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# A PRELIMINARY EXPLORATION OF THE COGNITIVE LINGUISTICS APPROACH TO ENGLISH ARTICLE SYSTEM INSTRUCTION IN THE JAPANESE EFL CLASSROOM

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# A Preliminary Exploration of the Cognitive Linguistics Approach to English Article System Instruction in the Japanese EFL Classroom

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# **Abstract**

It is frequently mentioned that using articles is a notably high barrier for Japanese EFL (English as a Foreign Language) learners to overcome because the English article system (EAS) does not exist in Japanese. Therefore, Japanese EFL students often resort to rote-memorization in learning EAS. Relying on rote-memorization, as often seen in traditional learning/ teaching methods, makes it more challenging to fully grasp purposes of the EAS. Multiple prior studies have attempted to elucidate the mechanism behind the acquisition of English articles, yet many aspects remain unclear. Cognitive Linguistics (CL), which grew out of work done in the 1970s, is a multidisciplinary approach to language study that came into being in the 1980s and views grammar not merely as a set of formal rules but as something closely related to meanings in written contents. A variety of research and experimental efforts have been made to apply this theory in practical teaching environments. Many of these report that applied CL has a high potential to serve as a foundation for new teaching strategies. Therefore, in learning English articles entangled with complicated rules, it is expected that the CL-based instruction makes it easier for learners to understand the meaning behind grammatical structures, contributing to better comprehension of grammatical concepts. This survey attempted to assess the current state of Japanese EFL learners' understanding on English article usage and evaluate their feedback on this newly introduced teaching approach. The research involved 46 university students enrolled in grammar courses at a university in Japan, and the participants were categorized into two levels of proficiency based on CEFR level. First, their understanding of articles was examined with a gap-filling test and then the CL-based teaching method

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was incorporated as part of a class activity. A questionnaire was also administered at different stages of the experiment to investigate first whether the differences in proficiency were connected to the comprehension of articles, then which aspects of articles were hard to understood, whether there were differences in trends based on proficiency, and what they thought of this teaching method. The results showed the group with higher proficiency understood articles better, and the participants seemed to have more difficulty selecting the right article based on the noun phrase type, which varies with the degree of proficiency. Additionally, post-experiment questionnaire results showed that many of them found this teaching method more beneficial and effective than the traditional one.

Keywords: the English article system, Cognitive Linguistics, Japanese EFL learners, grammar instruction

### 1. Introduction

Memorization and choral recitation have been the common technique of learning/teaching English grammar in Japanese schools. Because of the significant differences between the English and Japanese grammatical systems, Japanese EFL (English as a foreign language) learners have a great deal of difficulty learning English grammar, for example, the various grammar rules and many exceptions in the language. Learning an extensive amount of new information by heart when studying a second language (L2) imposes a heavy burden on their faculty of memory, which can in turn result in frustration and demotivation at the acquisition stage of learning. The Second Language Acquisition (SLA) process involves countless errors, some of which are said to be caused by false analogy with a learner's first language (L1). Furthermore, with regard to L1 interference, the complex system of English articles is, without a doubt, one of the most problematic and challenging areas of learning for non-native speakers of English, including Japanese EFL learners whose language, Japanese, itself has no article system. The difficulty seems to be related to various confusing factors involved in judging proper article usage; countability context, noun classes (e.g., proper nouns, abstract nouns, collective nouns), genericness, and so on. The English article system is closely involved with the concepts of definiteness and countability (i.e., noun countability). Meanwhile, the definiteness and plurality of a noun phrase is implicit in Japanese, meaning that it is unnecessary to spell out if a noun phrase is definite or indefinite, or singular or plural. Therefore, Japanese EFL learners struggle to select the appropriate article in each context.

Grammatical knowledge is a crucial component of both comprehension (i.e., input) and production (i.e., output). Without knowing the structure of a language, it is almost impossible to achieve a satisfactory level of verbal communication with others. As rapid and extensive adoption of social media and technologies such as Artificial Intelligence (AI) has been changing the way we communicate around the world, there has been a growing awareness of the importance of fostering Japanese EFL learners' communication skills; the demand has arisen that grammar instruction be reformed, with a greater focus on communication-centered teaching methods rather than memorization of a mere list of grammatical facts. With the purpose of helping learners acquire grammatically correct language and then improving their fluency, SLA researchers and instructors have been exploring a variety of effective and strategic teaching methods that will engage students in Japanese EFL classrooms. This paper describes teaching strategies for teaching the English article system that were effective at the university level in Japan, focusing on the syntactic structure of articles and their corresponding meanings in the framework of Cognitive Linguistics (CL).

# 2. Background of the Study

### 2.1 Definiteness and Countability

In the English language, an article is a determiner that modifies or describes a noun, forming a noun phrase (NP). Articles are categorized into two types: definite (*the*) and indefinite (a, an), based on the notion of definiteness. Definiteness is defined as follows; "If a DP of the form [D NP] is [+definite], then the speaker assumes that the hearer shares the speaker's presupposition of the existence of a unique individual in the set denoted by the NP." English is a language in which definiteness is coded by articles. One function of articles is to specify if the noun is general or specific in its reference, so *the* is used in the context of [+definite] and a(n) in the context of [-definite]. That is, the choice of article depends on if the reference of

the noun is understood. The definite article, *the*, is used to specify something that is already known or has been mentioned before. *The* is used before singular or plural nouns when talking about a specific thing or things. Generally, *a* and *an*, the two indefinite articles, are used when something non-specific is mentioned (I would like an apple, any apple) or something specific but not yet definite is mentioned for the first time (I ate an apple. The apple was good). Table 1, adapted from Goto Butler (2002),<sup>3</sup> itself based on Huebner (1983),<sup>4</sup> shows the types of articles in English classified in detail according to the concept of definiteness, suggesting that NPs are classified by two features of referentiality: specific reference [±SR] and hearer's knowledge [±HK]. Except for idiomatic expressions in Type 5, these two factors create four possible basic NP environments that articulate correct article use.

In determining the appropriate article, types 1, 3, and 4 in Table 1 indicate that it is also crucial to take into consideration another element in the nature of nouns: the concept of countability; different articles are used depending on the countability of the reference. Some nouns refer to things which are treated as sepa-

Table 1: Types of English Articles in NP Environments

| Types      | Articles     | Environments  | Examples  |
|------------|--------------|---|---|
| Type 1     | a(n), the, ø | generics and unspecifiable  |   |
| [-SR, +HK] |              | $[a(n) \text{ [+count] [+sg]}]_{NP}$  | $\underline{A}$ cat likes mice.   |
|            |              | [the [+count] [+sg]]NP  | <u>The</u> whale is a mammal.   |
|            |              | $[\emptyset \text{ [+count] [-sg]]}_{NP} \text{ or } [\emptyset \text{ [-count]]}_{NP}$ | ø Language is a great invention of humankind                                      |
| Type 2     | the          | referential definites   |   |
| [+SR, +HK] |              | [the] $^{\mathbb{N}P}$ Exophora, homophora  | Pass me the pen.  |
|            |              | [the]NP Cataphora   | The idea of coming to the U.S. was  |
|            |              | [the] NP Anaphoric reference  | When I found a red box, it was too late.  |
|            |              |   | <u>The</u> box blew up with a terrific explosion.                                 |
|            |              | [the] NP Connotative reference  | This book did not sell well even though the author was a famous writer.           |
|            |              | [the]NP Extended reference  | I won a million-dollar lottery. <u>The</u> news was quickly spread all over town. |
|            |              | [the] NP Unexplanatory modifiers  | <u>The</u> first person to jimp into the cold water was my brother.               |
|            |              | [the]NP Unique in all contexts  | There are nine planets around the sun.  |
| Type 3     | a(n), ø      | referential indefinites   |   |
| [+SR, -HK] |              | $[a(n) \text{ [+count] [+sg]}]_{NP}$  | I saw <u>a</u> strange man standing at the gate.                                  |
|            |              | [ø [+count] [-sg]]NP or [ø [-count]]NP  | I keep sending <u>ø</u> messages to him.  |
| Type 4     | a(n), ø      | nonreferential  |   |
| [-SR, -HK] |              | $[a(n) \text{ [+count] [+sg]}]_{NP}$  | I'm going to buy <u>a</u> new bike; He used to be                                 |
|            |              |   | <u>a</u> lawyer.  |
|            |              | [ø [+count] [-sg]]NP  | $\underline{\textit{ø}}$ Foreginers would come up with a better                   |
|            |              |   | solution for this matter.   |
| Type 5     | a(n), the, ø | idioms and other conventional uses  |   |
|            |              | [a(n) [idiom or other use]]   | All of $\underline{a}$ sudden, he woke up from his coma.                          |
|            |              | [the [idiom or other use]]  | In the 1960s, there were lots of protests   |
|            |              |   | against the Vietnam War.  |
|            |              | [ø [idiom or other use]]  | He has been thrown out of work, and his   |
|            |              |   | family is now living $\underline{\emptyset}$ hand to mouth.                       |

rate items, which can be called countable nouns. These nouns can be singular or plural. Singular countable nouns always have an article: a(n) or the. Meanwhile, other nouns referring to things that are seen grammatically as a whole or mass because they cannot be separated are called uncountable nouns. These nouns are not used with a(n) nor in the plural. The can be used with both singular and plural nouns, and countable and uncountable nouns. To have a good command of article usage, one must be able to make a clear distinction between what are referred to as countable nouns and uncountable nouns (or mass nouns). Thus, noun countability has been an influential factor affecting English article selection; what makes matters more complicated is that the concept of countability for each noun is not fixed, i.e. there are degrees of countability. Take ham as an example (Petersen, 1988). Ham in I found ham in the refrigerator refers to the meat that has been preserved with salt or smoke. This "ham" could be a tiny slice of meat or a large chunk of meat, which means it has no definite form. Its meaning is described as just material. In contrast, the case of I found a ham in the refrigerator shows that ham means a single unit of the upper part of a pig's leg, suggesting that it has a clear boundary of an individual entity. As such, noun countability is likely to depend on noun phrase environment in English.

# 2.2 Article Use by Japanese EFL Learners

English article usage has been taught as part of the school education in Japan, and Japanese EFL learners learn rules guiding the use of the article system in English, but, in the traditional method, their knowledge is most probably based on rote memorization. Japanese EFL learners are given a list of countable/uncountable nouns and instructed to engage in rote memorization of the list. Such a fixated means of instruction can become the indirect cause of uninformed guesses and misinterpretation, leading to inappropriate usage in output (i.e. speaking and writing).

Prior research reveals that Japanese EFL learners do not use different articles for different situations: there seem to be stages in the process whereby Japanese EFL learners develop understanding of the English article system and proficiency-related factors are involved in these situations.<sup>3,6,7</sup> Harwood (2017)<sup>8</sup> has summarized certain previously reported findings:<sup>9</sup> (1) higher proficiency level learners are likely to show a greater decrease of overuse of zero article; (2) as a whole, the entrenchment of *the* is done earlier than that of a(n); (3) they are able to use a(n) correctly with increasing "interlanguage" levels; and (4) they tend to avoid the use of a(n) until they have certainty of its correct use. Goto Butler (2002)<sup>3</sup> discussed the concept of definiteness (namely, [ $\pm$ SR], [ $\pm$ HK]) in more detail, suggesting that the proper detection of [HK] and noun countability was so difficult to capture that it became a challenging problem even among higher proficiency learners. Furthermore, Takahashi (2013)<sup>10</sup> pointed out that some tendencies demonstrated by Japanese EFL learners in judging noun countability can be categorized into two major types as follows:

- 1. A tendency to exercise a non-rule-based approach for judging English noun countability. This applies to Japanese EFL learners who have memorized collocations on an item-by-item basis.
- 2. A tendency to use rule-based criteria for determining English noun countability. These learners generated rules on article usage. These rules can be divided into four subtypes i.e a tendency to: (a) view noun countability as being fixed; (b) view concrete nouns that you can see and touch (e.g. *car*, *child*) as countable and abstract nouns that you cannot see and touch (e.g. *happiness*, *courage*) as uncountable; (c) view something they cannot specify as uncountable; (d) have a great difficulty in applying the concept of boundaries to abstract nouns.

In fact, Japanese EFL learners make a tremendous number of mistakes in article usage in their production or output. It is generally agreed that detecting and correcting errors is part of the teaching and learning processes, and such grammatical errors are very important in that they highlight their stage in the learning process. Accuracy in the use of English articles differs depending on learners' "interlanguage" levels. Interlanguage, proposed by Larry Selinker (1972), is a type of language system that learners develop in the process of learning a target language. By analyzing their grammatical errors carefully, clarifying the stage in the learning process could potentially result in more effective instruction for article learning, which tends to depend heavily on memorization.

# 2.3 <u>Cognitive Linguistics-Based Instruction</u>

In recent years, research has shown that the Cognitive Linguistics (CL)-based approach to instruction can have a positive effect on Japanese EFL learners' performance. 12 CL, a relatively novel school of linguistics which first began to emerge in the 1970s, claims that language used in talking about a particular phenomenon can reflect the world through a subjective interpretation and general conceptualization (i.e., an individual experience with his/her own cultural background, and so on), not from a purely objective view of that phenomenon: our understanding of categories is rooted in our experiences. Grammatical categories are organized around a prototype, which means the most salient instances of a category and our past experiences can shape our perception of new variations. Within the framework of CL, Construction Grammar is the main approach to grammatical description and theory, which regards the construction as the basic unit of grammar. As illustrated in the following definition, "any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency (Goldberg, 2006, p. 5)." 13 On its view, constructions are learned pairings of form and meaning, including morphemes and words. As for effectiveness of CL-based instruction for the English article system, research has shown mixed results. One of the most advantageous points of the CL approach, however, is that it can help raise student awareness of form-meaning relationships, such as between different uses of a particular term or construction. Therefore, it would be of great potential value to incorporate CL-based approaches into instruction, with a specific emphasis on the correspondence of form and meaning to see if such teaching methods are successful in improving student performance.

Above all, it is critical to give enough recognition to the fact that the English article system should not be presented in an item-by-item fashion and emphasis should be placed on the fact that the use of articles (i.e., whether or not an article is needed and if so, which article to use) in English largely depends on the context. Upon establishing the significance and importance of context, it should be the goal to have learners understand that there are no fixed rules, that syntactic structures have core meanings, which are called prototypes, and that it is necessary in applying the appropriate article to clarify whether something specific or something more general is being referred to. Furthermore, one should convey that syntactic structures each have their own category of meaning based on the notion of definiteness, i.e. that there are three different forms of articles, [the NP], [a/n NP], and [ø NP], each of which has its own different meaning from a CL's point of view. When a syntactic structure is embodied by [the NP], its form carries a meaning of a specific and definite identity: the core meaning of [the NP] is that it refers to something that should be separated from the others and that the hearer should be able to identify its reference in the given context. The form of [a/n NP] means that it refers to a single entity with a clear boundary. [ø NP] has a meaning of a continuous body with no visible form or boundary. Compare the following examples.

- (1) I bought a glass in a shop two weeks ago. The glass was broken yesterday.
- (2) She handed me *a glass*.
- (3) This bowl is made of *glass*.

In (1), when the glass is used, a hearer can identify which glass is being referred to because the word was already mentioned. The reason a glass in the first and second examples is in the form of [a/n NP] is that it is the first reference to the object being presented to the hearer and a glass means any small container for drinks made of glass. On the other hand, glass with the zero article in (3) represents a hard, transparent material with no fixed form factor or clear boundaries. This explanation applies to abstract nouns as in (4) below.

- (4) a. I had a pleasurable experience last summer.
  - b. Experience is the best teacher

The choice between [a/n NP] and  $[\emptyset \text{ NP}]$  depends on whether *experience* is construed as a single entity or not. In (4a), it is shown that *an experience* is something personally undergone and gained through direct observation or participation, whereas in (4b) *experience* refers to the process of getting knowledge or skill

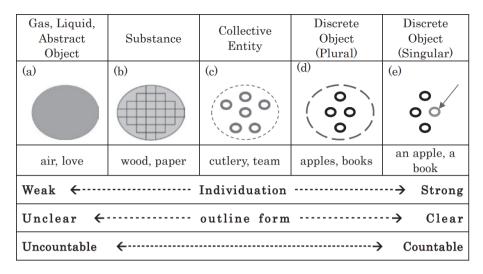


Figure 1. Schematic Summary of Countability (Akamatsu, 2018)

from actual doings, or a concept or idea which cannot be felt through physical senses. The instruction of countability should be coupled with that of definiteness. The less separated and individualized a noun is, the fuzzier the outline of a noun is, the higher possibility of regarding a noun as uncountable, as elaborated in Figure 1. It is suggested that "this concept of discreteness and boundedness, therefore, is considered to be useful in explaining the concepts underlying noun countability (Akamatsu, 2018, p.6)." <sup>12</sup>

After teaching the core meaning of each structure, the next step is to deal with one of the more confusing usages of the, i.e. the "generic" case wherein the is used to say something about all the things referred to by a noun as a whole (cited in Table 1 as "The whale is a mammal"). Confusion arises because the definite article interacts well with the notion of specificity and therefore it is used when the referent of the noun phrase is considered to be specific, such as the sun in There are nine planets around the sun (because there is only one), the highest mountain in Mt. Fuji is the highest mountain in Japan (because the expression with a superlative adjective indicates its uniqueness), and the author in This book did not sell well even though the author was a famous writer (because there is only one in that context: the author which wrote this book). However, Table 1 (above) categorizes generic noun phrases as Type 1, exhibiting two features: [-SR] and [+HK]. Thus, generic noun phrases are by definition non-specific, wherein the definite/indefinite and singular/plural distinction becomes less important. For Japanese speakers, then, and with a greater emphasis on the core meaning of [the NP], it would be a highly effective method to show that while the "generic" definite limits the meaning of a noun (to one thing), that the limitation has two interpretations. Following the explanations of Kuno and Takami (2004), 14 one can describe this as whether the limitation dealt with is a specific element of a given type, or is of the type as a whole. Example (5) from Kuno and Takami (2004) demonstrates the difference:

- (5) a. The summer of last year was very hot.
  - b. In the summer I take a vacation and go to Hawaii.

The summer in (5a) is restricted in meaning by a modifier, of my last year in college, and therefore it is the only and specific summer in contrast to the other summers in the person's life, similar elements of the same type. Meanwhile, the counterpart to the summer in the second sentence is not a different kind of summer: rather adding the definite article indicates that it contrasts with other seasons (spring, fall, and winter): i.e. it represents a type of season. The first example tells which year of summer is specified, whereas the second one tells which season of a year is specified so it entails the meaning "every summer I take a vacation and go to Hawaii". That's why the example in (5b) can be generic in that it refers to the whole class of summers.

This explanation applies to the expressions which Japanese EFL learners tend to memorize as fixed expressions, 'chunks.' Take for example the following sentences are typically encountered by beginners:

(6) a. He plays the guitar well.

### b. He plays *tennis* every Sunday.

Based on their or recollection, they are likely to connect an instrument (e.g., *guitar*, *piano*) with definite articles as in (6a), and connect a sport (e.g., *tennis*, *baseball*) with zero articles as in (6b). In the case of (6a), it never specifies a particular guitar. It refers to the guitar in contrast with the other instruments because an orchestra is made up of dozens of different musical instruments including the guitar. On the other hand, in the second sentence, the sport *tennis* is being referred to as an independent and specific entity (the sport he plays on Sunday), not in relation to other sports. Therefore, sport does not require a definite article.<sup>14</sup>

- (7) a. *The dog* is a faithful animal.
  - b. A dog is a faithful animal.
  - c. Dogs are faithful animals.

Likewise, this kind of explanation would make probably it easier to interpret generic expressions in example (7). In (7a), the meaning of the generic [the NP], the dog, is described in contrast to other animals. Also, it functions as a typical representation of all dogs. Having a shade of abstract meaning in a sense, this expression is not equivalent to Any dog is a faithful animal. As generic noun phrases involving countable nouns can be observed with indefinite and zero article as well as the definite article, examples such as (7b) and (7c) should be shown with detailed explanations for each structure. When [a/n NP] is used in a generic meaning, it presupposes that a certain member taken from its category is intended to represent all members in the same category. Thus, (7b) is very close in meaning to any dog is a faithful animal. Plural noun phrases with zero article in (7c) are construed as a plural form of (7b) so it is identical with many dogs are faithful animals.

Viewed in this way, the grammatical difference in (8)<sup>14</sup> makes sense.

- (8) a. *The tiger* is becoming almost extinct.
  - b. \*A tiger is becoming almost extinct.
  - c. Tigers are becoming almost extinct.

The issue of being on the brink of extinction is a problem for tigers as a whole, and it does not describe any particular individual tiger; therefore, sentence (8b) is grammatically incorrect, while the others are correct <sup>14</sup>

In sum, first and foremost, it is crucial to make it known to students that each form of noun phrase that includes an article has a corresponding meaning, this combination forming a prototype: articles are not just attached to nouns, but articles themselves create meaning categories. Subsequently, the level of understanding should be deepened by incorporating challenging usages demonstrating concepts like genericness into the learning process.

# 3. Methodology

The purpose of this study is to evaluate the present condition of Japanese EFL learners' understanding of the EAS and whether it is effective to teach using CL-based approaches and whether it is effective to teach using CL-based approaches and raise their awareness toward learning. Specifically, the current study addresses the following research questions:

- (1) Is there a correlation between high proficiency and better scores on article-related tests?
- (2) What kinds of problems with articles do learners have, and how are these situated among groups of differing proficiency levels?
- (3) How do students feel about CL-based instruction for learning English articles?

Table 2: Participants' Proficiency Levels

|            | lower intermedia         | te level $(n = 26)$ | higher intermedia       | te level $(n = 20)$ |       |         |
|------------|--------------------------|---------------------|-------------------------|---------------------|-------|---------|
|            | (male = 12, female = 14) |                     | (male = 7, female = 13) |                     | t     | p       |
|            | M                        | SD                  | M                       | SD                  |       |         |
| OQPT       | 31.31                    | 4.77                | 43.45                   | 2.33                | 11.09 | .000*** |
| CEFR level | A2                       | B1                  | В                       | 2                   |       |         |

*Note.* M = Mean, SD = Standard Deviation, \*\*\*p < .001

# 3.1 Participants

This study was conducted as classroom activities of 46 Japanese EFL learners (19 males / 27 females) between the ages of 18 and 21 (mean = 18.6) years old studying at a Japanese university (Table 2). They were non-English majors at the university, and enrolled in an English grammar class led by the author/researcher during the spring of 2021. No participant had stayed longer than one month in any English-speaking country. Prior to the study, each participant was notified that their samples would be kept confidential and examined only for future research, and that no monetary award was granted to any participating student in this survey.

To begin with, with the aim of measuring their general EFL proficiency, the Oxford Quick Placement Test (OQPT)<sup>15</sup> was administered. This test consists of 60 multiple-choices items, none of which directly measure article use in English. It is designed to last 30 minutes and to be used for estimating proficiency levels corresponding to the CEFR (i.e., the Common European Framework) levels.<sup>16</sup> It describes six levels of language proficiency from A1 for beginners, up to C2 for the most advanced learners. In line with the CEFR levels, the participants were divided into two proficiency groups, namely lower intermediate group (i.e., LIG) and higher intermediate group (i.e., HIG) as detailed below.

# 3.2 Materials and Procedure

The survey includes a gap-filling test on English article usage and one questionnaire (see Tables 3 and 4 below). Both surveys were provided in the same document, yet all the participants were instructed to fill the items out sequentially, in line with the current stage in the class. The gap-filling test was taken from a well-established grammar book, *Grammar in Use* (Oxford). Although this book had been used in class at the time of this experiment, the section regarding article usage was not included in the curriculum frame-

Table 3: A Gap-filling Test

| Put in | a/an or the where necessary. Leave the space empty if the sentence is already correct.                        |
|--------|---|
| 1      | I don't usually like staying at [(a) ] hotels, but last summer we spent two weeks at [(b) ] very nice hotel   |
|        | by [(c) ] sea.  |
| 2      | If you go to live in [(a) ] foreign country, you should try and learn [(b) ] language.                        |
| 3      | Helen is [(a) ] economist. She lives in [(b) ] United States and works for [(c) ] investment company.         |
| 4      | I love [(a) ] sports, especially [(b) ] tennis. I play two or three times [(c) ] week if I can, but           |
|        | I'm not [(d) ] very good player.  |
| 5      | I won't be home for [(a) ] dinner this evening. I'm meeting some friends after [(b) ] work and we're going to |
|        | [(c) ] cinema.  |
| 6      | When [(a) ] unemployment is high, it's difficult for [(b) ] people to find [(c) ] work.                       |
|        | It's [(d) ] big problem.  |
| 7      | There was [(a) ] accident as I was going [(b) ] home last night. Two people were taken to [(c) ] hospital.    |
|        | I think [(d) ] most accidents are caused by [(e) ] people driving too fast.                                   |
| 8      | A: What's [(a) ] name of [(b) ] hotel where you're staying?   |
|        | B: [(c) ] Ambassador. It's in [(d) ] Queen Street in [(e) ] city centre. It's near [(f) ] station.            |
| 9      | I have two brothers. [(a) ] older one is training to be [(b) ] pilot. [(c) ] younger one is still at          |
|        | [(d) ] school. When he leaves [(e) ] school, he wants to go to [(f) ] university to study [(g) ] law.         |

Table 4: A Questionnaire

| Items   | Strongly disagree | Disagree      | Neutral | Agree | Strongly agree |  |
|---|-------------------|---------------|---------|-------|----------------|--|
| Before Instruction (Please ensure you answer the questions in this sectio                         | n ahead of t      | he instructio | n. )    |       |                |  |
| 1. I found the task difficult.  |                   |               |         |       |                |  |
| 2. I felt completely unsure while answering every single question.                                |                   |               |         |       |                |  |
| 3. My responses were grounded in random guesses, not logical inference.                           |                   |               |         |       |                |  |
| After Instruction (Please ensure you answer the questions in this section after the instruction.) |                   |               |         |       |                |  |
| Compared to the conventional teaching method,   |                   |               |         |       |                |  |
| 4. I found this instruction easier to understand.   |                   |               |         |       |                |  |
| 5. I found this instruction more helpful for my learning.   |                   |               |         |       |                |  |
| 6. I found this instruction more effective in improving my motivation.                            |                   |               |         |       |                |  |
| At the End (Please ensure you answer the questions in this section at the                         | very end.)        |               |         |       |                |  |
| 7. The instruction actually led to an improvement in my accuracy.                                 |                   |               |         |       |                |  |

work for the semester. The test, which consists of 37 items, is designed to find out how much knowledge the participants have about English article usage. For each question, participants were asked to choose one appropriate article from four options, *a*, *an*, *the*, and Ø (the so-called zero article). The questionnaire, written in Japanese, was originally devised with the purpose of investigating the participants' comprehension of the EAS and their perceptions of using the CL-based approach for teaching English article usage. It was made up of three sections, each of which was to be completed at the corresponding time: "Before Instruction", "After Instruction", and "At the End." All the questions required providing a rating from 1 (strongly disagree) to 5 (strongly agree) on a 5-point Likert scale.

The research was carried out over a two-week period. In the first week, after all the participants had taken the OQPT, they were asked to take the gap-filling test within 15 minutes with no reference to any textbook or dictionary. The questionnaire was included at the bottom of the same paper, but they were cautioned to refrain from answering the questions until directed. Following the completion of the gap-filling test, they were instructed to answer the first set of questions (items 1-3), in the "Before Instruction" ection of the questionnaire. Finally, the completed forms were collected. The next week, the gap-filling test was returned to each participant without having been scored, and the CL-based method was incorporated as EAS instruction, as detailed in 2.3. This instruction did not include direct discussion of the answers or explanations for the questions worked on the previous week. After the teaching had continued for 30 minutes, they were given 10 minutes to self-correct the gap-filling test they had taken the week before. Subsequently, all participants were asked to respond to the second set of questions (items 4-6), in the section "After Instruction." Eventually, the author/researcher revealed all the answers. Afterward, the participants proceeded to answer the last question (item 7), in the "At the End" section.

# 4. Data Analysis and Discussion

To find answers to the research questions of this study, the data were collected both quantitatively and qualitatively. The quantitative data were analyzed using the statistical computation and graphics software R, version 4.4.1. The results of the gap-filling test for the first research question were quantitatively analyzed. One point was given for each correct answer, and the maximum score is 37. Table 5 shows the results of an independent t-test that compares two groups (LIG/HIG), where the difference in scores on the

Table 5: Results of a Gap-filling Test

|     | (male = 12, f | $f_{\text{emale}} = 14$ | ( 1 7 0       |              |       |         |
|-----|---------------|-------------------------|---------------|--------------|-------|---------|
|     | (             | (Cinaic – 14)           | (male = /, 1) | Semale = 13) | t     | p       |
|     | M             | SD                      | M             | SD           |       |         |
| GFT | 24.31         | 3.62                    | 29.85         | 2.94         | -5.59 | .000*** |

*Note.* GFT = gap-filling test, M = Mean, SD = Standard Deviation, \*\*\*p < .001

Table 6: Accuracy Rate on the Gap-filling Test

| Table |    | U. A | ccurac | y IXai | COII | uic C |
|-------|----|------|--------|--------|------|-------|
| Ite   | ms | G    | AR     | ø      | a/n  | the   |
|       |    | LIG  | 76.92% | 20     | 0    | 6     |
|       | a  | HIG  | 90.00% | 18     | 0    | 2     |
| 1     | b  | LIG  | 73.08% | 1      | 19   | 6     |
| 1     | b  | HIG  | 85.00% | 0      | 17   | 3     |
|       |    | LIG  | 57.69% | 8      | 3    | 15    |
|       | С  | HIG  | 70.00% | 4      | 2    | 14    |
|       |    | LIG  | 61.54% | 5      | 16   | 5     |
| 2     | a  | HIG  | 75.00% | 2      | 15   | 3     |
| 2     | b  | LIG  | 50.00% | 5      | 8    | 13    |
|       |    | HIG  | 65.00% | 1      | 6    | 13    |
|       | a  | LIG  | 61.54% | 4      | 16   | 6     |
|       |    | HIG  | 75.00% | 1      | 15   | 4     |
| 3     | b  | LIG  | 73.08% | 7      | 1    | 16    |
| 3     |    | HIG  | 95.00% | 1      | 0    | 19    |
|       | с  | LIG  | 65.38% | 3      | 17   | 6     |
|       |    | HIG  | 85.00% | 0      | 17   | 3     |
|       |    | LIG  | 80.77% | 21     | 0    | 5     |
|       | a  | HIG  | 95.00% | 19     | 0    | 7     |
|       | b  | LIG  | 92.31% | 24     | 0    | 1     |
| 4     | В  | HIG  | 85.00% | 17     | 0    | 3     |
| 4     |    | LIG  | 76.92% | 2      | 20   | 4     |
|       | С  | HIG  | 85.00% | 1      | 17   | 2     |
|       | a  | LIG  | 69.23% | 2      | 18   | 6     |
|       | d  | HIG  | 95.00% | 0      | 19   | 1     |

| Ite | ms | G   | AR     | ø  | a/n | the |
|-----|----|-----|--------|----|-----|-----|
|     |    | LIG | 65.38% | 17 | 3   | 6   |
|     | a  | HIG | 80.00% | 16 | 1   | 3   |
| 5   | b  | LIG | 42.31% | 11 | 5   | 10  |
| 3   | U  | HIG | 70.00% | 14 | 2   | 4   |
|     | _  | LIG | 69.23% | 6  | 2   | 18  |
|     | С  | HIG | 85.00% | 2  | 1   | 17  |
|     |    | LIG | 46.15% | 12 | 4   | 12  |
|     | a  | HIG | 65.00% | 13 | 1   | 6   |
|     | b  | LIG | 69.23% | 18 | 2   | 6   |
| 6   |    | HIG | 85.00% | 17 | 0   | 3   |
| 6   | С  | LIG | 23.08% | 6  | 9   | 11  |
|     |    | HIG | 55.00% | 11 | 2   | 7   |
|     | d  | LIG | 50.00% | 4  | 13  | 9   |
|     | a  | HIG | 85.00% | 0  | 17  | 3   |
|     |    | LIG | 61.54% | 6  | 16  | 4   |
|     | a  | HIG | 90.00% | 1  | 18  | 1   |
|     | b  | LIG | 84.62% | 22 | 0   | 4   |
|     |    | HIG | 95.00% | 19 | 0   | 1   |
| 7   |    | LIG | 34.62% | 10 | 7   | 9   |
| '   | С  | HIG | 65.00% | 5  | 2   | 13  |
|     | d  | LIG | 84.62% | 22 | 1   | 7   |
|     | u  | HIG | 85.00% | 17 | 0   | 3   |
|     |    | LIG | 61.54% | 16 | 0   | 10  |
|     | e  | HIG | 85.00% | 17 | 0   | 3   |

| Ite | ms | G   | AR     | ø  | a/n | the |
|-----|----|-----|--------|----|-----|-----|
|     | _  | LIG | 65.38% | 5  | 4   | 17  |
|     | a  | HIG | 70.00% | 1  | 5   | 14  |
|     | b  | LIG | 53.85% | 8  | 4   | 14  |
|     | В  | HIG | 70.00% | 2  | 4   | 14  |
|     |    | LIG | 50.00% | 13 | 0   | 13  |
| 8   | С  | HIG | 60.00% | 8  | 0   | 12  |
| 0   | d  | LIG | 50.00% | 13 | 0   | 13  |
|     | a  | HIG | 65.00% | 13 | 0   | 3   |
|     | _  | LIG | 57.69% | 3  | 9   | 14  |
|     | e  | HIG | 80.00% | 0  | 5   | 16  |
|     | f  | LIG | 46.15% | 10 | 4   | 12  |
|     |    | HIG | 85.00% | 1  | 3   | 17  |
|     | 9  | LIG | 76.92% | 5  | 1   | 20  |
|     | a  | HIG | 95.00% | 1  | 0   | 19  |
|     | b  | LIG | 76.92% | 4  | 20  | 2   |
|     |    | HIG | 85.00% | 1  | 17  | 2   |
|     | c  | LIG | 80.77% | 5  | 0   | 21  |
|     |    | HIG | 90.00% | 2  | 0   | 18  |
| 9   | d  | LIG | 84.62% | 22 | 2   | 2   |
| 9   | u  | HIG | 90.00% | 18 | 1   | 1   |
|     |    | LIG | 76.92% | 20 | 1   | 5   |
|     | e  | HIG | 90.00% | 18 | 0   | 2   |
|     | f  | LIG | 92.31% | 24 | 0   | 2   |
|     | 1  | HIG | 90.00% | 18 | 0   | 2   |
|     | ~  | LIG | 88.46% | 23 | 1   | 2   |
|     | g  | HIG | 70.00% | 14 | 1   | 5   |

*Note.* The gray-shaded areas in the table mark the correct answers for each item. gap-filling test was significant between these two groups (t (44) =  $\neg 5.59$ , p = .00).

For the article-related test, the results show that the high proficiency group performed better as well, but does not provide detailed information on the second research question: these results did not show a tendency for a dependency on proficiency level as to which errors occurred. Closer observation could provide clues to understanding the language learning process.

Table 6 depicts the accuracy rates on each item in the gap-filling test along with the distributions of the correct and incorrect answers, according to proficiency level. Each question was brief but included a particular context. The task was to select the correct option by taking the context into account. The lower proficiency group particularly struggled with items 6 and 8. For item 6, the difficulty seemed to lie in how to interpret the two abstract nouns (i.e., *employment*, *work*). As a previous study<sup>12</sup> indicates, when abstract nouns are used, uncertainty about which article to choose can lead to low accuracy rates: understanding the boundary that should distinguish it from others becomes especially difficult when abstract nouns are in play. This tendency is particularly noticeable in the lower proficiency group. Item 8 presented many challenges that assessed comprehension of definite article usage. The high level of accuracy in (8a), (8b), (8e), and (8f) suggests that more advanced learners are more consistent in using the definite article when it can be inferred from the context, even if it is not explicitly stated. Regardless of proficiency level, the participants were most likely confused by examples that involved proper nouns such as hotel names in (8c) and street names in (8d). Names of hotels use definite articles, whereas names of streets usually do not include articles. Proper nouns already indicate a specific entity, so they typically do not require articles. This explanation holds true in the example of street names like *Queen Street*. Then, why is the definite article used with hotel names like the Ambassador despite them being proper nouns? It might be possible to better explain the variations observed in this context henceforth by using the CL teaching method. As mentioned above, the core meaning of [the NP] is something that should be separated from the others and a hearer can identify its reference in each context. Hotels are subjects of comparison with other hotels concerning their looks, prices, and locations, but streets, primarily meant for passing through, are rarely discussed in contrast to other streets. 3,5,6,10,12 Thus, it can be stressed that the definite article serves to differentiate and ac-

Table 7: Results of the Questionnaire

| T4      | LIG         |            | n (%)       |             | HIG         |             | n (%)      |             |
|---------|-------------|------------|-------------|-------------|-------------|-------------|------------|-------------|
| Items — | M (SD)      | Disagree   | Neutral     | Agree       | M (SD)      | Disagree    | Neutral    | Agree       |
| 1       | 3.77 (1.12) | 4 (15.38%) | 5 (19.23%)  | 17 (65.38%) | 2.55 (1.02) | 10 (50.00%) | 7 (35.00%) | 3 (15.00%)  |
| 2       | 3.69 (1.10) | 3 (11.54%) | 9 (34.61%)  | 14 (53.85%) | 3.15 (0.79) | 5 (25.00%)  | 7 (35.00%) | 8 (40.00%)  |
| 3       | 3.96 (0.81) | 1 (3.85%)  | 6 (23.08%)  | 19 (73.08%) | 3.70 (0.95) | 3 (15.00%)  | 4 (20.00%) | 13 (65.00%) |
| 4       | 2.96 (0.76) | 7 (26.92%) | 14 (53.85%) | 5 (19.23%)  | 3.95 (0.80) | 1 (5.00%)   | 4 (20.00%) | 15 (75.00%) |
| 5       | 3.46 (0.84) | 4 (15.38%) | 8 (30.77%)  | 14 (53.84%) | 3.70 (0.71) | 1 (5.00%)   | 6 (30.00%) | 13 (65.00%) |
| 6       | 3.35 (0.87) | 5 (19.23%) | 9 (34.61%)  | 12 (46.15%) | 3.60 (0.80) | 2 (10.00%)  | 6 (30.00%) | 12 (60.00%) |
| 7       | 3.50 (1.05) | 5 (19.23%) | 6 (23.08%)  | 15 (57.69%) | 3.65 (0.65) | 1 (5.00%)   | 6 (30.00%) | 13 (65.00%) |

centuate noun phrases from others. While there are numerous issues to be scrutinized in the choice of articles for proper nouns, it is feasible to teach that articles themselves create meaning categories, rather than just behave as adjuncts to noun phrases.

On the other hand, the high correctness rate for items 4 and 9 was observed across all proficiency levels, probably due to rote memorization based on fixed phrases. The words *sports* or *tennis* in item 4, for instance, are usually observed without articles,  $[\emptyset]$  NP] so they tend to be processed as such. Additionally, the high success rate for (4c) shows that the use of a/n to indicate "per" for things like prices, rates, and speeds is a kind of input they often encountered. The expressions like *at school*, *leave school*, and *go to university* in (9d), (9e), and (9f) are likely to have been easily selected correctly because they are memorized in the same way as chunks like verb phrases or prepositional phrases are. While it was anticipated that learners would connect the superlative with the definite article (e.g., *the best*), it was surprising that they accurately associated the comparative with the definite article, as in (9a) and (9c). It is possible that many learners remember expressions that form units with indefinite pronouns and noun phrases such as *the older one* in (9a). Further examination of the use of articles in idioms, as noted as Type 5 in Table 1 above, will help us understand which expressions are recognized as idioms, as well as their retention rates, thus providing clearer insights into the learners' stages of learning.

Regarding the results from the questionnaire, responses on the Likert scale were assigned numerical values, showing varying levels of agreement. Once the total scores for each item were calculated, they were converted into percentages. The responses marked as "Strongly Agree" and "Agree" were combined to represent the level of agreement. Similarly, the "Strongly Disagree" and "Disagree" responses were aggregated to indicate the level of disagreement. Table 7 above summarizes the survey responses based on proficiency levels.

When examining the pre-instruction survey items (items 2 and 3), many scored above 3 on a 5-point Likert scale, showing that the participants were not confident in their test answers (LIG: mean = 3.69, HIG: mean = 3.15), and often relied on rote memorization (LIG: mean = 3.96, HIG: mean = 3.70). The post-instruction survey items (items 5 and 6), which relate to the third research question, were mostly marked 3 or higher, indicating that the teaching method was viewed somewhat positively and favorably. Finally, the results on item 7 revealed that, despite being self-assessed, many of the participants were able to correct their answers using this teaching method when reviewing their responses after instruction (LIG: mean = 3.50, HIG: mean = 3.65). Focusing on proficiency levels, one significant finding from the survey is that the perceived difficulty of the test for item 1 (LIG: mean = 3.77, HIG: mean = 2.55) and the clarity of the instructional methods for item 4 (LIG: mean = 2.96, HIG: mean = 3.95) differ across proficiency groups. The fact that the lower proficiency group felt the test was more difficult can be linked to their actual test performance. Nonetheless, attention should be paid to the observation that the lower proficiency group finds the CL-based methods less clear than the higher proficiency group. Implementing such teaching methods may require a certain level of proficiency and understanding of the EAS. The stage of learning at which to implement these instructional methods needs to be carefully evaluated.

# 1. Concluding Remarks: Limitations and Pedagogical Implications

Japanese EFL learners find it difficult to understand and apply the EAS. For example, the difference between "a cat" and "the cat" is clearly marked in English, whereas in Japanese, context is used to determine whether it is "a cat" or "the cat." It is well established that grasping the use of articles is fairly chal-

lenging for Japanese EFL learners and the significance of metalinguistic explicit instruction is evident in actual EFL classrooms. Due to the complexity of the EAS, which is affected by numerous factors, this experiment is also limited in scope and can be seen as part of the preparatory phase of a full study; therefore, the research design per se still has areas that need refinement. As to the limitations of this survey, it should be noted that the number of participants was small; only two proficiencies levels were taken into consideration; and the gap-filing test included a limited number of items. Above all, the reliability of the tests carried out in this study should be carefully evaluated and revised as a future topic. Although numerous challenges remain to be scrutinized moving forward, the results attained in this research have potentially revealed clues with pedagogical implications and indications for future research.

The results of the gap-filling test indicated that the high proficiency group had a better understanding of English articles. It also revealed that learners face difficulties in choosing the correct articles for various noun types, specifically proper nouns and abstract nouns. Proper nouns, in particular, had a low accuracy. rate even among learners with higher proficiencies. This suggests the importance of instructing with specific explanations tailored to the noun types, as well as the notions of definiteness and countability. Additionally, it has been observed that processing in the form of chunks (e.g., *go to university*) often leads to selecting correct answers, indicating that frequently used idiomatic expressions are well-ingrained as phrases. Viewed from the opposite perspective, there might be a tendency to easily attach articles to noun phrases simply because they are idiomatic expressions. The guidance needs to be thoroughly disseminated in Japanese EFL classrooms: articles are not inherently tied to specific noun phrases or fixed expressions; the context is what determines their appropriate use.

For this survey, the participants compared the CL-based method to the traditional memorization-focused approach through a questionnaire. Although there were many positive responses, an issue that requires consideration has been brought to light by the survey results after the experiment, namely that there were notable differences in the evaluation scores for the question rating the clarity of the instruction between the low proficiency group and the high proficiency group. This suggests the need to consider different teaching methods and timing of the instruction, based on proficiency levels. For the low proficiency group, since their understanding of articles may not be well-established, it is crucial to avoid jumping straight into theory. Instead, providing specific examples, assigning practical tasks, encouraging peer discussion, and actively involving them in the learning process can help gauge their understanding and determine the appropriate timing for introducing theoretical concepts.

Last but not least, it should be noted that this paper does not mention the substantial differences between US and UK English, which can also be a source of confusion. There are a few notable exceptions, like "The Beeches" in Salisbury, UK (that's a street), the Bowery, a famous street in NY, and hotels named after a person, like "Brown's (Hotel)" (also UK). High Street is the most common street name in UK (for historical reasons) and is often used conversationally with the article "I'll meet you at the High Street". While the explanation given for the difference between hotels and streets seems plausible, further investigation is in order. Other factors may be at play, such as history, origin, or customs. This remains to be addressed in future studies.

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