consist of 99 males and 73 females. Their ages range from 13 to 17, and their mean age is about 14;9. Note that the mean age of the subjects in this study is higher than those of Zdonrenko and Paradis' (2008) subjects, 5;4 at the onset and 7;4 by the final round, but much lower than that of Ionin *et al.*'s (2004) Korean subjects, 31;0.

All participants' first language is Korean, an article-less language, and they started to learn English from the 3rd grader. They have one class of English a week in the 3rd and 4th grades, two classes in the 5th and 6th grades, three classes in the 7th and 8th grades, and four classes in the 9th, 10th and 11th grades. Thus, the 7th graders in this study have been studying English for more than five years in school, and the 11th graders for more than nine years.⁵ Three of the subjects stayed more than three years in English-speaking countries.

The participants are classified into four groups based on the results of a proficiency test. The test contains questions for various levels of proficiency, from low to high. The questions of the proficiency test are selected from the TOEIC (ETS) and TOEIC Bridge questions; TOEIC Bridge questions are for low-level participants such as middle school

⁵ The experiment of the present study was conducted at the end of December, 2008, and thus the students have almost finished the year's classes, which started in March. For more specific class hours of each grade, see Byungmin Lee (2003).

students.⁶ The written multiple-choice test consists of 28 questions: 19 reading comprehension questions are given with short or long passages, and 9 questions test structural or grammar knowledge. About 40-50 minutes is given for the test. The participants are grouped into four levels based on the test results as shown in Table 2.

TABLE 2
Participants' Proficiency Levels

	Level 1	Level 2	Level 3	Level 4	Mean
Test Scores	0-8	9-13	14-18	19-26	13.3
Number	33	61	48	30	

Their mean score of the test is 13.3 (out of 28 points), which is the score dividing Level 2 and Level 3; Level 3 students have scores between 14 and 18, Level 4 students, between 19 and 26. Among the three students who stayed more than three years in English-speaking countries, one scores 26 (the highest) and the other two, 25 points.⁷ The lowest level, Level 1 is below 9, between 0 and 8. The reason that the group of Level 2 is larger than the other levels is that the number of 8th grade participants (N=45) is larger than the other grades, and almost half of them (N=22) are grouped into Level 2.

2. Design and Procedure

The article test is a forced elicitation test to evaluate the participants' acquisition of L2 English articles. It is a written multiple-choice test with five choices. The five choices consist of five DPs: *a* NP (*a bird*), DP (*bird*), DPs (*birds*), *the* NP (*the bird*), and *the* NPs (*the birds*). The test consists of 12 questions: four questions about DPs with the definite article *the*, four questions about DPs with the indefinite article *a*, and four questions about DPs without an article.

The three factors, specificity, countability and modification, are examined for the indefinite articles *a* and \emptyset as shown in Table 3.

⁶ TOEIC Bridge has several sublevels: 1A, 1B, 2A, 2B, 3A and 3B (Level 1A is lower than 2A, which is lower than 3A), and each level contains listening, grammar and reading questions. The low-level questions of the proficiency test in the present research come from the levels 3A and 3B (grammar and reading).

⁷ The reason that the three students are not excluded in the analysis is that there is little difference in the test performance between those three and the advanced students.

TABLE 3
Semantic and Structural Factors in Test Items

Article type		Specificity								Item number in the test
		+Specificity				-Specificity				
		<i>a</i>		\emptyset		<i>a</i>		\emptyset		
Counta -bility	Singular	(2)	(5)	(10)		(4)	(3)		(1)	
	Plural			(6)				(7)		
		+m	-m	+m	-m	+m	-m	+m	-m	
		Modification								

Four questions about the four uses of the definite article are not included in Table 3. The DPs in the four questions are all singular.

Sentences with the specific indefinite *a* and \emptyset are illustrated in (5).

- (5) a. When I woke up this morning, I saw a pretty bird on a tree near my window and it soon flew away.
- b. Last year I had dogs that were very big and very noisy. I had a hard time taking care of them. I had to sell them quickly.

The underlined DPs in (5) are both specific, and (5a) is singular while (5b) is plural. The DPs have modifiers; the noun *bird* in (5a) has two modifiers (*pretty* and *on a tree near my window*) and the *dogs* in (5b) is modified by a relative clause. All the questions on the test are given in the Appendix.

The sentences below show how the nonspecific indefinites, *a* and \emptyset , are used in the test.

- (6) a. I am looking for a book for my son's birthday. Can you help me find one?
- b. You have already had a lot of coffee. I think you need sleep.

The underlined DPs in (6) are both singular; *sleep* is noncountable and considered singular here. The DP in (6a) has a prepositional phrase modifier, but the one in (5b) does not.⁸

As seen earlier, each question has five choices: one indefinite DP, two definite DPs, and two article-less DPs. In terms of article type, the choices have three types: the indefinite DP (*an* NP), the definite DP (*the* NP(s), singular and plural), and the article-less DP(s) (singular and plural). When article type only is analyzed, countability is not considered.

⁸ One reviewer points out that the pronoun *it* in (5a) may affect the subjects' responses, which limits the choice to singular NPs. This is the case in (6a) where the pronoun *one* is also singular. Even if the pronouns limit their choices to singular nouns, there are still three choices left such as *a book*, *the book* and *book* in (6a), which is question 4 in the Appendix.

Therefore, in a question where the target is *dogs*, *dog* as well as *dogs* is counted as a correct answer. This is the case for *the dog* and *the dogs*. When countability is considered, the choice between *dog* and *dogs* makes a difference; *dogs* only is considered as the correct answer.

A control group of three native speakers of English, who are English professors at a university in Seoul, took the same test, and they all agreed on the correct answers. The article test was conducted after the proficiency test, and about 20 minutes is given for the test. The purpose of the test is not told to the participants.

IV. RESULTS AND DISCUSSION

1. Article Types

The test contains four questions for each article type, *a*, *the*, and \emptyset . Table 4 shows the subjects' correct responses by proficiency level.

TABLE 4
Correct Responses (%) by Article Type and Proficiency Level

	Lv1	Lv2	Lv3	Lv4	Mean
<i>a</i>	28.03	45.90	58.85	65.83	49.65
\emptyset	40.91	46.31	51.04	55.00	48.32
<i>the</i>	40.15	40.57	48.44	60.83	47.50

The correct responses for the indefinite article *a* increase greatly as proficiency level goes up while those of the zero article \emptyset show a slight increase, and those of the definite article fall between those of the indefinite and the zero article. The mixed factorial ANOVAs show that there is an interaction effect between the article type and the level ($F=(5.794, 324.485)=2.405, p<.05$). This means that performance varies depending on level. On the other hand, the one-way repeated measures ANOVA reveals that there is no significant effect on article types ($F=(2,342)=0.88, p>.05$). So, Korean secondary school students do not show significant difference in their correct responses across the three article types, *a*, *the*, and \emptyset . This result is somewhat different from the findings reported in other studies (Eun-Hee Lee, 2008; Taesook Park, 2005) where the accuracy percentage of the definite article is higher than those of the indefinite and the zero articles. In Taesook Park's (2005) study the accuracy rate of the indefinite article (67.39%) is higher than that of the zero article (56.29%). This different result seems to be related to the fact that the test questions about the definite article in this study include its various uses. We will find

different levels of difficulty with different uses of the definite article in Section 3.

2. Specificity

The test contains eight questions about specificity: four specific uses and four non-specific uses. The feature specificity is tested with *a* and \emptyset and there are two specific uses and two non-specific uses of each article. Table 5 shows the subjects' article uses by specificity.

TABLE 5
Article Use by Specificity (%)

				Mean	
[+spec]	<i>a</i> : target	54.65	\emptyset : target	50.87	52.76
	<i>the</i>	26.74	<i>the</i>	24.71	
	\emptyset	18.02	<i>a</i>	23.26	
[-spec]	<i>a</i> : target	44.48	\emptyset : target	45.35	44.92
	<i>the</i>	28.20	<i>the</i>	23.55	
	\emptyset	26.16	<i>a</i>	30.52	

The correct response percentage is higher when DPs are specific than when they are nonspecific; 52.76% with specific and 44.92% with nonspecific. The mixed factorial ANOVA reveals that the difference is significant ($F(1,171)=8.653, p<.05$). Note that the non-target articles in Table 5 are misuses.

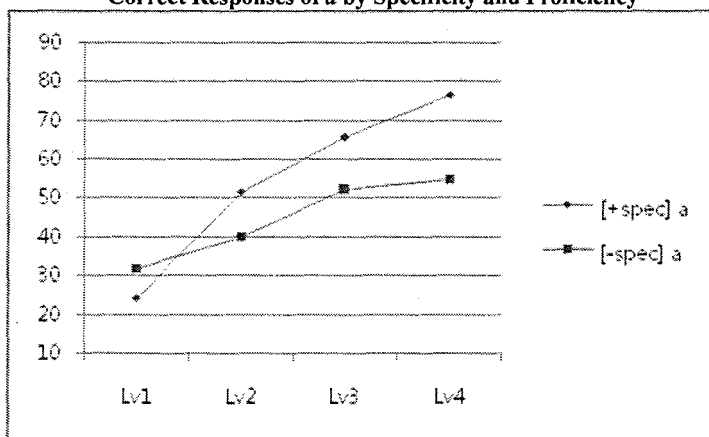
One interesting result in Table 5 is that there is little difference in the overuse of *the* with specificity. This is different from the findings of Ionin *et al.* (2004) whose subjects are L1-Russian and L1-Korean adult speakers. They report that L2 English learners tend to overuse *the* more in a specific context than in a non-specific context, but this is not the case for Korean secondary school students.

To see how specificity develops as proficiency increases, look at Table 6 where the target form is *a*. Figure 1 graphically shows the developments of the specific and nonspecific indefinite article uses as proficiency increases.

TABLE 6
Percent of Article Use (Target *a*) by Specificity and Proficiency

	article	Lv1	Lv2	Lv3	Lv4
	<i>a</i> : target	24.24	51.64	65.63	76.67
[+spec]	<i>the</i>	36.36	28.69	22.92	18.33
	\emptyset	36.36	19.67	11.46	5.00
	<i>a</i> : target	31.82	40.16	52.08	55.00
[-spec]	<i>the</i>	34.85	33.61	27.08	11.67
	\emptyset	30.30	25.41	19.79	33.33

FIGURE 1
Correct Responses of *a* by Specificity and Proficiency



The specificity effect is clear in the development of the indefinite article *a*; the increase of the correct responses in specific contexts is higher than the increase in non-specific contexts. With the indefinite article, specific DPs are acquired more quickly than non-specific DPs are; the correct responses for specific DPs at Level 4 (76.67%) are more than three times as many as those at Level 1 (24.24%), while Level 4's correct response percentage for non-specific DPs (55%) is less than twice that of Level 1 (31.82%). This implies that specificity plays a role in the acquisition of the indefinite article by Korean secondary school learners.

An interesting finding in Table 6 is that the students in this study choose *a* more than *the* in an indefinite specific context, which is the opposite of Ionin *et al.*'s (2004) finding. The Korean secondary school subjects choose more *the* (36.36%) than *a* (24.24%) at Level 1, but they choose more *a* (51.64%) than *the* (28.69%) at Level 2. In an indefinite nonspecific context, they also start to choose more *a* (40.16%) than *the* (33.61%) at Level 2. These results may indicate that they seem to start to acquire the semantic features,

specificity and definiteness, at Level 2, and that most of Level 4 subjects (76.67%) seem to understand the specific indefinite *a*.

One more interesting finding in Table 6 is misuses of the zero article. For the target form of the specific indefinite article, the misuse of the zero article decreases sharply as proficiency increases (from 36.36% to 5%), while for the nonspecific zero article the misuse of the zero article doesn't decrease as proficiency increases (from 30.30% to 33.33%; it decreases until Level 3 but it goes up at Level 4). This may indicate that the subjects, especially the advanced subjects, tend to associate nonspecificity with the zero article more than they associate specificity with the zero article.

Table 7 below, where the target form is the zero article, reveals that the acquisition of the non-specific zero article is difficult for the subjects.

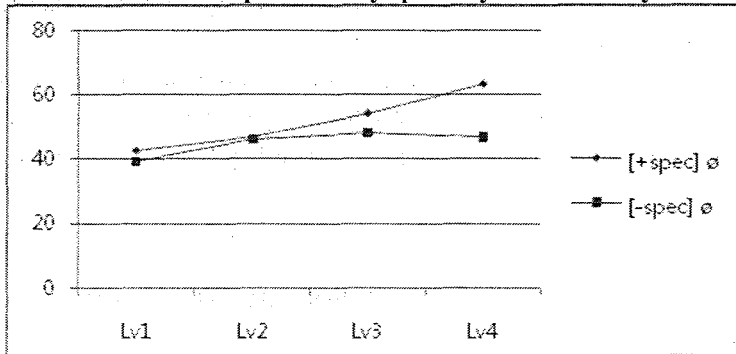
TABLE 7
Percent of Article Use (Target \emptyset) by Specificity and Proficiency

	Article	Lv1	Lv2	Lv3	Lv4
	\emptyset : target	42.42	46.72	54.17	63.33
[+spec]	<i>the</i>	30.30	27.87	22.92	15.00
	<i>a</i>	22.73	24.59	22.92	21.67
	\emptyset : target	39.39	45.90	47.92	46.67
[-spec]	<i>the</i>	36.36	23.77	19.79	15.00
	<i>a</i>	22.73	30.33	31.25	38.33

When the target is the specific zero article, the correct responses increase slowly as proficiency increases. Learners' misuses of *the* decrease as proficiency increases, but the misuses of *a* do not decrease or even increase. Specificity effect in article choice is somewhat less clear when the target is the zero article. Take a look at Figure 2, which shows the development of the correct responses to the target \emptyset by specificity and proficiency.

Figure 2 demonstrates that the subjects respond correctly more often in specific contexts than in nonspecific contexts, but that their improvements are much slower than when the target is *a* (See Figure 1), and the difference between specific and nonspecific contexts is smaller, though the gap grows wider as proficiency increases.

FIGURE 2
Correct Responses to \emptyset by Specificity and Proficiency



3. Uses of the Definite Article

Table 8 below shows the Korean subjects' correct responses to the different uses of the definite article by proficiency level.

TABLE 8
Correct Responses (%) for the Definite Article by Use Type and Proficiency

	Lv1	Lv2	Lv3	Lv4	Mean
Anaphoric	57.58	45.90	79.17	83.33	63.95
Situational	42.42	42.62	50.00	63.33	48.26
Associative	27.27	39.34	31.25	60.00	38.37
Conventional	33.33	34.43	33.33	36.67	34.30

The different uses of the definite article show different acquisition processes and seem to cause different levels of difficulty. The easiest use of the definite article is the anaphoric use; even Level 1 learners responded correctly over 50% of the time and Level 4 learners, over 80%. The most difficult use of the definite article for Level 1 learners is the associative use (27.27%), and the most consistently difficult and problematic use for all level students is the conventional use, which shows little development as proficiency increases.

The results in Table 8 reveal that different uses of the definite article pose different levels of difficulty for the Korean secondary school students. This implies that it is not completely correct to say that the definite *the* is easier than the indefinite article *a* or \emptyset . This finding also suggests that the feature definiteness is complex and thus should be dealt with carefully in L2 acquisition of English articles. The learners' different levels of difficulty for different uses of the definite article seem to be related to the various meanings of the feature definiteness. The referent denoted by a DP in the anaphoric and situational uses can be directly sensed by the interlocutors in the given situation, while the

referent in the associative and conventional uses cannot be directly sensed by the interlocutors. It requires further research to find the specific factors in definiteness which affect its acquisition.

It will be interesting to compare the results in this study with those of other studies. Figure 3 below is a graph of the data in Table 8 and Figure 4 shows incorrect uses of *the* by the subjects in Liu and Gleason (2002).⁹ Note that Figure 3 shows correct responses while Figure 4 shows errors.

FIGURE 3
Comparison of Means of Correct Responses of *the* by Use Type

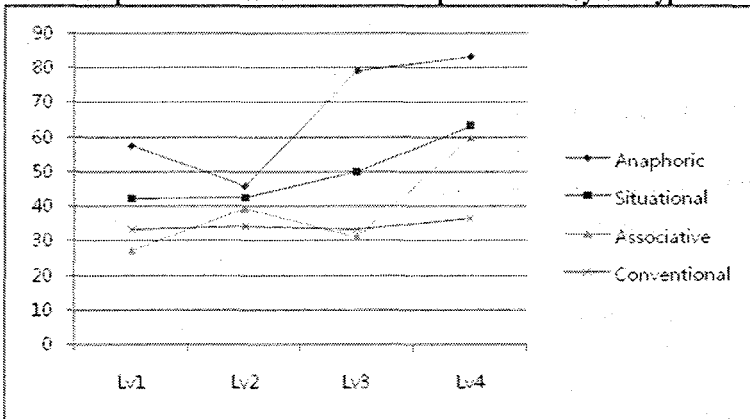
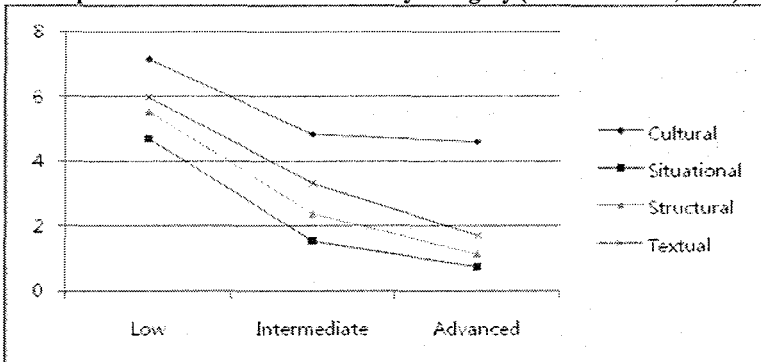


FIGURE 4
Comparison of Means of Missed *the* by Category (Liu & Gleason, 2002)



⁹ Liu and Gleason's (2002) subjects stayed less than a year in the U.S., and their average length of English study was 4.41 years. More than half of the subjects were undergraduate and graduate students. Therefore, their subjects would seem to be more advanced learners of English than the subjects of this study.

Note that some of the article uses in Figure 3 correspond to the uses in Figure 4, but some do not. The conventional use and the situational use in Figure 3 correspond to the cultural use and the situational use in Figure 4, respectively. The anaphoric and associative uses in Figure 3 are subsumed by the textual use in Figure 4. The structural use in Figure 4 has no corresponding use in Figure 3.

Figure 3 and Figure 4 both show different difficulties with the different uses and differences between groups. Both groups of the subjects in the two studies show progressive development as proficiency increases. The Korean secondary students in Figure 3 show little progression for the conventional use of the definite article, and it is the most difficult use even for Level 4 students. The subjects in Liu and Gleason (2002) also make more errors with the cultural use than with any other uses of the definite article. The situational use is the easiest one for the subjects in Liu and Gleason (2002), and it is the second-easiest in the present study. Structural use in Liu and Gleason's study where *the* is used with a DP with a modifier is not tested in the present study. The anaphoric use is the easiest and the associative use, the second most difficult for the Korean students in Figure 3 while the textual use is the second most difficult in Figure 4.¹⁰

It is also interesting to see the learners' article misuses in definite contexts, which are shown in Table 9.

TABLE 9
Errors (%) in the Use of *the* by Proficiency Level

	Lv1	Lv2	Lv3	Lv4
<i>the</i> : target	40.15	40.57	48.44	60.83
<i>a</i>	22.73	23.36	28.13	30.00
∅	33.33	35.66	23.44	9.17

The correct responses to the target *the* in Table 9 are the mean percentages of the four uses in Table 8. In the definite contexts, Level 1 learners use the zero article (33.33%) more than the indefinite article *a* (22.73%), but as proficiency increases, the use of the indefinite article increases slowly (from 22.73% to 30%), but the use of the zero article decreases sharply, especially at Level 4 (9.17%).

¹⁰ Gui-Seok Kim and Gil-Soon Ahn (2003) look at Korean high school students' acquisition of the exactly same four uses of the definite article as in Liu and Gleason (2002). In their study, textual use was highest, situational use second, cultural use third and structural use last in the comparison of the three groups' total means scores: low, intermediate and advanced groups.

4. Noun Countability

Noun countability was tested in the present study and thus the test contains questions about singular and plural target DPs, for instance, *a dog, dog, dogs, the dog, and the dogs*. It contains four questions about the singular indefinite article, four questions about the singular definite article, two questions about the singular zero article, and two questions about the plural zero article. Table 10 shows the subjects' correct responses to the questions.

TABLE 10
Correct Responses (%) for Countability by Proficiency

	Lv1	Lv2	Lv3	Lv4	Mean
SG	36.87	44.45	53.12	60.00	48.61
PL	39.39	41.41	50.00	56.67	46.87

The results in Table 10 show that Korean secondary school students choose correct DPs almost equally across singular and plural DPs, and across article types. But their mean of correct responses is less than 50% across all article types, whether the DPs are singular or plural.

However, an interesting pattern is revealed by error analysis. Korean secondary school students make more errors with plural DPs than errors with singular DPs. Table 11 shows some difference between the two patterns of countability errors.

TABLE 11
Two Patterns of Countability Error By Proficiency

	L1	L2	L3	L4	Mean
SG-PL	26.01	24.6	16	10.83	19.35
PL-SG	56.06	50.8	35.4	23.33	41.41

In Table 11, Pattern SG-PL indicates that the subjects consider singular DPs as plural, and Pattern PL-SG, plural DPs as singular. The mean of Pattern PL-SG (41.41%) is almost twice the mean of Pattern SG-PL (19.35%). It can be inferred that many of the learners have a strong tendency to consider plural DPs as singular or ignore the plural form of DPs.¹¹ This implies that noun countability is a possible factor affecting the acquisition of articles by Korean secondary school students of L2 English. This implication is consistent with what Butler (2002), Ogawa (2008) and Park and Song (2008) report. Park and Song (2008) report that noun countability is one of the major difficulties for advanced adult

¹¹ Note that the test does not include definite plural DPs.

Korean learners of English (whose average TOEFL (CBT) scores are 260). Ogawa (2008) also reports that the difficulty of article acquisition for advanced EFL Japanese learners lies in nominal countability.

The high error rate of the plural zero article seems to be related to two factors: difficulties of noun countability and zero article DPs. We have already seen L1-Korean speakers' difficulty with zero article DPs. The difficulty of noun countability is also associated with both L1 and L2. The subjects' L1, Korean, does not have a grammatical number system. Though it has the plural marker *-tul*, its use is optional, not obligatory. Even if the plural marker is missing with a plural noun in a sentence, the sentence is grammatical (*saram-(tul)-i manhta* 'there are a lot of person(s)'; *saram* 'person', *-i* nominative marker, *manhta* 'a lot'). There is also no number agreement between the subject noun and the verb (or auxiliary verb) in the language. So Korean learners of English, especially beginners, tend to consider all English DPs as singular. On top of it, L2 English has a complex countability system; a noun's countability usually depends on the context. The nouns *coffee* or *hair* can be considered as uncountable or countable, as in *a coffee* or *a hair*, depending on the context, which may cause great difficulty for L2 English learners.

Noun countability or the number system is important for learning English because the language uses number in various ways; not only in article choice but also in the subject and verb's number agreement and uses of pronouns (for instance, *it* or *they*). However, Korean secondary school students do not seem to have acquired the number system clearly yet; the mean of all the subjects' correct responses is lower than 50% (See Table 10), and even the high level students' (most of them are high school students) correct response percentages are between 50% and 60%. This implies that they need instruction about noun countability or the number system in general.

5. Modification

Modification was also tested in the present study and thus the test has four questions for the target *a*; two of them are modified by prepositional phrases, and two of them are not modified. It also contains four questions for the target \emptyset ; three of them have modifiers (one item modified by a relative clause and two items modified by prepositional phrases). Table 12 shows the percentages of learners' misuse of *the* with DPs with or without modification.

TABLE 12
Misuse of *the* by Modification (%)

	Lv1	Lv2	Lv3	Lv4	Mean
[+mod]	30.56	27.05	19.62	14.17	22.85
[-mod]	39.39	24.59	24.48	10.83	24.82

Overall, the misuse of *the* decreases as proficiency increases, but modification does not seem to affect the choice of *the*.

To see whether the modification type, clausal (S) or prepositional (PP) modifier, affects article choice, let us look at Table 13 below, which shows the subjects' article choice depending on proficiency level and modifier type.

TABLE 13
Article Choice (%) by Modifier Type and Proficiency

Article	Modifier	Lv1	Lv2	Lv3	Lv4	Mean
<i>the</i>	S	30.33	26.23	35.42	20.00	29.07
	PP	30.30	28.28	16.67	14.17	22.97
<i>a</i>	S	30.30	39.34	33.33	30.00	34.30
	PP	25.76	33.61	42.71	49.17	37.35
∅	S	33.33	34.43	31.25	50.00	36.05
	PP	40.15	24.18	40.63	36.67	38.81

The mean percentages in Table 13 show that the subjects choose *a* or ∅ more than *the* when a DP is modified by a clause. There is a small difference in *the* choice between the two types of modifiers, S and PP; they choose *the* slightly more with clausal modifiers (29.07%) than with PP modifiers (22.97%). However, many students choose *a* or ∅ with a DP modified by a clause. This finding is consistent with Ionin *et al.* (2008) where modification does not affect article choice. However, this result is not consistent with the findings of Taesook Park and Mi-Jeong Song (2008) where the advanced Korean students tend to choose *the* more for an S-modified DP than a PP-modified DP. Note that there is a difference in proficiency level between the subjects of this study and Park and Song's. Park and Song's subjects are very advanced; their average score on the TOEFL (CBT) is 260.

V. CONCLUSION AND PEDAGOGICAL IMPLICATIONS

This research shows that the students' acquisition processes of L2 English articles are nonrandom and that their overall accuracy increases as proficiency increases. This study suggests that specificity plays a role in choosing the articles *a* or ∅. Considering that

L2-English teachers in Korea rarely teach the notion specificity to their students, the results in this study can be considered another piece of evidence that specificity is a universal semantic feature, supporting Ionin *et al.* (2004).

We have seen that specificity plays a role, and that the L1-Korean learners of L2 English seem to start to use the semantic feature specificity for the article *a* (Level 4 students responded correctly to the questions at 76.67% of the time). This implies that at the secondary school level the notion specificity may need to be incorporated into L2-English instruction whatever the instruction method may be; explicit or implicit, through textbooks or teaching materials. To see how English articles are presented in secondary school English texts used in Korea, the researcher of the present study briefly examined some part of an English text for the 9th grade. I found that the article input in the text doesn't seem to be problematic; specific and nonspecific uses of each article type are found, though their frequencies are different. To see how much Korean secondary school English teachers understand the notion specificity, the researcher tested 13 teachers taking "Studies in L2 English Grammar", a graduate course. None of them could define the notion specificity; eight of them are high school teachers and five are middle school teachers. It indicates that the curriculum for L2-English teachers may need to include the notion specificity.

The finding on the different uses of the definite article suggests that not only the notion definiteness but also the different uses or more specific sub-features of definiteness need to be introduced into L2 acquisition and instruction of English articles. The findings have the pedagogical implication that the easier use of the definite article, for example, the anaphoric use, be presented earlier to low level students of L2 English, and then the situational use, followed by the associative use. In the test of Korean secondary school English teachers, only three of the thirteen teachers responded that they teach various uses of the definite article, and only one of them could define the notion definiteness clearly. This implies that the notion definiteness needs to be included in the curriculum for English teachers. Note that Master (1990) emphasizes the feature [\pm definite] subsuming the feature [\pm specific] for pedagogical purposes.

We also saw that the feature countability plays a role in L2 acquisition of English articles, while the structural notion modification does not. Noun countability is a consistent problem for Korean secondary school students; the mean scores of the correct responses are lower than 50%; even Level 4 students' rates are only 60.00% for the singular and 56.67% for the plural. This implies that Korean secondary school students do not seem to have yet acquired countability. Thus, secondary school teachers should be aware of the problem, and it should be incorporated into their instruction and/or teaching materials.

One issue in the literature regards which article is easier than or acquired earlier than the other articles. It is reported that the definite article *the* is easier than the indefinite article *a* (Hawkins, 2001; Ionin *et al.*, 2008; Tae-Sook Park, 2005). The results of this research

suggests that each article has its own developmental stages where an article with different uses or features is acquired at different times. When the correct responses (mean scores) of articles in this study are compared, we get the following difficulty order from the easiest to the most difficult: the anaphoric use of *the* (63.95%) > the specific *a* (54.65%) > the specific \emptyset (50.87%) > the nonspecific *a*, (44.48%) > the nonspecific \emptyset (43.35%) > the conventional use of *the* (34.30%). This suggests that the definite article *the* is the easiest and most difficult one among the three articles. These results tell us that we can't simply compare article acquisition by type since difficulty of article acquisition varies greatly by use and feature.

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APPENDIX

Article Test

다음 주어진 문맥과 문장 속에서 빈 칸에 가장 알맞은 표현을 고르시오. 해당 번호를 빈칸에 적으시오.

- Mary: I am sleepy again, but I have a lot of work to do. Can I have more coffee, Sue?
Sue: You have already had a lot of coffee. I think you need _____.
① sleeps ② the sleep ③ the sleeps ④ sleep ⑤ a sleep
- When I woke up this morning, I saw ____ on a tree near my window and it soon flew away.
① the pretty birds ② a pretty bird ③ pretty bird ④ pretty birds ⑤ the pretty bird
- _____ can be defined generally as a person who is learning at a school.
① Students ② A student ③ The student ④ Student ⑤ The students
- 손님: I am looking for ___ for my son's birthday. Can you help me find one?
서점주인: How old is he?
① the books ② a book ③ the book ④ book ⑤ books
- My wife gave me _____ last Christmas. You didn't see it because I rarely wore it. Then while I was on an important business trip in New York, I lost it and I couldn't tell my wife the truth.
① the watch ② watch ③ watches ④ the watches ⑤ a watch
- Last year I had _____ that were very big and very noisy. And I had a hard time taking care of them. I had to sell them quickly. You don't know how much they ate and how noisy they were.
① dog ② dogs ③ the dog ④ a dog ⑤ the dogs
- I have known my neighbors, Mr. and Mrs. Kim, for ten years but I didn't know they were _____ of American history. They are quiet and rarely talk with us.
① the teacher ② teacher ③ the teachers ④ teachers ⑤ a teacher
- Jack: Is Susan here? You're always talking about her. I want to talk with her.
Jane: Yes, she is here. She is sitting over there on the couch and wearing a red dress.
Jack: Oh, I can see her. She is _____ with long hair! She is very pretty.
① a woman ② the woman ③ woman ④ women ⑤ the women
- 손님: I ordered a glass of milk but I think something dropped into _____.

웨이터: I am very sorry. I will bring you a new one right away.

- ① milk ② milks ③ the milk ④ a milk ⑤ the milks

10. Laura: Well, there were peanuts and _____ on the table. But the wine is spilt, and the peanuts are gone.

Cindy: I think it is the cat, Betty, who did it.

- ① a wine ② the wine ③ wine ④ wines ⑤ the wines

11. Jack: I saw Joe this morning. He looked terrible. He coughed a lot, and he said he had a fever.

Bill: Yes, he went back home to rest. I think he also needs some medicine for the cough and fever. He must have caught _____.

- ① the flu ② a flu ③ flus ④ flu ⑤ the flus

12. Mr. Kim bought a car last week. All of his family liked it very much. But yesterday he found a problem with _____.

- ① the engines ② an engine ③ engines ④ engine ⑤ the engine

Applicable levels: secondary school

Key words: indefinite article, zero article, definite article, specificity, countability, modification

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