A "The" or the "A"? L2 Learner Problems and Patterns

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While definite and indefinite articles, and bare nouns with no articles have long proved to be notoriously problematic for Koreans and other English learners whose L1 lacks such a grammatical system, seemingly little progress has been made. Learners still struggle with these, and teachers often lack the linguistic awareness and resources for teaching them. Part of the problem is the traditional rule-based approaches to grammar that students have been subjected to, while our lack of linguistic understanding is another obstacle. More recent approaches in linguistics offer some new tools for investigating these grammatical conundrums. In this study, L1 and L2 essay corpora are compared, with an analysis that is guided by a cognitive linguistic approach to types of noun phrases. This approach leads to a unique way to understand, teach, and explain article and noun patterns, while it also leads to ways of breaking up these contents into manageable chunks, and some specific interactive classroom activities and tasks that can target specific noun phrase patterns and functions.

Keywords: definite and indefinite articles, determiners, noun phrases, cognitive linguistics, communicative language teaching

INTRODUCTION

English definite articles can indicate items that are previously mentioned, or otherwise known or inferrable to listeners (e.g., "the rock" in a known context), while indefinite articles indicate newly mentioned items in discourse ("a rock"). Unmarked or bare nouns with no articles, especially unmarked plurals, can indicate a generic meaning (e.g., "rocks"), and in the singular, so-called non-count nouns can refer to

materials ("the path is made of rock") or abstract concepts (e.g., "peace" or "feminism"). In addition to previous mention in context, a noun can be made more specific by a post-modifier phrase, that is, a prepositional phrase, relative clause, or other phrase after the noun (e.g., "the brick in the wall" or "the rock that fell on me").

Korean, Chinese, Japanese and other East Asian languages do not have article systems, and instead, the nuances that they express are inferred from context, expressed with other determiners (e.g., "this, that"), or are marked with noun class markers for definite countable noun concepts. For example, "one rock" can be expressed as *yi ge shí* in Chinese and as *dolmaengi han ge* in Korean, where *ge* is the noun counter for general objects in both languages, which indicates a single or specific known rock. Some languages like Korean sometimes express specificity with topic markers (*-un/-nun*) on nouns instead of subject markers (e.g., *dolmaengi nun*, "the rock" or "the rocks," can refer to an item that is assumed to be known or familiar, and thus, definite). The Korean subject markers (*-i/-ga*) can indicate new or generic nouns (e.g., *dolmaengi-ga*, "rocks" or "a rock"). However, topic and subject markers are not unambiguous markers of such meanings, as they generally indicate other nuances, e.g., topic markers often indicate contrast (Lee, 2008).

Articles belong to a larger syntactic category of determiners. The term "article" can be confusing (e.g., "*an* object" or "*a* short piece of writing") and not very meaningful, and the term "determiner" refers to other function words as well as articles. Thus, for this paper, the novel term "delimiter" is proposed as a clearer label for "article" (e.g., definite and indefinite *delimiters*). Nouns with no delimiters will be referred to as "unmarked nouns" or "bare nouns." After a brief survey of some previous studies, a data analysis is presented, followed by ideas for understanding, teaching, and practicing delimiter patterns.

LITERATURE REVIEW

The omission of both definite and indefinite delimiters when appropriate or required on nouns is one of the most common mistakes for Korean ESL learners (Cowan, 2008; H. Lee, 1997), and article omission may be due to the fact that unmarked nouns are the default or

norm in Korean (H. Lee, 1997). Omissions tend to occur more on nouns modified by adjectives than on unmodified nouns (e.g., "the hot sun"; cf. "the sun") (H. Lee, 1999). While most studies have focused on writing, article errors are commonly found also in Koreans' oral discourse, in ways that suggest L1 influence (H.-Y. Lee, 1996); for example, while learners often omitted delimiters or used the wrong one (*a/an* versus *the*), they frequently used delimiters with prefabricated expressions and collocations like "in the corner." Also problematic for Koreans are so-called social or cultural uses of definite articles (e.g., "the sun," "the White House," "play the piano"), situational or contextual uses that are inferrable to or familiar to listeners (e.g., "go to the pub, go to the hospital"), and associative uses for a familiar noun (e.g., "we went to a different pub, but the atmosphere was bad"), though again some improvement was found with increasing proficiency levels (Liu & Gleason, 2002). Accurate delimiter use may improve at higher proficiency levels, depending on the writing context (Park, 2008), but still remain problematic. However, overuse of *the* tends to increase from lower to intermediate proficiency levels and decrease at more advanced levels (Liu & Gleason, 2002).

These problems are also pervasive with other East Asian learners. Japanese learners may omit delimiters or use the wrong one (*a/an* versus *the*; Yamada & Matsuura, 1982), and Chinese learners similarly omit articles (Robertson, 2000). Chinese and Japanese learners have difficulty with generic and non-specific nouns (e.g., "lions live in savannas") (Snape, García Mayo, & Gürel, 2009). An error analysis of Chinese EFL writers showed that delimiter errors were the third-most-common error in their writings (behind lexical errors and verb tense errors), and the student writers were generally very aware of and troubled by such errors (Chen, 2002). Thai college writers make delimiter errors in a frequent but random manner, suggesting a lack of understanding of definiteness or specificity in the delimiter system, or how delimiters function differently from other determiners and adjectives (Gentner, 2016).

Among Koreans, delimiter difficulties can be explained by their learning methods. In various educational contexts in Korea, delimiters are taught in a traditional, prescriptive, rule-based approach (H. Lee, 1999), namely, with the four basic traditional rules, which fail to cover a number of examples and environments with varying delimiter usage: (a) *a/an* are used for nouns used for the first time, that is, when not known to the reader (first mention rule); (b) *the* is used for nouns

already named and known to the reader (subsequent mention rule); (c) *a/an* is used for singular count nouns and not plural nouns; and (d) *the* is used for one or more specific representatives of the noun, but not for plural or mass nouns referring generally to all representatives of the noun. Research has shown, however, that learners can benefit from instruction on delimiters, being made aware of delimiter patterns, and pedagogical intervention, for example, by means of systematic (and non-prescriptive) teaching of the delimiter system (Master, 1990), along with written assignments and feedback on errors (Master, 1994). Learners of various L1 backgrounds that lack delimiter systems have been found to benefit from corrective feedback.

However, it may not be entirely clear to teachers why students make many of their specific errors, or what specific nouns might be problematic. No known studies have examined more specific noun types other than general categories such as count, non-count, generic, and perhaps abstract nouns, in Korean learners' delimiter errors. Some preliminary research on Korean learner data from fill-in-the-blank grammaticality surveys indicate that specific noun types are problematic, such as post-modified nouns, abstract nouns, less common nouns, and nouns with multiple meanings (K. Lee, 2016). This research derives from cognitive semantics, which posits that grammatical forms, function, and usage are shaped in part by natural cognitive categories from human perception and cognition (Langacker, 2008; Taylor, 2002). Within this framework, some have posited that nouns can be classified or used in semantically different ways (Lyons, 1995; Talmy, 2000; Vendler, 1967), for example, nouns for materials (e.g., "coffee" or "wood"), objects and "things" (e.g., "a coffee," "a mug"), nouns referring to events ("a theft") or general activities (e.g., "jogging"), and abstract nouns (e.g., "feminism"). However, relatively little systematic research exists on these semantic factors in delimiter errors. For this purpose, a more detailed study of noun types and article errors is carried out on L1 and L2 writing samples, drawing from the cognitive linguistic framework.

The research hypotheses are as follows: (a) Lexical and semantic factors influence Korean delimiter errors (e.g., more semantically abstract and less common nouns are more error-prone), and (b) noun types such as post-modified noun phrases are more problematic for Koreans. After the analysis, teaching applications and techniques are discussed for Koreans and other East Asian learners.

EXPERIMENT

Two corpora of written texts were compared for article usage patterns. For the L1 corpus, the COCA corpus (Corpus of Contemporary American English; Gardner & Davies, 2013) was used, which contains academic and non-academic sub-copora of various genres. The academic subcorpus was used here, which consists of published academic journal articles and totals 103 million words. The L2 corpus consists of a collection of college and graduate school essays by ESL learners at a North American university (Cowan, Choi, & Kim, 2003). This corpus consists of 241,000 words at multiple levels: non-credit ESL students, undergraduate students, and graduate students. The non-credit students took writing courses in an intensive English program, and the college and graduate students took required ESL writing courses. The essay samples were collected from students' course assignments. Nouns were drawn from a list of the 570 most common English academic words needed for tertiary study (Coxhead, 2000); non-nouns and words not commonly used as nouns were removed, for a total of 269 potential nouns. The WordSmith Concord program[1] was used to search these corpora for these academic nouns; due to limitations of these programs, about one-third of the tokens in the COCA files were randomly sampled.

Phrases with the target nouns were extracted and coded for whether the nouns were proceeded by a delimiter and for the type of phrase following the noun, such as prepositional phrases. Coding other post-modifiers such as relative clause pronouns in such a large data set was not feasible, so this study only focused on prepositional phrases after the nouns (e.g., "the theory *of gravity*"); nouns within prepositional phrases were also examined (e.g., "in *orbit*"). To examine abstractness and word frequency, two indices for the nouns were entered into the data set: a numerical index for semantic concreteness (versus abstractness), and one for lexical frequency. These indices were created by psycholinguistics researchers (Brysbaert, Warriner, & Kuperman, 2014), by norming linguistic survey data from native speakers who rated the concreteness or abstractness of several thousand English nouns. These kinds of semantic effects are commonly used or controlled for in psycholinguistics and reading psychology studies, and it is hypothesized that they would affect L1 and L2 use, so they were tested for in this study.

The corpus software outputs data in a so-called KWIC format (quick words in context), that is, a display of the target words with five or more preceding and following words. This was exported to a spreadsheet, where target noun phrases were coded for various grammatical factors (e.g., delimiter type, post-modifiers). The data were analyzed with the SAS program (SAS 9.4 Studio, University Edition, for Linux). Since the dependent variable was categorical (type of delimiter or non-delimiter), logistic regression was used, which is a logarithm-based correlation analysis that is ideal for non-parametric data such as lexical data (Baayen & Lieber, 1996). Based on the results of the quantitative analysis, random sentences from the L2 corpus were then examined for more insight into particular L2 usage patterns. The corpora and data are summarized in Table 1.

TABLE 1. L1 and L2 Corpora

Corpus	Level	Total Words	*the* Tokens	*a/an* Tokens	Bare Nouns	Other Nouns	Total Nouns
COCA (L1)	Academic	103,421,981	13,120	17,817	37,578	2500	71,015
EFL (L2)	Non-credit	11,822	10	10	45	1	66
	Undergraduate	60,236	92	44	239	18	393
	Graduate	169,798	297	130	727	96	1250
	L2 total	241,856	399	184	1011	115	1709

Note. L1 and L2 corpus counts: Total words in all corpus files; instances of *the, a/an,* bare nouns, other noun phrases (possessives, demonstratives, etc.), and total number of noun tokens sampled based on the Coxhead (2000) list.

RESULTS

An overall difference in delimiter use was found for L1 versus L2 samples (312.48, p < .0001). For the L1 and L2 data overall, the following factors were significant influences on choice of *a/an, the,* or no delimiter: lexical frequency (chi square: x^2 = 462.01, p < .0001), concreteness (x^2 = 102.41, p < .0001), and type of phrase following the noun (x^2 = 2392.03, p < .0001). There was an overall difference between L1 versus L2 (x^2 = 312.48, p < .0001), and for the levels within the L2 (non-credit, undergraduate, graduate) compared to the L1 (x^2 = 332.72,

$p < .0001$), which suggests that the higher-level L2 students may have less difficulties than lower-level L2 students. The logistic regression model yields parameter estimates that can be converted to odds ratios. From this, it was found that L2 writers significantly underused *a/an*, and were only .38 times as likely to use *a/an* compared to the L1 writers; this trend was similar from lower to advanced L2 levels in the corpus. The L2 writers did not seem to overuse or underuse *the*, except for the low-level non-credit L2 writers, who were only .57 times as likely to use *the* as L1 writers (i.e., underuse). Before prepositional phrases (post-modified nouns), the L2 writers showed a similar tendency (1.01 times), but the L2 writers were more likely (1.99 times more likely), than L1 writers to use *a/an* for nouns post-modified by prepositional phrases and less likely (.21 times as likely) to use *the* for nouns post-modified prepositionally. Nouns within prepositional phrases showed no significant differences (e.g., "in orbit"). This may be due to limitations in coding a large data set or because problems may mainly arise with certain prepositions or expressions.

With a moderate-sized L2 corpus, there are some limits to what the statistical analysis can show us (e.g., how abstract nouns, material nouns, or nouns post-modified with prepositions or other expressions are used), so next some sentences from the L2 essays were examined for their delimiter patterns. Pragmatically non-native usage patterns indicated by the quantitative results were examined, namely, overuse and underuse of *the* and *a/an*, use of *a/the* with prepositionally post-modified nouns, and delimiters with abstract nouns. These L2 examples were then grouped semantically, according to natural semantic categories, such as object (cf. material nouns), events (cf. activities), and types of abstract nouns, based on categories from cognitive semantics (Lyons, 1995).

Some examples seem consistent with the lexical frequency effect as some errors are made with relatively less common or less familiar nouns for the learners' levels, namely, omission errors like these[2].

1. Liberman insists that <u>supralaryngeal airway</u> of modern humans is not defined by the existence of the hyoid bone. [Gr]
2. Because of this reason, it was very hard for me to understand <u>English pronoun system</u>. [Gr]

Of primary interest is semantic concreteness and abstractness. A number of examples are consistent with the abstractness effect found in

the quantitative analysis above, in that more abstract nouns seem more susceptible to errors, (i.e., nouns with non-physical or conceptual meanings). First, we see relatively few errors with the most concrete noun types – those referring to physical objects and materials, especially at the higher L2 levels (in this example, *film* is used as a material, so "a film" is not the best choice here).

3. First, when you buy <u>a film</u>, you should check selection of <u>film</u>, brand ISO (International Standard Organization)... [Gr]

Sometimes problematic were nouns referring to sets or groups of items or persons, which the L2 writers used as singulars with no delimiters. A bare plural would be more natural in such cases (e.g., "members," "men"), since the plural refers to a group or set, and by extension it can refer to a whole category of items, as in general descriptions and generalizations.

4. ...so that other <u>team member</u> had to do her projects for her. [Gr]
5. [Responding to an article on psychological studies of priming effects and stereotypes] In addition, <u>black man</u> is worse than <u>white man</u> in <u>intellectual area</u>, if he is reminded of stereotype that "you are black man." [Gr]

More often, we see errors or less felicitous delimiter use with non-physical, non-concrete nouns. These include abstract nouns, but also those that are not so abstract but not concrete, that is, quasi-abstract nouns that fall in the middle range between concrete and abstract (e.g., *degree, aspect, stereotype*). The examples below may be familiar to EFL teachers who have encountered such noun phrases that would be pragmatically better formed with an indefinite *a/an* or by making the noun plural. In such cases, the relative abstractness of the noun may be a factor, and in some examples, the lower lexical frequency or relative unfamiliarity of the noun may also be a factor; for example, a new graduate student may be superficially familiar with terms like *stereotype* or *impact*, but may not have used or encountered them enough to use an appropriate delimiter.

6. ...Learning a foreign language will encourage to see other countries and other cultures from <u>different aspect</u> and try to

adopt one's culture. [UG]

7. I think that for those three reason, it's good to learn <u>foreign language</u>. [UG]
8. In addition, <u>positive stereotype</u> influence our society as a good aspect. [Gr]
9. ...and academic performance are also impaired <u>in serious degree</u>. [Gr]
10. Eron said TV violence is one of the cause of youth violence, which is indicated as <u>public health problem</u>. [Gr]
11. Surely, <u>negative thought</u> or stereotype is tend to make a bad situation in society. [Gr]
12. Of course, stereotypes have <u>impact</u> on society. [Gr]
13. Usually <u>in advertising company</u>, there are a lot of bidding presentations, and managing clients by making proposals and planning <u>budget</u>, <u>master plan</u> and so on for clients. [Gr]
14. Korean usually have a positive thought, for example, "even if we are in <u>bad situation</u>, we can do it and overcome." [Gr]

Conversely, such quasi-abstract nouns were sometimes marked with a delimiter in ways that were pragmatically awkward for the context.

15. If we have a strong will, we can overcome <u>the</u> negative stereotype. [Gr]
16. Neanderthal could not speak a language like <u>the</u> modern human language.... Therefore, we cannot deny that Neanderthal language was very similar to <u>the</u> modern human language [Gr]
17. They can learn something to solve <u>the</u> hardness [i.e., difficulty] through this process. [Gr]
18. Steele asserts that <u>the knowledge</u> of a stereotype affects how well they accomplish on intellectual and other tasks. [Gr]
19. To do so, parents are responsible for taking <u>a further attention</u> to their children [Gr]
20. Nevertheless, <u>a certain fear</u> is necessary for children, because it may help protect children from dangerous situations. [Gr]

The range of quasi-abstract nouns includes those that refer to general activities with no delimiter (e.g., "Theft is a problem here") versus particular events with a delimiter ("The theft happened yesterday"). In these examples, the nouns were used in an abstract sense in the context but were marked with delimiters.

21. However, in anthropological behaviors of Neanderthals, they had enough ability to change <u>the</u> conversation each other. [Gr]
22. That is, if this situation continues, it can be possible to increase <u>a</u> <u>crime</u> in our society [NC]

The degree of a noun's abstractness can be altered by a post-modifier phrase. As hypothesized, post-modified nouns (i.e., with prepositional phrases) were sometimes problematic. Sometimes L2 writers used such nouns with no delimiter in instances where a delimiter would be appropriate (lexical frequency and abstractness may play a role here as well). These nouns are often more abstract, but when post-modified, they can have a more specific meaning and are modified with *a/an/the*, especially when referring to a particular instance or type of the abstract term (e.g., *limitation* in a more abstract sense, cf. "the limitation of Neanderthals" below).

23. I'm focus[ed] on <u>ratio</u> of user to a member of computer, high educator to low educator. [NC]
24. It is indicated that guns have at least two negative effects; the eruption of the crime rate and <u>destruction</u> of families [UG]
25. Since overweight and obesity lead to increased morbidity and mortality, growing of obese population in the USA indicate <u>severity</u> of the public health problem. [Gr]
26. We have suggested that <u>three major limitations</u> of Neanderthal show us the impossibility of speaking like humans. [Gr]

Occasionally, an inappropriate indefinite delimiter was used with post-modified nouns.

27. ...but if these fears continuously reside in children's minds, and interfere their daily routines, it might be <u>a beginning</u> of social phobias [Gr]

In the L1 corpus, we see prepositional post-modifer phrases used with *the* particularly in restrictive contexts. In these contexts, it is not only (and not necessarily) a matter of *the* plus a noun phrase referring to a previously mentioned noun, but also the fact that the following prepositional phrase restricts the meaning of the noun, including more abstract or non-physical meanings of nouns, to more specific ideas. In

the following examples, relatively non-physical or abstract nouns (*hypothesis, flexibility, use*) are restricted to more specific instances, types, or examples of the noun (i.e., a specific type, instance, or example of a hypothesis, arousal, or use of something).

28. ...and to further evaluate <u>the</u> arousal hypothesis of stereotype threat... [L1]
29. ..., the findings also confirm <u>the</u> central hypothesis of this study that... [L1]
30. ..., augmenting <u>the</u> inherent flexibility of the VTB abstraction... [L1]
31. <u>The</u> use of short videos for patients in the waiting room encourages them [L1]

In contrast, those with *a/an* were not only for first mentions but were also more general in nature, such as noun phrases that served as definitions or more hypothetical descriptions or examples in their contexts.

32. ...chemical characteristics, researchers can develop a hypothesis regarding the role this newly discovered... [L1]
33. ...1974, Molina and Rowland proposed an alarming hypothesis in *Nature* that the use of chlorofluorocarbon... [L1]
34. Breakwell (1986b) has defined a strategy for coping with stigma as... [L1]
35. ...to select a broadcast protocol for use in a large-scale WSN deployment... [L1]
36. ...tools designed to help people weigh up evidence about a test or a treatment... [L1]

Though errors with nouns within prepositional phrases (as objects of prepositions, such as "in orbit") did not show up in the statistical analysis, some were found in the L2 corpus. The level of coding for noun phrase syntax in the quantitative analysis was probably not deep enough for this to show up as a significant factor, especially since it may be more common in certain types of prepositional phrases; however, such errors are familiar to ESL/EFL teachers, and some do show up in the L2 corpus. The examples below show omissions of *the* (#37−38), and awkward usage of *a* (#39) and *the* (#40) for what would be more abstract noun phrases in their respective contexts.

37. ...make mention of 3 big reasons about North Korea famine. [NC]
38. Since almost of students in nation take the same test [Gr]
39. Although it may be true that the competency of personal writing may be a critical factor for a successful academic writing. [Gr]
40. ...because the investment on the computer technology should be done as early as possible [NC]

Also, a cursory examination of expressions in the L1 corpus shows some common collocational expressions formed from a preposition plus no delimiter plus a singular noun that are used in a somewhat abstract sense. A few standard expressions use *the* (#45).

41. ...each involves significant drawbacks when used in isolation. [L1]
42. ...and emulated sensor nodes and radios in real time... [L1]
43. In response, in terms of, keep/bear in mind, in practice, in detail, to be in development, in relation to, in spring/summer/fall/winter, in decline... [L1]
44. ...difference in X, similar in form, believe in... [L1]
45. ...cf. in the short run, in the end... [L1]

The semantic reasons for some of these L1 patterns is beyond the scope of this paper as they involve specialized uses of *the* or of bare noun phrases. Nonetheless, for learners, exposure to authentic texts and learning common prepositional collocational patterns in the language of their fields will be necessary for learning more accurate delimiter usage.

At times, *the* was used inappropriately for nouns being mentioned for the first time in context. Though students have learned the rule of first and second mention for *a/an* versus *the*, they still find this difficult to apply at times. This may be because the rule is too vague or unclear to learners, especially given how it has been taught (H. Lee, 1999). This may also be because other discourse factors are more important than first and second mention, such as scene shifts and perspective shifts made by writers in their choice of delimiters (Epstein, 2001). In the following examples, the L2 writers used *the* for new noun referents, or where it is not clear in the context if the noun is meant to be a more abstract bare noun (e.g., "cope with anxiety") or if it is meant to refer to a specific instance of an abstract concept (e.g., "cope with this anxiety").

46. For example, if the parents got shot by a gun randomly on the street

of New York, it would have a tremendous impact in the family.
[UG]

47. Therefore, to understand children's mental stability to help them how to cope with the anxiety and fear is an inextricable work for all parents. [Gr]

48. Stone and his colleagues showed that a negative stereotype can adversely affect performance from the study on the 40 black and 40 white Princeton undergraduate volunteered to play mini-golf. [Gr]

DISCUSSION

The statistical data support the first research hypothesis that lexical and semantic factors are relevant to Koreans' delimiter problems. Nouns with concrete, physical meanings seem less problematic, especially for intermediate and higher levels. Among these, nouns for objects may be easier, as these correspond directly to the idea of count nouns that they are taught, while nouns for materials (e.g., "film") may be slightly more error-prone. Most problems were found with non-physical nouns and more abstract nouns. Also, less frequent or unfamiliar words seem to be more error-prone. The data also support the hypothesis that post-modified nouns are problematic, at least for nouns followed by prepositional phrases. Sentences in the L2 data show examples of delimiter use that are consistent with the statistical results. More abstract or non-physical nouns tended to be problematic, either in simple noun phrases or in post-modified noun phrases. These issues tended to show up more in the writings of graduate students, as they are more likely to attempt using more abstract or complex noun phrases in their writings. Other sample sentences also showed possible problem areas that did not show up in the statistical analysis, namely, nouns within prepositional phrases (e.g., "in orbit"). It may be that prepositional phrases are generally problematic: for nouns followed by prepositional phrases (e.g., "the orbit of the satellite") and for nouns within prepositional phrases (e.g., "in orbit").

Many nouns can exist as both countable and non-countable nouns, with slight differences in nuance (e.g., "coffee" for the liquid substance; "a coffee" for "a cup of coffee," i.e., an object), or rather different meanings (e.g., "glass" for the material, "a glass" for an object made of glass). Sometimes the difference can be more subtle, as in science

writing ("carbon" as material, cf. "the carbon" for an aforementioned piece of material). Therefore, focusing on the count–non-count distinction may not be helpful, and might be confusing. The abstract–concrete distinction was found to be a relevant factor in the above analysis, as well as in grammaticality judgment studies (K. Lee, 2016). Thus, for physical nouns, a marked noun (a noun marked with *a/an* or *the*) generally indicates an object, while a bare noun by default refers to a material or substance. Abstract or quasi-abstract nouns can be marked with delimiters to refer to a specific instance, type, or example of something (e.g., "feminism," cf. "the feminism of the 1960s"). Similarly, some nouns can refer to general activities as bare nouns, or to specific events or instances as marked nouns ("crime," cf. "a crime"; "theft," cf. "a theft").

The difference between "new" or first mention for *a/an* and "old" or subsequent mention for *the*, while valid, is an oversimplification. Examples are readily found in academic writing, such as those above, where one continues to use *a/an* for repeated mentions of a noun, particularly in definitions and general descriptions. It is also used for hypothetical discussion of a noun (K. Lee, 2017), e.g., repeated use of "a theory" in "physicists are searching for a unified theory of the cosmos – a theory that would go beyond the current model, a theory that would explain a number of unexplained phenomena, and a theory that would be testable." The definite delimiter *the* refers not only to previously mentioned items, but also unique referents ("the sun, the moon"), items that are familiar by association ("open the computer case and find the hard drive cable"), and items that can be inferred from context or familiarity ("I went to the store"). Also, the terms definite for *the* and indefinite for *a/an* may not be clear for learners. Thus, it may be better to explain these as "familiar" or "unfamiliar" to readers in context. That is, *a/an* as indefinite because it is unfamiliar to the reader in the context, due to first mention, hypothetical discussion, or a general description or definition; *the* is assumed to be more familiar in the context due to previous mention or a number of other reasons, such that it is familiar enough that the reader can infer what the writer is referring to.

Teaching Applications

These results lead to the following teaching applications. Delimiters can be taught based on their relative concreteness or abstractness. This

may be, in fact, more meaningful or clearer to students than count versus non-count noun distinctions. Also, terms like "delimiters" (or other terms like "thingifier") and "bare noun" might be better for learners than "article" or "zero article." This semantic approach leads to two important possibilities for teachers. This provides a logical way to break up units or contents on delimiters into separate chunks or subunits, going from more concrete to more abstract functions, and from simple nouns to more complex phrases (e.g., prepositional phrases and post-modifiers). For example, teachers can focus on more physical, tangible nouns with *the* at lower levels before introducing more non-physical or abstract uses at a later stage. At more intermediate and advanced stages, more grammatically complex forms can be introduced, such as nouns in prepositional phrases, nouns with post-modifiers, and various collocational uses such as those used in academic vocabulary. Corrective feedback may also be effective, such as feedback focused on specific uses of delimiters or unmarked nouns. More exposure to different types of texts is needed, and extensive reading outside of the classroom can be promoted.

TABLE 2. Summary of Noun Phrase Types

Noun Phrase Types	Meaning	Examples
1. Physical nouns	objects or materials	
(a) Bare singular	material, mass, substance	water, chicken
(b) Marked singular nouns (marked with a/an/the)	things, objects	a/the chicken
(c) Bare plural	set or group of things (also applicable later to non-physical nouns and to generic descriptions)	tables, chairs, penguins Penguins are flightless birds.
2. Non-physical nouns	non-physical entities or concepts	
(a) Bare singular nouns	more abstract	peace, hope, biology, contamination
(b) Marked singular nouns	specific instance, type, example of an entity	a/the element, aspect, difference
3. Indefinite nouns (*a/an*)	unfamiliar entity to listener/speaker	a cable
4. Definite nouns (*the*)	more familiar or likely familiar entity to listener/speaker	the cable (in your computer)

Note. Overview: More physical or concrete nouns, cf. non-physical nouns (1-2); and indefinite, cf. definite (3-4).

An overview of the basic distinctions is shown in Table 2, which can guide the sequencing of delimiter lessons in teaching.

The different noun phrase patterns are sketched out below in more detail, with possible sequencing from simple to complex forms. This includes some patterns from other recent research (K. Lee, 2017) about differences between the definite *the* and the indefinite *a/an*. Indefinite nouns, for example, can be taught as nouns referring to items unfamiliar to the listener. This is used not only for first mention, but also for hypothetical descriptions and examples, and for definitions, especially in academic writing.

TABLE 3. Noun Phrase Patterns and Possible Sequencing

	Noun Phrase Pattern	Examples
1a.	Material / substance nouns (bare singular nouns)	water, milk, flour, wood, plastic, metal, juice
1b.	Object nouns (marked singular nouns)	*a/the* + table, chair, house, building, mountain, chip, computer
1c.	Object vs. material nouns	Bare vs. marked forms for: coffee, juice, chicken, lamb, tomato, pepper
2a.	Plural bare nouns = set or group of things	chickens, tables, chairs, melons, tomatoes, potatoes, chips, computers
2b.	Plural bare nouns = a group, a category (general descriptions)	Penguins are flightless Antarctic birds.
3a.	Indefinite *a/an* = unfamiliar, unknown to listener	A squirrel approached me as I sat down with my lunch.
3b.	Hypothetical examples or cases	I want a man who knows what love is – a man who is thoughtful and kind. A typical graduate student spends four hours per day reading.
3c.	Definitions	A first mover is a business leader who identifies a new niche or market.
4a.	Definite *the* = familiar or potentially familiar to the listener (e.g., previous mention)	A squirrel approached me ... The squirrel clearly wanted some of my food.
4b.	Specialized uses of *the* where familiarity is implied or assumed (e.g., part-whole and associative contexts)	Open your computer and find the red SATA cables that attach to the motherboard.

5.	Bare noun = general activity, marked noun = specific event, episode, instance	I enjoy jogging, and yesterday I had a great jog in the park. We did research; the research uncovered some interesting results. (a / the / bare noun +) theft, crime
6a.	Bare singulars = abstract nouns	love, hate, war, peace, feminism, racism, discrimination, equality, justice
6b.	Non-physical entities (i.e., quasi-abstract nouns, with a/an/the or bare plurals)	stereotype, aspect, element, ratio, difference, conflict
6c.	Prepositional phrases: more general, abstract meaning	They spoke in dialect. The shuttle is in orbit. The matter is in arbitration. Proceed with caution. They are in conflict / at odds.
7a.	Post-modified nouns: the = specific instance, type, example	The stability of the peace in first-century Rome
7b.	Post-modified nouns: the = specific batch of a substance	The vanadium in this jet engine
7c.	Post-modified nouns: a/an & bare nouns for general descriptions or definitions	CBT is a standard technique in psychotherapy that has been validated by clinical research

This also leads readily to other methods for teaching delimiters. Since we can identify more specific functions and meanings of delimiters and bare noun patterns, teachers can create better activities for these forms. Rather than teaching a set of traditional rules or forms (a, the, bare noun forms), we can focus on one particular function or meaning at one time. In this way, we can break up the contents into more manageable chunks. More importantly, because we can match a particular task with one specific delimiter pattern or function, it is now easier to find communicative, inductive, or interactive methods for teaching and practicing delimiter forms. It is thus possible to tailor many classroom tasks to focus on delimiters by focusing on one delimiter pattern or meaning in a particular task.

These patterns can be presented one at a time to students for a discovery learning activity in which students are given examples and in groups discuss and try to infer the patterns. This can be done with sample passages and/or with pictures with labels (e.g., "chicken" cf. "a chicken"), or with realia. For example, students can be shown corresponding examples of bare nouns for materials and marked nouns

(marked with delimiters) for objects (e.g., "coffee," "a coffee"; "juice," "a juice"; "chicken," "a chicken"). This leads students to form hypotheses of their own about the differences between these types of noun phrases. The discussion can then be guided by the instructor to make sure that students have found the right patterns and to reinforce their learning. This so-called "guided discovery" learning can be helpful to students for deeper learning and retention, possibly more than unguided discovery (Mayer, 2004). This can then be followed by a specifically tailored practice activity.

While choosing communicative or interactive activities for practicing delimiters may seem daunting, the task becomes more manageable if one focuses on specific semantic-pragmatic functions of the delimiter system, as discussed above. That is, rather than focusing on one form (*a/an* or *the*) or one specific rule, their natural categories and distinctions as outlined above can be focused on, such that one classroom activity focuses on one of these noun phrase types or distinctions. For example, common tasks such as map tasks can be adapted to focus on object nouns ("the post office," etc.). An activity in which students create a list, such as a shopping list, can be useful for contrasting material nouns (like "peanut butter") versus object nouns (like "a watermelon"), including material–object distinctions of the same noun (e.g., "a pineapple" for one fruit, versus "pineapple" as a material, for precut or processed pineapple in a package). This can lead to a useful discussion of what nouns we conceptualize more as materials (e.g., "broccoli," "cauliflower"), those that we think of as objects (e.g., "onions"), and those that may depend on how they are sold (e.g., "melon," "a melon") in English or in Anglophone culture; incidentally, this often depends on how shoppers or cooks conceptualize and work with these food items. A third distinction of bare plurals for groups or sets can also be used in listing activities (e.g., "pineapples" for multiples; i.e., buying two or three, which constitutes a set of pineapples).

The traditional genre or discourse forms used in writing classes such as process, classification, listing, descriptive, example, and analytical paragraphs can be adapted for delimiters. These tasks can be used or adapted to focus on particular delimiter patterns, as written or oral tasks, individually or in groups. Depending on the topic, process paragraphs can focus on materials, objects, or a contrast thereof; or on activities, events, or a contrast thereof. Listing and example exercises can include shopping lists or more complex tasks like drafting a budget or budget

proposal, as a simple list or with more elaborate descriptions (e.g., as justifications for budget items). Below are some sample activities for groups that can be done as oral and/or written exercises, including some used in this author's classes.

TABLE 4. Activities or Tasks for Physical Nouns

1. Simple tasks for object and material nouns (and/or object vs. material nouns)
   - Map tasks
   - Recipes
   - Shopping lists (grocery items)
   - Shopping lists (for clothing, office supplies, furniture, or equipment)

2. Other tasks for object and/or material nouns
   - Budget proposals (e.g., for a company)
   - Film budget (for a proposal for an independent film; students draw up a list or description of items, equipment, and personnel needed for pitching an independent film to investors; for more advanced levels, the budget can be broken down into pre-production, production, post-production, and distribution phases)
   - Description tasks (e.g., describe a scene, location, favorite trip)
   - Summarizing or creating a fictional narrative

3. Process paragraphs and/or oral descriptions
   - Assembly instructions for a machine, piece of furniture, toy, computer, or other product
   - Descriptions of how a food item is prepared or of how something is made from a material.
   - Directions for constructing an object (e.g., a house), assembling a product, manufacturing a product, or accomplishing a goal.
   - How to make a movie, or how to make a YouTube video.
   - Describing how special effects might have been done in a film or how a video was made (e.g., practical effects in elaborate music videos by the band OK Go or special effects in a movie).

For intermediate to advanced learners, more exposure to abstract nouns is needed, and for advanced learners, input with post-modified nouns is needed. Abstract nouns that are post-modified may be more problematic and may require more explicit instruction or form-focused correction. Such phrases are more common in academic English, and in these post-modified noun phrases, the phrase often refers to a specific type, instance, or example of an abstract noun (e.g., "feminism," cf. "the feminism of the 1960s") or of a noun referring to a material (e.g.,

"carbon," cf. "the carbon in the cleaning solution"). Similarly, bare singular activity nouns can be contrasted with nouns for specific events or instances of the activity ("theft," cf. "a theft"). Here are some general ideas for more advanced activities that can be done in a more EAP-style or content-based course.

TABLE 5. Advanced Tasks and Activities

Written or Oral Description Tasks

- Describe a scientific experiment or a research method used in your field.

- Describe a manufacturing processes or the industrial processing of a material.

- Describe a particular artistic genre or subgenre (of film, music, novels, etc.); then discuss a specific example, and explain how it fulfills and differs from the standards of the genre.

- Describe a particular theory, movement, framework, belief system, hypothesis, model, or ideology in your field of study, and particular phases or varieties of this system.

- Explain an important term or concept in your field of study.

- Contrast or compare two theories, terms, or concepts in your field.

- Present a proposal for your own independent film project, including, for example, justification for budgeted items and/or reasons for the film's potential to persuade potential investors in the project.

- Analyze the success of a particular company and reasons for its success or failure.

Writing exercises on paraphrasing, combining clauses, and nominalizations can also be adapted for working on delimiters, especially when combined with group work, peer editing, revision, and focused feedback on delimiters. Nominalization is common in academic writing, particularly when clauses are reduced to complex noun phrases in writing summaries or paraphrases since nominalizations often consist of a noun with a post-modifier, and these nouns are often marked with delimiters (e.g., some of the post-modified noun phrases from the L1 corpus in the Results section above). Intermediate and advanced writing texts tend to have such exercises (e.g., Swales & Feak, 2012), in which clauses or sentences are to be paraphrased and combined as in the example below; these can be done as interactive group tasks as well.

1. Linux has emerged as the dominant operating system on servers. This

shift has been widely recognized in the IT community. →
2. The emergence of Linux as the dominant operating system on servers has been widely recognized in the IT community.

Finally, various discovery activities and interactive activities such as those above can be beneficial for learning when tailored to a specific function, nuance, or contrast expressed by delimiters and bare nouns. Such activities can work in academic learning environments as they engage various cognitive mechanisms for deeper comprehension, learning, noticing, and retention (Bransford, Brown, & Cocking, 1999). These and other activities can be adapted for interactive learning, awareness, and instruction in these particular types of noun phrases.

CONCLUSION

Rather than teaching count versus non-count nouns, delimiter patterns and noun types can be taught instead, going from more physical to more abstract and more complex noun phrases. Non-physical or abstract nouns and less frequent nouns can be problematic and require more attention in teaching. After teaching distinctions like object versus material nouns, more attention is needed for activity and event nouns, familiar versus unfamiliar noun types (such as hypothetical and definitional uses), nouns in prepositional phrases, and post-modified nouns, particularly abstract nouns that are post-modified. Much more research is needed, of course, on all these factors, from approaches like corpus research and classroom learning research, in order to better understand how these factors work in more detail, and how to teach them more effectively.

Essentially, many kinds of tasks can be adapted to practice delimiter–noun phrase patterns, as long as one knows what specific function of delimiter–noun phrases that one wishes to work on. Students can benefit from systematic instruction and awareness-raising with article patterns (Master, 1994, 1995). The linguistic framework used here leads to a helpful classification of noun phrase types and delimiter usage patterns, and by doing so, it leads to a helpful way to characterize some of the L2 delimiter problems. This framework, thus, makes it possible to isolate and identify more specific functions of delimiter patterns for teaching and

to find more appropriate interactive activities for these particular delimiter functions.

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REFERENCES

Baayen, R. H., & Lieber, R. (1996). Word frequency distributions and lexical semantics. *Computers and the Humanities, 30*(4), 281–291.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (1999). *How people learn: Brain, mind, experience, and school.* Washington, DC: National Academy Press.

Brysbaert, M., Warriner, A. B., & Kuperman, V. (2014). Concreteness ratings for 40 thousand generally known English word lemmas. *Behavior Research Methods, 46*(3), 904–911.

Chen, Y. (2002). The problems of university EFL writing in Taiwan. *The Korea TESOL Journal, 5*(1), 59–79.

Cowan, R. (2008). *The teacher's grammar of English.* New York, NY: Cambridge University Press.

Cowan, R., Choi, H. E., & Kim, D. H. (2003). Four questions for error diagnosis and correction in CALL. *CALICO Journal, 20*(3), 451–463.

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly, 34*(2), 213–238.

Epstein, R. (2001). The definite article, accessibility, and the construction of discourse referents. *Cognitive Linguistics, 12*(4), 333–378.

Gardner, D., & Davies, M. (2013). A new academic vocabulary list. *Applied Linguistics, 35*(3), 305–327. doi:10.1093/applin/amt015

Gentner, M. T. (2016). English article use accuracy: Are learners in ASEAN making progress? *ThaiTESOL Journal, 29*(2), 88–110.

Langacker, R. W. (2008). *Cognitive grammar: A basic introduction.* Oxford, UK: Oxford University Press.

Lee, C. (2008). Contrastive (predicate) topic, intonation, and scalar meanings. In C. Lee, M. Gordon, & D. Buring (Eds.), *Topic and focus: Crosslinguistic perspectives on meaning and intonation* (pp. 151–175). Dordrecht, Holland: Springer.

Lee, H. (1997). English article deletion in Korean EFL learners' compositions. *Working Papers in Educational Linguistics, 13*(2), 41–50.

Lee, H. (1999). Variable article use in Korean learners of English. *University of Pennsylvania Working Papers in Linguistics, 6*(2), 35–47.

Lee, H.-Y. (1996). English article use of native Korean speakers. *English Teaching, 51*(1), 163–179.

Lee, K. (2016, July). *Determiner usage: Variation among native speakers and Korean university students.* Paper presented at the KATE (Korean Association of Teachers of English) Conference, Seoul, Korea.

Lee, K. (2017, June). *Teaching determiners: Some cognitive approaches for university EFL learners.* Paper presented at the KATE Conference (Korean Association of Teachers of English), Seoul, Korea.

Liu, D., & Gleason, J. L. (2002). Acquisition of the article by nonnative speakers of English: An analysis of four nongeneric uses. *Studies in Second Language Acquisition, 24*(1), 1–26.

Lyons, J. (1995). *Linguistic semantics: An introduction.* Cambridge, UK: Cambridge University Press.

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

Master, P. (1994). The effect of systematic instruction on learning the English article system. In T. Odlin (Ed.), *Perspectives on Pedagogical Grammar* (pp. 229–252). Oxford, UK: Oxford University Press.

Master, P. (1995). Consciousness raising and article pedagogy. In D. Belcher & G. Braine (Eds.), *Academic Writing in a Second Language: Essays on Research and Pedagogy* (pp. 183–204). Norwood, NJ: Ablex.

Mayer, R. E. (2004). Should there be a three-strikes rule against pure discovery learning? *American Psychologist, 59*(1), 14–19.

Park, S. K. (2008). To *the* or not to *the*: The acquisition of the English article system by Korean speakers. *Purdue Linguistics Association Working Papers, 1*(1), 154–180.

Robertson, D. (2000). Variability in the use of the English article system by

Chinese learners of English. *Second Language Research, 16*(2), 135–172.

Snape, N., García Mayo, M. del P., & Gürel, A. (2009). Spanish, Turkish, Japanese, and Chinese L2 learners' acquisition of generic reference. In M. Bowles, T. Ionin, S. Montru, & A. Tremblay (Eds.), *Proceedings of the 10th Generative Approaches to Second Language Acquisition Conference – GASLA 2009* (pp. 1–8). Somerville, MA: Cascadilla *Proceedings* Project.

Swales, J. M., & Feak, C. B. (2012). *Academic writing for graduate students* (3rd. ed.). Ann Arbor, MI: University of Michigan Press.

Talmy, L. (2000). *Toward a cognitive semantics* (Vol. 2). Cambridge, MA: MIT Press.

Taylor, J. R. (2002). *Cognitive grammar.* Oxford, U.K.: Oxford University Press.

Vendler, Z. (1967). *Linguistics in philosophy.* New York, NY: Cornell University Press.

Yamada, J., & Matsuura, N. (1982). The use of the English article among Japanese students. *RELC Journal, 13*(1), 50–63.

FOOTNOTES

[1] WordSmith: www.lexically.net/wordsmith

[2] The examples are glossed as follows: NC = L2 beginner/intermediate non-credit; UG = L2 undergraduate; Gr = L2 graduate student; L1 = L1 COCA corpus.