1991

Analysis of English articles used by Japanese students

Noriko Iwasaki
Portland State University

AN ABSTRACT OF THE THESIS OF Noriko Iwasaki for the Master of Arts in TESOL presented November 8, in 1991.

Title: Analysis of English Articles Used by Japanese Students

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

[redacted]

Marjorie S. Terdal, Chair

[redacted]

Thomas G. Dieterich

[redacted]

Suwako Watanabe

[redacted]

Ma Ji Rhee

English articles are perhaps the most difficult grammatical items for Japanese students to master. However, because these are among the most frequently occurring grammatical items in English, Japanese students must concern themselves with them.

Some researchers (e.g., Brender, 1989; Petersen, 1988 & 1990) emphasize the importance of articles in conveying "meaning" in communication. Much of the learners' difficulty in acquisition of the English article system lies in the complex interaction of syntactic rules, semantics, and pragmatics, areas that tend to be inadequately addressed in English language textbooks and classroom instruction.

In order to develop a more effective approach in teaching articles that will help Japanese students to properly learn their usage, it is necessary to discern those aspects of article usage which might present particular difficulties to Japanese students. This study examines various aspects of the use of English articles among Japanese students, and attempts to answer research questions regarding the following:

1. Systematicity of article use among Japanese students.
2. Accuracy of article use.
3. Accuracy of use of different articles, *the, a, Ø* (no use of articles) and *Ø+s* (no use of articles before plural nouns).
4. Syntactic accuracy and semantic/pragmatic appropriateness.
5. Relationship between article use and modification of noun phrases.

To examine these questions, forty-eight writing samples were collected from Japanese students studying in the United States, and noun phrases were extracted from the the samples for analysis. The analysis focused principally on types of semantic contexts in which articles were used, and on the structures of modifiers contained in the noun phrases.

It was found that article use among Japanese students was not arbitrary, and some tendencies were observable. Accuracy of article use among the total subject pool was 81.5%, the syntactic accuracy rate and the semantic/pragmatic accuracy rate being almost the same. The difficulty order of the articles in terms of the percentages of articles used correctly was *Ø* > *a/an* > *the* > *Ø+s*, and in terms of the suppliance in obligatory contexts, *a/an* > *the* > *Ø=Ø+s*. Complex structures of modifiers in the noun phrases were found to present great difficulty.

It is speculated that a primary source of difficulty may lie in the nature of English instruction and textbooks. This thesis briefly examines some textbooks, revealing an emphasis on "form," or syntactic rules, and neglect of "meaning," or semantic/pragmatic functions. Owing to the non-existence of articles in Japanese, their semantic and pragmatic properties such as "specificity," "definiteness," and "plurality" are not verbally manifested in that language, and are not consciously recognized by Japanese students. Yet, English language textbooks and instruction generally fail to adequately deal with these aspects of meaning. As a result, Japanese students encounter significant difficulty, and require contextualized classroom instruction of articles.

ANALYSIS OF ENGLISH ARTICLES USED BY JAPANESE STUDENTS

by

NORIKO IWASAKI

A thesis submitted in partial fulfillment
of the requirements for the degree of

MASTER OF ARTS
in
TESOL

Portland State University
1991

TO THE OFFICE OF GRADUATE STUDIES:

The members of the Committee approve the thesis of Noriko Iwasaki presented November 8, 1991.

[redacted]

Marjorie Terdal, Chair

[redacted]

Thomas Dieterich

[redacted]

Suwako Watanabe

[redacted]

Ma Ji Rhee

APPROVED:

[redacted]

James R. Nattinger, Chair, Department of Applied Linguistics

[redacted]

C. William Savery, Vice Provost for Graduate Studies and Research

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

FIGURE PAGE

CHAPTER I

INTRODUCTION

This is a cross-sectional study which examines use of English articles among Japanese students in their writing. Four articles are examined in this study, namely, *the* (the definite article), *a/an* (the indefinite article), *Ø+s* article (no use of articles before plural forms of nouns) and *Ø* (no use of articles before singular nouns or mass nouns). Use of the four articles is examined in terms of syntactic rules and the semantic/pragmatic functions of articles in order to determine problematic aspects of article usage for Japanese students. Causes of difficulties are speculated upon, based on the results of the analysis, and pedagogical implications are discussed.

BACKGROUND

The Japanese student's reaction to English articles is very often disgust and frustration. Even after spending years studying English, most students cannot overcome the difficulty of the article system. It is often pointed out that although many Japanese students are not efficient in spoken communication, they "know" grammatical rules fairly well and show their knowledge in grammatical tests or in writing (See for example, Oda, 1990). Their "knowledge" does not seem to help them use articles successfully. The Japanese students

might not have learned about articles or what they have learned about articles does not work in actually using them.

Although articles are regarded as the most difficult items for Japanese students, they are tremendously important to master, since they are among the most frequently occurring grammatical items in English, and also because they convey meaning in communication (see for example, Brender, 1989). Because of the frequency of article use, many Japanese students, from the beginning level to the advanced level, are concerned with how to overcome the difficulty. Some researchers consider errors in articles as "local errors" which do not affect communication (Tomiyama, 1980), but many other researchers note the importance of articles in conveying meaning (see for example, Petersen 1988 & 1990; Koizumi, 1989).

The difficulty of articles for Japanese students is generally attributed to non-existence of formal equivalents of articles in Japanese language and to the complexity of article usage. Very few studies have been conducted to determine precisely the sources of difficulties and problematic aspects of article usage.

One Japanese student at Portland State University has said, "Teachers correct articles I use, and I never know why." He had been taught to use the definite article to refer to something "specific," and always followed the rule, but was often corrected. For example, when referring to the high school he attended, he used *the* because it was a "particular" high school, but was corrected. The article he should have used depends on the context. It could have been "I went to Ø high school," "I attended *a* large public high school," or "*The* high

school I attended was..." The actual rules of article usage seem to have been simplified by the student.

As a Japanese speaker who has been studying English myself, I share his concern. I was not sure what teachers in Japan meant when they said that the "definite" article was required when the referent was "specific." When I came to the United States, and studied more about English grammar, I realized that I knew very little about article usage. I blamed the insufficient or inadequate instruction I received, not the complexity of the usage.

Pica (1983) points out that grammar books for students studying English as a Second Language (ESL) deal with article usage at the sentence-level, but not the discourse-level, and that the way ESL students use articles may reflect the grammar in textbooks. She speculates that students use articles correctly at the sentence-level, but inappropriately in contexts. This may be the case with Japanese students as well.

Japanese students may neglect English articles due to the complexity of the rules, or they may attempt to use articles according to the rules they know and the hypotheses they have made based on what they have learned. If the latter is more likely to be the case, the difficulty of English articles may be caused by an inadequate description of grammar in textbooks and/or inadequate instruction in class.

In order to determine whether the Japanese student's use of articles reflects the way English articles are taught, their article use is analyzed and compared with explanations and grammatical

descriptions in textbooks and grammar books. If in fact the students' use of articles reflects inadequate instruction, more adequate instruction should help them understand article usage, and in effect facilitate more accurate and appropriate use of articles.

The role of formal instruction in second language acquisition is controversial, but many researchers support an interface position, i.e., that formal instruction can facilitate acquisition of a second language (L2). Seliger (1979) suggests that conscious rules facilitate acquisition and make the hypothesis-testing process and the internalization of rules more efficient.

For the above reasons, and to develop a more effective approach, the pedagogical approach to English articles should be reconsidered. In order to do so, it is necessary to examine article use among Japanese students thoroughly, and to discern the problems Japanese students have, i.e., to discern between what Japanese students can do and what they cannot do in article use.

STATEMENT OF RESEARCH QUESTIONS

Some people suspect that Japanese students use articles almost randomly, and this may be why Yamada and Matsuura (1982), in their study, focussed their research question on the systematicity of article use among Japanese students. They found that their subjects' use of articles was rather systematic. If Japanese students' use of articles is random, precise examinations of article use may be invalid. In order to determine the validity, the systematicity of article use is

questioned again in this study. To see if Japanese students indeed have difficulty in using articles, the accuracy rate is questioned. The focus of the study is to determine what aspects of article usage present more difficulty, i.e., whether the syntactic rules present more difficulty than the semantic/pragmatic functions of articles or the other way around. In addition, the relationship between article use and the complexity of noun phrase structures is examined. These goals have been encapsulated in the following set of research questions:

I. Is the use of articles by Japanese students systematic?

II. How accurately do Japanese students use articles? In other words, what is the proportion of correct use to total use of articles?

III. With which article do Japanese students have the most difficulty, *a/an*, *the*, *Ø* or *Ø+s*? In other words, what are the accuracy rates of the respective articles in terms of (1) percentage of articles correctly used by the subjects, and (2) suppliance of articles in obligatory contexts (contexts which require *a/an*, *the*, *Ø* and *Ø+s* respectively).

IV. Do Japanese students have more difficulty in manipulating the semantic/pragmatic functions of articles, or in observing the syntactic rules of articles? In other words, what are the rates of semantic/pragmatic accuracy while ignoring syntactic accuracy, and of syntactic accuracy while ignoring semantic/pragmatic appropriateness?

V. In using articles, do nouns modified by other words or phrases present more difficulty than nouns without modifiers?

KEY DEFINITIONS

Two articles, the indefinite article *a/an* and the definite article *the* are generally regarded as "articles," but two more articles, namely, *Ø* and *Ø+s* are also examined in this study. The zero article (*Ø*), i.e., no use of articles before nouns, is included in most recent studies (see for example, Master, 1987, Parrish, 1987, Thomas 1989), but the studies included only one category of *Ø* no matter what kind or what form of nouns follow the article. In the present study the zero article is further divided into *Ø* before plural nouns (*Ø+s*) and Ø before mass or singular nouns (*Ø*).

Terms such as "generic," "specific," and "definite" are to be defined precisely in this study. Following the classification of Bickerton (1981), "generic" nouns are noun phrases (NP) in subject positions, which refer to the class without specific reference. For example, "tiger" in (1) below is generic whereas "tiger" in (2) and (3) are not.

(1) Tigers are dangerous animals.

(2) I am afraid of tigers.

(3) A tiger was sleeping in the cage.

Though "tigers" in (2) may refer to the whole class of "tiger," it is not regarded as "generic" reference because it is in a predicate position. Instead, the noun "tigers" in (2) is regarded as "non-specific (non-referential) indefinite" in this study. "Specific" nouns are nouns in

subject positions and in predicate positions, which have particular referents such as "tiger" in (3). "Specific referents" can be "definite" when they are assumed to be known by the hearer as in (4).

(4) The tiger we saw in the zoo did not look so frightening.

Thus, the terms "definite" and "specific" are used distinctively in this study following Bickerton's definition and classification.

Bickerton (1981) classified nouns into four semantic types using the two semantic features of articles "specific reference" and "hearer knowledge." The four types are: "generics" ([-Specific Reference (SR), +Hearer Knowledge(HK)]) which does not have specific reference, but the class is assumed to be known by the hearer, "referential indefinite" ([+SR -HK]) which has specific reference assumed to be unknown by the hearer, "non-referential indefinite" ([-SR -HK]) which does not have specific reference, and "definite" ([+SR +HK]) which has specific reference assumed to be known by the hearer. Thus, "tiger" in (1) is "generics," "tiger" in (2) is non-referential indefinite, "tiger" in (3) is "referential indefinite," and "tiger" in (4) is "definite."

CHAPTER II

REVIEW OF RELATED LITERATURE

To establish a foundation for this study, related literature is reviewed. First, the treatment of articles in linguistic research is reviewed to draw a clear picture of articles. Secondly, studies on acquisition of articles in first (L1) and second (L2) languages are reviewed. The special focus is on the studies examining Japanese students' acquisition of articles. Very recent literature dealing specifically with the problems of Japanese students is introduced. The role of instruction in teaching grammar is briefly reviewed, and the most recent approaches in teaching articles are summarized.

WHAT ARE ARTICLES?

From a Syntactic Point of View

Articles are a type of determiner listed along with other determiners in Bloomfield (1935, quoted in Radford 1988); demonstratives (*this/that/these/those*), interrogatives such as *which* and *what*, quantifiers such as *every, each, any*, etc., and possessives like *my, your* and *his*. The category, "determiner" is justified by its distribution. It is the only class of words which always occur in the position marked ___ in a sentence such as "He wrote ___ other work(s)" (Radford, 1988).

Although *the* and *a* are the only articles dealt with in some grammatical descriptions, the zero-form of article is not ignored. Christopherson (1939) lists three forms of articles, *a*-form, *the*-form and zero-form, and he describes how the usage of the three forms is related to the types of nouns; namely, continuate-word (mass noun or uncountable noun), unit-word (countable nouns) and the plural. It is noteworthy that he points out that "unit-words and continuate-words are not absolute groups" and that "the transition of a word from one group to the other is an extremely common phenomenon" (p. 27).

The distinction between uncountable nouns and countable nouns plays a decisive role in article usage. Celce-Murcia and Larsen-Freeman (1983) summarize article usage in relation to the uncountable/countable distinction as follows:

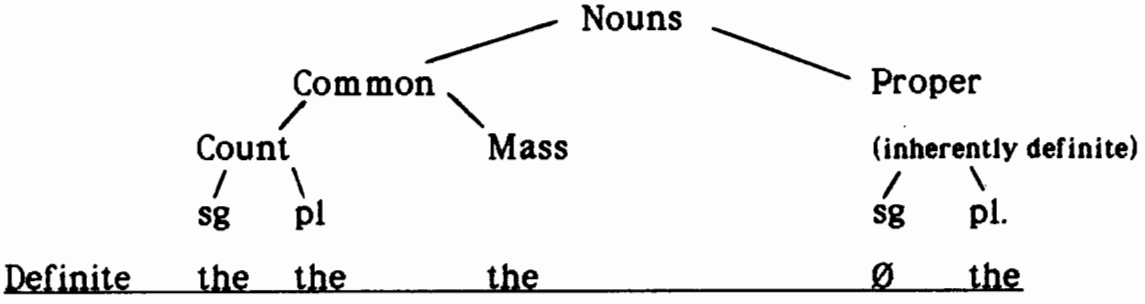


Figure 1. Article system from a structural or transformational point of view. Source: Celce-Murcia and Larsen-Freeman, 1983, 172.

From a Semantic/Pragmatic Point of View

Although a syntactic description of article usage is useful, it cannot sufficiently explicate article usage. Celce-Murcia and Larsen-Freeman (1983) state that structural and transformational grammarians are unsuccessful mainly because their analysis is limited to the sentence level, while the discourse context is essential in determining what is definite or indefinite. In other words, it is possible to predict whether *Ø* or *a* precedes a plural noun by applying the syntactic rules above, but it is not possible to predict whether *the* or *a* precedes a singular noun.

Treatment of articles is very controversial in linguistics, but recent researchers seem to agree that article usage can only be explicated in the domain of pragmatics, i.e., "the study of use of language in communication, particularly the relationships between sentences and contexts and situations in which they are used" (Richards et al, 1985, p. 225).

In semantics, articles are regarded as deictic words; the meaning of words varies systematically according to context of utterance, while most other words have basically the same meaning no matter what the context is. Context in semantics is defined by Hurford & Heasley (1984) as "a small subpart of the universe of discourse shared by speaker and hearer, and includes facts about the topic of the conversation in which the utterance occurs, and also facts about the situation in which the conversation itself takes place." Contexts in semantics do not take account of the intention and assumptions of people involved in the communication. However, in a sentence such

as "I cannot find the cat," *the* can be used only if the hearer can uniquely identify the object (cat).

The choice between *a* and *the*, or the choice between definiteness and indefiniteness is not a syntactic matter. Rather, the choice involves "meaning" which depends on non-linguistic context and on the assumption and intended meaning of the people involved in the communication.

ACQUISITION OF ARTICLES

In First Language Acquisition

Brown (1973) was the first researcher who conducted a systematic longitudinal study of the acquisition of English morphemes among English-speaking children, including articles *a* and *the*. He collected data from three American children at ages from 18-44 months, and found that they acquired both articles very early, but made many mistakes in contexts in which the children had to consider the listener's point of view. In other words, the children in his study used *the* frequently when the referents were specific, but not assumed to be known to the hearer ([+SR -HK] contexts). At the same time, the children used *a* as frequently in contexts in which the referents were specific and assumed to be known to the hearer ([+SR +HK]). These errors occurred when the hearer's knowledge could be assumed by entailment; e.g., "the heel" is entailed by mentioning "socks." Brown attributed the overuse of *the*

to the egocentricity of the children, and the overuse of *a* to the children's occasional inability to identify part-whole assemblage.

Overuse of *the* in [+SR -HK] contexts was observed in other studies as well (see for example, Maratsos, 1971; Warden, 1976; Zehler, 1982). Many of the researchers (Brown, 1973; Maratsos, 1971; Warden, 1976) attributed overgeneralization of *the* to the egocentricity of children, but other researchers did not necessarily agree.

Zehler and Brewer (1982) examined use of the zero article (*Ø*) in addition to *a* and *the* articles in order to make the study more comprehensive. They examined use of the articles of 20 children 2-3 years old by sentence-completion tasks in on-going play sessions. They found an acquisition sequence starting with no article use, *a* use only, and essentially correct *a* and *the*, followed by overextended use of *the*. Because overuse of *the* was found after a period of essentially correct use, Zehler and Brewer speculated that the overuse was caused by "overextension of a principle of shared knowledge found in adult article use" (p. 1268).

Warden (1981), who attributed overuse of *the* among children to egocentricity in his earlier study (1976), suspected that the overuse of *the* in his studies was due to the type of communication task given to the children in the studies. In his studies, children were asked to narrate stories to their partners by looking at pictures (1976) or by watching a video (1981). Warden (1981) suspected that the description of static pictures might have increased the occurrence of *the* in the earlier study, hence carried out another

study using a video. Based on the results of the second study, Warden speculated that the children did not take account of their listener's knowledge and overused *the* because they were not motivated to communicate the semantic content which was not generated from themselves to passive listeners who did not participate in the communication themselves. The children would be unlikely to take account of their listener's knowledge when they were not motivated to communicate information.

Cziko (1986) first accepted egocentricity as a cause for overuse of *the*, but after reviewing studies of articles in L1 acquisition, he concluded that such interpretation might be misleading because it assumed that children knew that the choice between the definite and indefinite article in [+SR -HK] contexts depended on what they could assume about the hearer's knowledge. Cziko speculated that children might be using *the* for specific referents and *a* for non-specific referents without knowing that they need to take account of the hearer's knowledge in using articles.

Cziko (1986) supports the specific/non-specific distinction in Bickerton's (1981) Language Bioprogram Hypothesis. To examine article use in Creole languages, Bickerton developed the systematic classification of semantic types of article usage, which many researchers borrowed in later studies. His classification used combination of two features [+/-Specific Referent(S)] and [+/-Presupposed by speaker that the listener will know the referent (P)], and he divided semantic functions of article use into four categories; [-S +P], [-S -P], [+S -P] and [+S +P]. (Following Huebner, two features in

this study are termed "Specific Referent (SR)" and "Hearer Knowledge (HK)," but they are identical with Bickerton's classification.) Bickerton found that the specific/non-specific distinction was marked in all Creole languages; thus, he postulated that the subjects might have innate sensitivity to specificity. Cziko reviewed studies on article acquisition in L1, and proposed developmental stages for article acquisition, which are summarized as follows:

> Stage 1: *a* or *the* used for +S referents, and *Ø* for -S referents.
> Stage 2: *a* used for -S referents, and *the* used for +S referents no matter the referents are presupposed to be known by the hearer or not.
> Stage 3: an increase in the correct use of *a* for [+S -P] referents, and a decrease in the correct use of *the* for [+S +P] referents.
> Stage 4: acquisition of the correct article system.

Cizko concluded that all article errors might involve the failure to take into account the hearer's knowledge, with its interaction with specificity. He argued that children have innate sensitivity to specificity. While he claimed that the four stages of article acquisition and the sensitivity to specificity were relatively invariant, he admitted that there were individual differences due to variation in each child's cognitive and linguistic ability.

Children were found to acquire articles relatively early. They seem to use *the* correctly when referents are specific and assumed to be known by the hearer, but seem to overuse *the* when referents are specific but not assumed to be known by the hearer. While some researchers attribute the overuse of *the* to the children's egocentricity, Cizko and Zehler et al speculate that it is a

developmental stage of article acquisition which has nothing to do with egocentricity. Thomas (1989), having compared L1 acquisition and L2 acquisition, agrees with Cizko that overuse of *the* is not due to egocentricity, but due to sensitivity to specificity.

In Second Language Acquisition

L1 Interference. Bertkua (1974), Master (1988), and Thomas (1989) compared article acquisition among L2 learners who have formal equivalents of English articles in their L1 and those who do not have such formal equivalents. They all obtained distinctive results from the two groups of subjects. Berkua analyzed utterances produced by 15 native speakers of Spanish and 15 native speakers of Japanese, and found that Japanese speakers deleted articles (or overused $\varnothing$) very frequently but that Spanish speakers did not. Bertkua speculated that article deletion might be explained by L1 interference and a simplification strategy.

Overuse of $\varnothing$ by L2 learners who do not have articles in their L1 was observed in Master's study and Thomas' study as well. Master analyzed the article acquisition of speakers of five different native languages (Chinese, Japanese, Russian, Spanish and German), the first three of which do not have formal equivalents of English articles. He found that article use among the subjects who do not have articles in their L1 was markedly different from English native speakers' article use. Overuse of $\varnothing$ was observed particularly frequently at the beginning level both in Chinese and Japanese speakers. He concluded that article acquisition was clearly influenced by L1. Thomas'

subjects, who did not have articles in their L1 also produced *Ø* very frequently, and he found the overgeneralization of *Ø* among all groups of subjects (low to the advanced level proficiency). Since his subjects whose L1 contained articles did not overproduce *Ø* Thomas also concluded that it was due to L1 transfer.

Article Acquisition among Japanese Speakers. Since many researchers who compared different language groups all agreed that article acquisition is influenced by L1, studies focussing on article use or acquisition by Japanese speakers are particularly relevant. Besides Master (1988) and Thomas (1989), who included Japanese speakers in their studies, Hakuta (1976) conducted a longitudinal study of one Japanese child's acquisition of English morphemes including articles, and Parrish (1983) focussed on article acquisition of one Japanese student. Also, Yamada and Matsuura (1982) analyzed use of articles among 70 students using a cloze-type test.

Hakuta analyzed two articles, *a* and *the*, and found that many of the errors were caused by violation of the specific/nonspecific distinction. He started examining articles when the subject was clearly acquiring them because he found that articles were impossible to distinguish from the pronunciation features of particular words or from schwas. He found that the articles appeared very early in his subject's speech and both articles were acquired at about the same time, but the subject did not control the semantics of the articles until much later. In other words, the subject used *a* or *the* inappropriately for a relatively long period of time after she acquired the forms. Hakuta concluded that this late acquisition of

semantic functions was due to the fact that the specific/nonspecific distinction is not marked in Japanese language.

Yamada and Matsuura (1982) also attributed the general difficulty to the specific/nonspecific distinction that students had to make. It was also found that article use among Japanese students was more systematic than random, and that the Japanese students tended to overuse *the*. Yamada and Matsuura pointed out that the students' deficiency in article use would not be salient in reading except that the students would "fail to grasp finer points," but their deficiency would be "more serious when they wrote English, making errors of article about 30% of time" (p.61). Another noteworthy point that they made was that the reason why Japanese students do not accurately acquire the English article system was that "the articles had not functioned meaningfully for them (students)" and "had not received their attention" (p.61). This suggests the need for pedagogical presentation of English articles.

Order of Difficulty and Order of Acquisition. Parrish (1983) examined one Japanese student's acquisition of articles for four months, and found that *the* was probably being acquired more quickly than *a*, and the point at which *Ø* was acquired was uncertain since the subject used overused *Ø* frequently, while she used *Ø* correctly at the same time. Many researchers (see for example, Master,1988; Yamada & Matsuura,1982 and Huebner, 1985) agree that *the* is acquired earlier or more quickly than *a* or that *the* is easier than *a* for Japanese speakers as well as speakers of other languages.

Master (1988) speculated that the difficulty with *a* might be related to the count/noncount system of article usage which is somewhat independent of the other functions of article usage. Hakuta also observed the difficulty of using *a* and noted that it was due to the syntactic restriction that *a* could be used only with a singular noun.

Though there is general agreement that *a* is more difficult to acquire than *the*, or acquired later than *a*, the acquisition of *Ø* is very controversial among the researchers. Yamada and Matsuura determined the difficulty orders by scoring correct responses in a cloze test: (from the easiest to the most difficult) *the* > *a/an* > *Ø* for the intermediate students, and *the* > *Ø* > *a/an* for the advanced level students. On the contrary, Master stated that accuracy of *Ø* was almost 100% even for the beginning level students. But at the same time, he pointed out the salient overuse of *Ø*. Thomas also found that his subjects used *the* correctly much earlier than *a*. In her study, most errors, particularly in speakers whose L1 did not have articles, were from overuse of *Ø* in contexts requiring *a* or *the*, but Thomas did not determine the place of *Ø* in the order of acquisition.

Overuse of *the*. Overuse of *the* in contexts in which referents were specific but not assumed to be known to the hearer ([+SR -HK]) was observed in Parrish (1987) and in Thomas (1989). Although overuse was first observed in all contexts in Master's (1988) and in Huebner's (1979) studies (and thus called "flooding" by these researchers), it gradually disappeared from [-SR -HK] contexts. Thomas speculated that the overuse of *the* was due to the sensitivity

to the specific/nonspecific distinction as proposed by Bickerton and supported by Cziko. Huebner did not make any claim about the cause, but argued that the overuse showed the subject's dynamic revision of his own hypothesis about the grammatical item. Huebner claimed that studies about order of morpheme acquisition did not explain much about interlanguage, since learners first acquire forms and then revise the system. The revision may involve a stage which appears to be far from a native speaker's system before the subject actually attains the native-like system.

Prefabricated Patterns and Articles. In most of the studies reviewed above, article use in idiomatic expressions such as Ø in "I go to Ø school" was eliminated from the data for analysis. However, Parrish analyzed idiomatic expressions, and discovered some interesting development in her subject's use of articles in idioms.

The subject first used articles in idiomatic expressions correctly such as "go to *the* bathroom," "all Ø day," and "went Ø home." However, the subject later started using incorrect articles in the same or similar expressions, such as "all *the* day," and "at *the* home." Parrish speculated that the subject first acquired idiomatic expressions as "prefabricated patterns" without knowledge of underlying structures, and that later, as she learned more rules of article use, she tried to apply the general rules to the idiomatic expressions in order to attain "internal consistency." Hakuta (1976) introduced these notions of "prefabricated patterns" and "internal consistency," but did not discuss the notions regarding article acquisition. Parrish stated that including idiomatic expressions in the

analysis provides more insight into the processes underlying the subject's interlanguage.

Researchers agree that L1 interference is observed at least in the acquisition of articles among speakers of languages which do not contain articles. Overuse of *Ø* is a predominant phenomenon in the beginning level students whose native language is Japanese or Chinese. Learners seem to acquire *the* first, overuse it, especially in [+SR -HK] contexts, and later acquire *a* Based on more focussed analyses of article use among Japanese students, researchers speculate that the non-existence of a specific/nonspecific distinction in their native language is the major source of difficulty for Japanese students.

The above studies involving Japanese students do not yet provide a comprehensive picture of article use among Japanese students due to the small numbers of subjects (1 in Parrish, 4 in Master's study) or the method. Yamada and Matsuura (1982) had as many as 70 subjects, but Thomas (1989) claims that data obtained by cloze tests "give an inadequate view of how learners actually use articles" (p. 339). Therefore, a more comprehensive study involving many subjects is required to draw a complete picture of how Japanese students use articles.

SOURCES OF DIFFICULTY

For ESL Students in General

Mixture of Causes. Most researchers who have examined article use among ESL students agree that, at least regarding articles, L1 interference is the source of difficulty. On the other hand, Richards (1971) claims that failure to observe restrictions in article usage may be intralingual errors, those which have origins within the structure of English itself. He claims that errors of this nature are frequent regardless of the student's L1. Since the types of errors found in article use among Japanese students were different from those found in speakers of languages with articles, Richards' claim does not seem convincing. It is more likely that errors are caused by combination of many different sources including L1 interference and the causes Richards suggests, but not by one source alone. Richards lists many possible causes of errors, among which are overgeneralization of rules caused by certain teaching techniques, rote-learning of rules, and learning strategies employed by learners. Article errors probably result from a combination of all these.

Grammatical Description and Textbooks. Grannis (1972) suggests that inadequate grammatical descriptions of article usage may have confused students. He says that grammars often depend too much on forms, but they need to "assign central importance to consideration of meaning" (p. 275).

Pica (1983) shares a similar concern. She reviews ESL instructional materials, and compares the rules presented in the

materials with actual use of articles by native speakers. She says that article usage involves discourse-related information which is not in ESL materials. She emphasizes the need for meaningful practice of article usage.

Particular Difficulty for Japanese Students

A number of books dealing with the problem of articles have been published recently for Japanese students. Petersen (1988, 1990), Oda (1990) and Koizumi (1990) make similar claims. Petersen states that the problems Japanese students have in using articles probably result from grammatical explanations written for Japanese students. The grammatical explanation deals with forms but not meaning. He gives an example of error which a Japanese student actually made, "Last night, I ate *a* chicken in the backyard" (p.10). The student observes grammatical rules, but does not seem to mean what s/he intends to. The student probably knows the word "chicken" as a countable noun, and uses it as a countable noun without knowing the difference in meaning between "*Ø* chicken (chicken as meat to eat)" and "*a* chicken (a whole chicken, possibly alive)." Oda claims the inadequacy of textbooks, which do not teach what students do not know, "meaning" of articles. Master, Oda, and Koizumi all speculate that the source of the problems is that Japanese students lack the need to express overtly concepts related to articles such as specificity and definiteness. Even if Japanese students vaguely recognize these concepts, the way Japanese students perceive these distinctions is different from that of English speakers.

Master, Oda, and Koizumi claim that in order to teach article usage, the English speaker's way of thinking should be taught first.

Errors in article use seem to result from many different causes. To summarize, the non-existence of articles in Japanese makes it difficult for Japanese students to use articles because the students lack the need to express overtly the concepts to be conveyed by articles like the specific/nonspecific distinction. Because the concepts are missing in the language, the students are not aware of the meanings in speaking. Thus, the need to express these meanings must be presented to the students; nevertheless, textbooks and instruction have not dealt with these distinctions. Since Japanese students have neither grammatical forms equivalent to articles nor the consciousness of the relevant concepts, instruction must play a crucial role in the student's acquisition of article usage.

TEACHING ARTICLES

Approaches to Teaching Articles

Researchers (see for example, Rinnert & Hansen, 1986, Master, 1988, 1990, Brender, 1989) have recently attempted to develop more effective approaches to teaching articles than previous structural approaches. They are aware of the importance of the semantic functions of articles. In the recent approaches, the syntactic rules listed in traditional grammar are replaced by more systematically organized explanations. Instead of sentence-level exercises, more meaningful cloze-type exercises are provided in

Master (1988), Brender (1989) and Rinnert & Hansen (1986). Most of these approaches, however, have been developed for ESL students, and whether they would be adequate and effective for Japanese students is yet to be examined.

Role of Formal Instruction

Approaches to teaching articles have been reviewed above on the assumption that teaching grammar would help students acquire the language. However, the role of formal instruction in language acquisition is a very controversial issue among researchers.

Krashen (1987) proposes the acquisition/learning distinction, and claims that "learning" can be developed by formal instruction, but not "acquisition". He claims that acquisition is responsible for fluency in L2 performance, and that conscious learning does not contribute to fluency except when the knowledge can be used as an editor, or "Monitor," to make self-corrections.

Krashen's argument, however, is being questioned by some researchers. Rutherford (1987) suspects that Krashen's hypotheses are based on the perception of language as "accumulated entities," which may be clearly revealed in the idea of a "natural order" of morpheme acquisition. Krashen seems to have assumed grammar teaching to be the explicit teaching of forms, or product-oriented instruction. Rutherford supports "grammatical consciousness-raising" as a means to attainment of grammatical competence, and emphasizes the need for process-oriented instruction which involves meaningful communication.

Seliger (1979) examined the relationship between conscious grammar rules and actual performance regarding usage of *a* (before consonants) and *an* (before vowels), and found that conscious rules did not necessarily affect their performance. Seliger concluded that although conscious rules would not directly contribute to language production, they would serve as cognitive focusing devices to facilitate language acquisition.

Ellis (1985) summarized the interface position on the role of formal instruction, and concluded that the important issue is not whether to teach grammar or not, but how to teach it.

SUMMARY

Article usage involves the understanding of semantic/pragmatic functions as well as syntactic rules. Thus, studies on acquisition of articles are to be carried out to include these aspects of article usage. Although some studies have been conducted in this manner, the numbers of Japanese subjects involved are very limited.

Since many researchers claim that article use is influenced by L1, a study involving many Japanese subjects will be useful to determine the unique features of article use among Japanese speakers. The results will help teachers examine pedagogical approaches to article usage, and aid the development of more effective approaches which would be particularly helpful for Japanese students.

CHAPTER III

METHOD

This chapter describes the procedure and method in which writing samples were collected and analyzed in order to examine article use by Japanese students. The original source of the methodology used in the analysis and the rationale of adaptation are explained.

GENERAL METHOD

Writing samples were collected from 48 Japanese students who were in the United States as ESL students, undergraduate college students or graduate students. Rather than speech samples, writing samples were collected because the appropriate use of articles is commonly regarded as more important in writing than in speech and also because writing samples seem more reliable as data for the analysis of article use.

Researchers and language teachers agree that appropriate article use is more important in writing than in speech. Master (1990) says, "the articles...rarely cause misunderstanding when misused in spoken language. It is usually only when ESL/EFL students have to write that they become aware that they lack the basic concepts necessary to guide them in choosing the correct article" (p. 461). Also, Koizumi

(1989), in his list of suggestions for Japanese students, claims that Japanese students would rather not care about the usage of articles in speaking because even native speakers may not hear articles (p.190, trans.).

The identification of articles used in recorded samples turned out to be very difficult in some of the previous studies on article acquisition (Huebner, 1985; Hakuta, 1976). The same limitation was apparent in the pilot study for the present study. Furthermore, Yamada and Matsuura (1982) state that "their (students') best competence is represented in their reading and writing ability rather than in their listening and speaking ability" (p. 52).

From the writing samples, noun phrases (NP) were pulled out, and use of articles in all the pre-noun positions was analyzed. In addition to the articles analyzed in previous studies *a/an*, *the*, and *Ø* use of *Ø+s* articles (non-existence of *a* or *the* before plural nouns) was analyzed here. The frequency of the four types of articles was counted in relation to pragmatic/semantic contexts. The success rate of article use was analyzed both in terms of the percentage of articles actually used correctly and the suppliance of articles in obligatory contexts. In addition to the proportion of completely correct instances (which are correct both syntactically and semantically), rates of syntactic accuracy and of pragmatic/semantic accuracy were calculated.

SUBJECTS

Number of Subjects

The subjects for this study were Japanese students who received most of their education through high school in Japan, and were studying in the United States when they took part in this study. Fifty five Japanese students originally participated, but only those who wrote 98 words or more were selected as subjects for later analysis. Forty eight students ages 18-43 (21 male and 27 female) were selected. Their length of stay in the United States ranged from 5 days to 5 years, with the average of 13.3 months.

Subjects' Backgrounds

The subjects were enrolled in five different programs. Fifteen students were enrolled in an English as a Second Language (ESL) program at one college in Portland, 4 were in the ESL program at another college, 2 were in an ESL course as part of a professional training program, 8 in undergraduate courses at a college, and 19 in a workshop for participants in an exchange program.

The students who were in the ESL programs were attending English classes about 4 hours a day from Monday through Friday in order to acquire sufficient English proficiency to attend college courses. The ESL program at one is divided into five levels, and students in levels 2-5 participated in the study. The program at the other college has four levels, and students in levels 3 and 4 participated. Most of them had not taken the Test of English as a

Foreign Language (TOEFL), but their proficiency was unlikely to exceed a TOEFL score of 500.

The ESL classes in the professional training program are designed for Japanese participants in the program. The students study English mainly to communicate with other people in the program and to survive in the United States. The students were attending 2 hours of English classes 3 days a week. According to the instructor of the English classes, their English proficiency varied, but was relatively low compared with students in college ESL programs. Five students wrote for this study, but three of the samples were not used because one was too short and the other two were fragmented.

The undergraduate students from college were studying either for a bachelor's degree, or a certificate in Linguistics, General Studies, Speech, Accounting or Marketing. Their length of stay in the United States ranged from 9 months to 3 years.

The participants in the workshop for an exchange program were to be engaged in teaching Japanese and to be enrolled as full time students. They had been selected in Japan and all of them had a very high level of proficiency, with TOEFL scores from 570 to 640. Some had studied at a college in the United States before, and had stayed in the U.S for a rather long time, but others had recently come to the United States for the first time. Appendix A gives additional information about the subjects.

MATERIALS

A video tape produced by a group of high school students in Tokyo was used as a stimulus for writing. The high school students produced the video, titled "Dear Friends--A Video Letter From Japan," in order to introduce contemporary life in Japan, with the focus on the everyday lives of high school students.

The video consists of two parts, but only the first part was used in the present study. This part lasts for 13 minutes, and it shows everyday life of typical Japanese high school students. In the video, two Japanese students, a girl and a boy, get up in the morning, have breakfast, and go to school. Various activities at high school are introduced. The boy goes back home early and enjoys himself playing the guitar. The girl goes to a preparatory school after classes in order to prepare for an entrance exam to college, and gets home very late.

The video was shown to the subjects as a stimulus for writing without any verbal narration accompanying the video. Selection of this video involved the following criteria: 1) whether the content was easy for Japanese students to understand without any explanation, 2) whether the subject matter was interesting for students to write about, and 3) whether the video would provide enough information for a relatively long composition.

The procedure was designed to make the experiment as close to real communication as possible. The subject matter of the selected video, high school students' life in Japan, might motivate the subjects to write with a potential American reader in mind because the

subjects could provide information that they were familiar with to those who would have little or no idea about it.

PILOT STUDY

The pilot study was crucial in determining whether to collect writing data or speech data. Both writing data and speech data were collected and analyzed in the pilot study.

Two intermediate level students from a college ESL program volunteered to participate in the pilot study. After they viewed the video, they were first interviewed and then asked to write about the video in 30 minutes.

Speech samples were very difficult to analyze because of many fragments that the subjects produced and because of the frequent noise that they made, of which identification was impossible, i.e., it was impossible to decide whether the noises were indefinite articles or hesitation noise ("uh"). On the other hand, writing samples seemed much easier and more reliable to analyze. The data consisted of complete sentences, containing sufficient numbers of words (237, and 172) and noun phrases.(43, and 41).

PROCEDURE

Use of Video Tape

The video tape was shown to the subjects. The subjects were asked to give an account of the film in writing after they viewed the video. The procedure was a modification of methods used by Warden

(1976, 1981), who developed an experimental design to investigate children's use of referring expression. In his earlier study, he presented a series of drawings to children, and they told the story to other children who did not see the drawings. Warden (1981) further improved the method by using a video tape because "the use of static, pictorial stimuli might bias 'normal' use of articles toward the language of children's story book, in which the definite article is more predominant" (94). On the other hand, Thomas (1989) developed a picture-description task to replace Warden's story-telling task in her experiment in order to draw advanced adult learner's interests and to gather data containing a variety of contexts.

The use of a video tape seemed more appropriate for this study than a series of drawings or a picture-description because the presence of static referents might bias normal use of articles. Furthermore, dynamic visual material would make it easier to elicit response from the subjects.

Data Collection

The Setting. Small groups of Japanese students or ESL students viewed the video either during their regular class hour or at a scheduled time after class. The data were collected at nine different times in slightly different settings. About half of the data were collected in classes as part of the established programs, and the other half was collected outside class.

I asked instructors in the three programs to provide class time for the data collection. Some instructors agreed, and others gave me a

few minutes in their classes to ask for volunteers. I solicited the non-ESL volunteers at one of the colleges, and at the workshop for exchange students, and asked them to come to a classroom at a designated time.

Protection of Human Subjects. When data were collected in a class, it was explained that the students did not have to participate if they did not want to. Some students left the classes.

Identification was unnecessary as long as the subjects provided information about themselves, e.g., their gender, ages, TOEFL scores, length of their stay in the U.S. and how long they were enrolled in ESL classes in the U.S.

Explanation and Direction Given to the Subjects. The fact that the focus of the study was on article use was never revealed to the subjects. Instead, I explained that use of grammatical items was to be analyzed so that improvement could be made in teaching grammar.

The subjects were asked to view the video, and later to write about the content of the video as if talking to an American friend who had not seen the video, and to add comments about high school students in Japan and their own experience. Writing about their own experience was encouraged since it could widen the variety of noun phrases and range of contexts for article use. The students had thirty minutes to write.

In the second, third, and fourth groups, explanation and direction were given verbally in English since samples were collected from speakers of other languages as well. In order to avoid

misunderstanding, the same explanation and direction were given in a written form in English and in Japanese in addition to the verbal explanation. Verbal explanation was given in Japanese whenever possible.

Some subjects appear to have assumed that the potential reader knew about the video. Some even wrote in a way that they assumed that the reader knew the content of the video in detail. This misunderstanding made some noun phrases difficult to analyze. Some noun phrases with inappropriate articles possibly caused by misintepretation of the directions were eliminated from the data. For instance, Subject #12 started a sentence as, "The similarities are..." without mentioning two groups to compare, or any equivalents of "similarities." In my explanation in English, I said that the subjects could write about the similarities between the high school students' life in the video and the subjects' own experience. This subject seemed to have missed the main part of the direction and in a way responded to the experimenter who was assumed to know everything about the video. This instance as well as some other similar instances were eliminated from the data since they could complicate identification of semantic contexts and their appropriateness. Other instances where the subject assumed that the reader knew about the video were analyzed as long as it was clear in the discourse that the subject assumed the potential reader's knowledge. Many of those subjects seemed to assume that the potential reader knew that the subject saw a video about Japanese high school students. Thus, for example, *the* in "*The* video showed

us ....(Subject 14)" was regarded as appropriate, but *the* in "I saw *the* short video about two high school students..."(Subject 27) was regarded as inappropriate.

DATA ANALYSIS

List of Noun Phrases

The subjects produced between about 50 words and 548 words. As mentioned above, writing samples which contained fewer than 98 words were eliminated from the data. The hand-written compositions were all typed out for ease of analysis. An example of typed composition is in Appendix B. All the noun phrases(NP) were pulled out except NPs containing only proper nouns. The pulled NPs were analyzed in terms of the semantic category of the context where the NP was used and the syntactic category of the noun and the NP. A list of NP took the following format, which is an adaptation of "pulled utterances" in Master's (1988) study:

Entry	Subject	Line	Noun Phrase	Used	Required	Semantic category	Syntactic category
101	3	32	the students	the	the	[+SR] [+HK]	the+count pl.

The entry number is the number given to each pulled noun phrase, the line is the number of line in the typed subject's composition. Articles actually used and the required articles in the context are both listed. The semantic category shows the context where the subjects used the pulled noun phrase, and the syntactic category shows the types of the required article and noun which the

subject used or should have used. Appendix C shows a part of the list of noun phrases as an example.

Articles to be Analyzed

The analysis examined four articles, namely, *a, the, Ø* and *Ø+s*. In early studies of first and second language acquisition concerning articles, only *a* and *the* were examined, as in Brown (1973) and in Hakuta (1975). Later, the article *Ø* was added in studies by Zehler (1982) Master(1987), Parrish(1987) and Thomas(1989). The present study was initially intended to follow recent researchers and examine the three articles *a, the,* and *Ø*. However, as article use was examinned, it became apparent that it was incomplete and inadequate to treat *Ø* before a singular countable noun and a plural countable noun equivalently. To produce an NP like "*a* student" instead of the syntactically inaccurate "*Ø* student" , and to produce "*Ø* students" instead of inaccurate "*Ø*student" require a subject to have very similar knowledge (or competence). It was inappropriate to treat *Ø* and *Ø+s* as correct where the subject must have meant "students." and did not need *a* or *the*. Subjects who produce many *Ø+s*, and those who produce many *Ø* before count nouns should be differentiated. In fact, one subject (#16) did not use *a* or *the* at all, and used only three instances of *Ø+s*, and yet obtained 72.7% correct. After *Ø+s* was included, the percent correct became much lower (63.6% total, 36.4% excluding article use in idioms).

For the reasons above, it was decided to divide *Ø* articles into two groups for analysis, *Ø* and *Ø+s*. The article *Ø* in this study refers

only to no use of *a* or *the* before a noun which is not in a plural form. Non-existence of *a* or *the* before a plural form noun is classified as *Ø+s* and regarded as a type of article in this study. Even though the difference between *Ø* and *Ø+s* is not exactly the difference of "determiner" but the matter of "noun form," the distinction may be necessary to examine Japanese students' competence in article usage since mastery of use of *Ø* and *Ø+s* involves a similar competence required to use *Ø* and *a* correctly.

Semantic Categories

The semantic categories used in the analysis are based on the following semantic wheel (Figure 2) which Huebner (1983, 1985) borrowed from Bickerton (1981).

The first semantic type, "generics," could have been problematic in analysis since there is a confusion about the difference between generics ([-SR, +HK]) and some cases of nonreferential indefinite ([-SR, -HK]). *The, a* and *Ø(+s)* can be used alternatively with very slight changes in nuance only in noun phrases used in subject positions. The following sentences (1-3) have very similar meaning, but not sentences (4-6).

1. [-SR]
   [+HK]

2. [+SR]
   [+HK]

4 [-SR]
   [-HK]

3. [+SR]
   [-HK]

1. [-Specific Referent, +Assumed Known to the Hearer]: Generics

The tiger is a dangerous animal.

2. [+Specific Referent, +Assumed Known to the Hearer]: Referential Definites

a. Unique or conventionally assumed unique referent;

I went to his house, but **the** door was locked.

b. Referent physically present;

The book is mine.

c. Referent previously mentioned in discourse;

I met a student. **The** student was from Japan.

d. Specific referent otherwise assumed to be common knowledge.

3. [+Specific Referent, -Assumed Known to the Hearer]; Referential Indefinites.

First mention of NP [+SR] in a discourse and assumed not common knowledge.

I met **a** very tall man.

4. [-Specific Referent, -Assumed Known to the Hearer]; Non-Referentials

a. Predicate noun phrases; (equative noun phrases, attributive use, identification, or categorization in other studies)

The tiger is **a** dangerous animal.

b. Noun phrases in the scope of negation;

He does not have **a** car.

c. Noun phrases in scope of questions, irrealis mode.

Do you have **a** pen?

I would like to have **a** party.

Figure 2. Semantic wheel for noun phrase reference.
Source: Huebner,1983. Examples by Iwasaki

(1) The tiger is a dangerous animal.
(2) Tigers are dangerous animals.
(3) A tiger is a dangerous animal.
(4) I am afraid of tigers.
(5) I am afraid of a tiger.
(6) I am afraid of the tiger.

In sentences (1-3), the speaker (or writer) most probably means the whole class of "tiger"; thus, the NP is generic. However, in sentence (6), the NP, "the tiger" cannot be generic, but a definite tiger. The NPs in (4) and (5) are marginal. The NPs could refer to the whole class of tiger, but I decided to include these NPs in [-SR, -HK] to avoid possible confusion and to comply with the approach of Bickerton (1981), who first invented these semantic types. Bickerton clearly stated "'generics' refers to the subject NP in *The dog/A dog/Dogs is/are (a) mammal(s)*"(248) Confusion is observed in the previous research (e.g., Parrish, 1987, Master, 1987). For example, Parrish used the same semantic wheels for her analysis, but stated that "the sentence, *The cat has cancer* also contains a generic NP, *cancer*" (p. 371). Huebner did not clarify these distinctions.

The term "Semantic categories" is used by the previous researchers who used this system. Strictly, however, the term, "semantic/pragmatic category" is more adequate since the four types of meaning expressed by articles are closely related to the contexts beyond sentence-level contexts, which are in the domain of pragmatics. In this study, the categories are sometimes called "semantic categories"; this is a foreshortening of "semantic/pragmatic categories," and should be understood as such.

Numbered Contexts for Analysis

The above semantic contexts were divided into 20 numbered contexts for analysis as follows. Syntactic information is added to the semantic categories. This is an adaptation of items used in Thomas.

[-SR, +HK] 1. *a* generics
2. *the* generics
3. *Ø* generics
4. *Ø+s* generics

[-SR, -HK] 5. Predicate indefinite: singular
6. Nonspecific indefinite: singular
7. Predicate indefinite: plural
8. Nonspecific indefinite: plural
9. Predicate mass noun
10. Nonspecific mass noun

[+SR, -HK] 11. Referential indefinite: singular
12. Referential indefinite: plural
13. Referential indefinite: mass noun

[+SR, +HK] 14. Unique for all
15: Unique for a given setting
16. Unique by entailment
17. Unique by specified order or rank in a set
18. Unique by previous-mention
19. Unique by a prepositional phrase or a relative clause
20. Other referential definite

The division under [+SR, +HK] is similar to Brown's (1973) list of circumstances for specific reference, which Celce-Murcia and Larsen-Freeman (1983) quote. Thomas (1989) has a context named "Unique by definition", which is included both in Brown and Celce-Murcia. However, their interpretations of "definition" are different. Brown states that NPs which contain words such as *first* or *next*, by

definition, take the definite article (p. 347). On the other hand, Celce-Murcia's examples for this category are "the house with a view, the girl who speaks Basque" (p. 177). In order to avoid confusion, this subcategory of context was abandoned and "the last/first class" was categorized as #17, and "the house with a view" and "the girl who speaks Basque" were categorized as #19.

Distinction between "Unique by entailment" and "Unique for a given setting" was sometimes confusing. It was decided that an NP was "unique for a given setting" if the setting was not explicitly mentioned but could be inferred from the content. An NP was "unique by entailment" if preceding words or statements entail the setting for the NP.

Determining Semantic Categories

There was not always a clear-cut distinction between [+SR] and [-SR] context, and between [+HK] and [-HK]. Determining the semantic category of each context was not easy. Some criteria were established to determinine the semantic category.

1. [-SR, +HK]: Generics

As previously discussed, only NPs in subject-positions can fall into this type. Generic NPs can take premodifiers like adjectives and prepositional phrases as postmodifiers except *of*-preposition phrases. But, NPs with relative clauses cannot be generic. Thus, underlined NPs in the following sentences are generic, but NPs in italic are not.

(7) Japanese high schools are very similar to American high schools ([-SR, -HK].)

(8) High schools in Tokyo have uniforms.

(9) The Life of *Japanese high school students* ([+SR.-HK or -SR -HK]) is very hard.

2. [+SR, +HK]: Referential Definite

The in "in the same school" is referential definite, but *the* in "it is about the same" is an article in a commonly used expression.

3. [+SR, -HK] Referential indefinite

The NP in "I went to *a private school* is referential indefinite, but NP in "I usually brought *a lunch box* from home" is non-referential indefinite.

NPs with modifiers, but not specified enough to be definite are [+SR, -HK], e.g. "*Japanese students* who want to go on to college".

Elimination of Some NPs

Initially, 2360 NPs were pulled out. The 2360 NPs included nouns used with other determiners such as possessive and demonstrative. I decided not to analyze these NPs partly because most of them were correctly produced, and the number of NPs in contexts where other determiners were required was much smaller than NPs in contexts where articles were required.

NPs which had "some" or "one" in the pre-noun positions were included in analysis concerning how well subjects could use articles in each Semantic Type, but excluded from data for other analysis.

Some other NPs were not included for analysis for the following reasons.

A. NPs containing Romanized Japanese words such as "juku" (preparatory school for college entrance exams) and "obento" (lunch box).

B. NPs in ill-formed structures. The readers could not understand what these NPs or the sentences (which contain the NPs) meant, or readers managed to understand the meaning, but reconstruction of the NPs to standard English would require some change in NP structure or article use.

C. NPs for which required articles were very difficult for native speakers to decide (The choice of articles may involve cultural information about Japan. Or the choice may be arbitrary to some extent even among native speakers.).

Idioms and Commonly Used Expressions

In previous studies, article use in idioms and commonly used expressions such as *the* in "in the morning" or Ø in "go to Ø school" were eliminated and were not examined (See for example, Parrish, 1987). However, in the present study, they were examined separately without consideration of semantic contexts.

Idioms and commonly used expressions include expressions containing NPs in which choice of article is conventionally fixed. A different choice of articles would totally change the meaning as in "go to the school." The semantic change is not that of definiteness, but the meaning of "school" itself, i.e., from concept to actual entity. Many of the idioms in the data contained these kinds of nouns which have

more conceptual meaning, rather than actual entity, e.g., "lunch" "class" "breakfast" and "college."

The article use in these expressions does not involve specificness or the hearer's (reader's) knowledge in each context. Rather, a whole phrase, including an article, serves to express one meaning. Therefore, the analysis of these expressions was done separately without consideration of semantic/pragmatic types.

Many researchers (see for example, Hakuta, 1974; Brown, 1971) claim that prefabricated routines and patterns play a very important role in language acquisition. Idioms and commonly used expressions are often contained in prefabricated patterns. If this is the case, acquisition of article use may have something to do with these expressions. Furthermore, these expressions generally play an important role in formal English instruction. Considering the fact that pedagogical implication would be an important part of discussion, idioms and commonly used expressions needed to be included in the analysis in some way.

Determining Required Articles

The required articles were determined with the help of five native speakers (2 college professors, 1 college graduate, and 2 college students). Required articles are articles which native speakers of English would most probably choose to use in each environment. Each of the typed writing samples was shown to two of the above native speakers, and was corrected by them. I checked the corrected

compositions, and further asked for native speakers' intuition about other possibilities of articles in the concerned pre-noun position.

Doubtful Cases. In some doubtful cases, the articles used were considered appropriate, and in some very doubtful cases, the NPs were excluded from the data. Examples of eliminated cases are "Then he plays saxophone with his friend" (Subject 4, Entry 149) and "(Some students go to prep-schools for the preparation for) college entrance exam" (Subject 26, Entry 860). In the former example, there was disagreement among the native speakers about what the required article was in that context. It seemed that "plays *Ø/a/the/his*" were all acceptable in the context with slight changes in meaning. Unless there was more information about the saxophone or about the situation, the native speaker could not decide what the writer intended. In the latter example, and in some other cases, the native speakers claimed that it was impossible for them to tell what article was required before the word "exam" unless they knew exactly what entrance examinations were like in Japan. For example, they questioned if there was a nation-wide uniform exam, and whether one student would take many exams.

Syntactic Categories

Syntactic categories were included in the list of NPs to see if article use was affected by the type of noun (count.noun or mass noun(uncountable noun)) and by the structure of the whole noun phrase.

The classification from Celce-Murcia and Larsen-Freeman, (1983) in Figure 1 on page 9 was used for the analysis of structure.

If the noun phrase was syntactically accurate, the structure was written as it was used in the following manner, and if not, the corrected structure was written out as follows: .

Common nouns: the + count plural(pl), the + count singular(C),
the + mass(UC)
Ø (zero article)+count plural, Ø + mass
a(n) + count singular

Modifiers such as relative clauses and prepositional phrases were also indicated in the list.

Frequency Score and Proportional Score

The frequency of actually used articles in each semantic type was scored for each subject and the total subject pool. The proportion of correct instances (both syntactically and semantically/ pragmatically) in the total number of articles used was scored. The correct proportion was also scored for each semantic type and for each type of article (*a, the, Ø* or *Ø+s*).

Suppliance in Required Contexts

Scoring the correct proportion in each semantic type could determine in what semantic contexts correct articles were difficult to produce, but the scoring of the correct proportion was not sufficient to determine which article was more difficult than others. The scoring could only reveal the number of times an article was used and the number of times it was used correctly. It could reveal how difficult it was for the subjects to use an article correctly only if the

subjects used it. In other words, the article which subjects use most frequently, but not always correctly, could appear to be the most difficult one. For example, some subjects may have a hard time producing *a* in contexts where *a* is required, and use other articles such as *Ø* instead. They may have a very low percentage of correct use for *Ø* but it does not mean *Ø* is more difficult than *a*

As the above example shows, what is also important to examine is whether the respective articles are supplied in the contexts where each article is required. This would make it possible to determine which article is difficult to supply in the contexts where it should be used. For these reasons, the percentage of suppliance in contexts where each article was required was scored respectively.

For many researchers who have studied acquisition of some morphemes, the concept of "obligatory context" is very important. Their criteria for "acquiring" a morpheme is whether the morpheme is supplied in "obligatory contexts". Brown (1973), for example, looked at the absence or presence of articles (*a* and *the*) in obligatory contexts, and examined acquisition of articles. Brown, however, is not concerned with the subjects' use of articles in non-obligatory contexts. Although Thomas (1989) does not use the term "obligatory context," she determines the rate of accuracy by looking at the number of times articles are used in the environment where the respective articles are required, and she does not consider percentage of articles used correctly to total use of *a, the* and *Ø* The approach in this study is similar to Parrish's (1987) approach, which

is a combination of Huebner's system and suppliance in obligatory contexts.

Syntactic vs. Semantic/Pragmatic Accuracy

In order to determine whether the subjects had difficulty with syntactic rules, or rules in the domain of semantics or pragmatics, syntactic and pragmatic accuracy rates were scored for each subject and for the total subject pool.

The percentage of correct use determined earlier was the proportion of both syntactically and semantically/pragmatically correct instances. Subjects' attempts to use semantically/pragmatically appropriate articles were examined by ignoring structural accuracy. For example, both *a(n)* and the zero article were considered appropriate in [-SR, -HK] contexts regardless of the type of nouns; i.e., both "He is *student*" and "They are *a students*" would be regarded as "semantically /pragmatically appropriate." A score was obtained by adding the number of these cases to the number of correct instances previously determined, and by getting its proportion over total number of articles. (The total number of articles and total number of environments where articles are required are identical since articles in this study are *a*, *the*, *Ø* and *Ø+s*. One of these articles should appear before a noun unless other determiners are used.)

Also, syntactically accurate articles regardless of consideration of context were examined. For instance, "I have *the book*" would be

regarded as "syntactically accurate" even if used in the context of [+SR, -HK].

Article Use and Modifiers

In order to determine the relationship between article use and level of complexity of NPs, the NPs in the data were broken into small categories depending on their structures, and the correct proportion in each structure was scored.

Premodification. Types of premodification were determined by the number of elements they contain. Nouns (i.e., preceding nouns in noun compounds), noun possessives, adjectives, cardinal numbers (e.g., *two* students, *five* classes) except "one" were regarded as "elements," and written out as □ for the convenience in analysis. The NP, "high school" student functions as a single noun; thus, it was considered as one "element." For example, "Japanese high school students' mother" is an NP containing "mother" as its head noun, and the three element premodifier "Japanese high school students'.," and the structure of the NP is written out as "□+□+□+N."

Although cardinal numbers were regarded as "elements," quantifiers such as "some," "many," and "most" were not regarded as "elements" because of the complex relationship with articles. Whitman's (1974) conception of articles reflects the complexity. Whitman claims that "the article consists of two independent constituents, quantity and determiner, each of which is optional" (p. 254). According to Whitman, phrase structure rules of articles are as follows (p. 254):

ARTICLE→(QUANTITY)+(DETERMINER)
QUANTITY→{a/an, one; two, three, some, many}
DETERMINER→{NP+'s, the, this...}

Though the analysis in the present study does not exactly follow Whitman's conception of articles, it takes a similar approach. The quantifiers such as "many of the ...," "some of the ..." "most of the ..." are regarded as definite equivalents of " *Ø* many (noun)," "some (noun)" and "*Ø* most (noun). Hence, the difference between "many of the students" and "many students" lies only in definiteness. Therefore, both of the NPs must have the same structure, and both are regarded as nouns without modifiers (i.e. "N").

Postmodification. Postmodifiers include prepositional phrases (PP), relative clauses (RC), to-infinitive phrases, that-complementizers, and participles. Some NPs have only postmodifiers, but some have both premodifiers and postmodifiers. For example, the NP, "Japanese high school students who want to enter college" contain both a two-element premodifier and a relative clause, hence written as "□+□+N+RC."

Some *of*-phrases do not serve as postmodification, and thus are not counted as postmodifiers. Examples of such *of*-phrases are "a glass of...," "a piece of...," "a kind of...," "a form of..." and "a variety of...." Whereas postmodifying prepositional phrases modify the preceding head noun as in "the life of Japanese high school students," the above phrases with "of" at the end seem to modify what follows. Master (1990) distinguishes these two, and calls the former type of phrases "partitive *of*-phrases." He defines the phrases, and says "the

headnoun of the *of*-phrase represents a portion, part (hence the term partitive), or measure of the object of the preposition *of*.., then it presents one of many possible divisions of that object" (p. 473). Since these phrases are clearly different from the *of*-phases which describe and modify their head nouns, they were excluded from the "postmodifiers" in this study.

As far as relative clauses are concerned, there are mainly two types, restrictive relative clauses and non-restrictive relative clauses. Only restrictive RCs are regarded as "modifiers" in this study. Though both types of RCs modify the head noun, according to Quirk and Greenbaum (1973), only modification by restrictive RCs is necessary for the identification of the head noun, and modification by non-restrictive RCs given to the head noun is additional information. This may be why only restrictive RCs seem to affect article choice.

Modification and the Difficulty of Article Choice. The relationship between modifiers and article use was examined in terms of the possible difficulty caused by modification. The frequency of NPs with each type of modifiers was counted, and the percent correct was scored for the respective type.

Frequencies of types of incorrect instances were also examined for each type of modifier. The types of incorrect instances to be examined were mostly; use of *Ø* in place of *the* or *a* (most of which are possibly "omission"), use of *the* in place of *a*, *Ø*, or *Ø+s* ("overspecification"), use of *a*, *Ø*, *Ø+s* in place of *the* (failure to specify the noun).

More about syntax and article use. The relationship between article use and the position of the NP in the sentence was also examined in this study. Huebner (1979) found that his subject had a tendency not to mark subject position NPs with *the*, and Parrish (1987) also found that her subject tended to use *Ø* for subject position [+SR +HK] NPs and to use *the* for predicate position [+SR +HK] NPs.

To see if Huebner and Parrish's finding was a tendency among a larger population, the frequency of subject position NPs was counted. The percentage of correct use for the NPs in the subject position was scored, and types of errors were examined Furthermore, in order to determine which sentence position presents more article use difficulty for Japanese students, the percentage of correct use was compared with that of NPs in predicate positions.

SUMMARY

Writing samples collected from 48 Japanese students studying in the United States were analyzed in this study. NP phrases were pulled out from the compositions, and all the NPs which could possibly take articles in the pre-noun position were examined except some NPs in ungrammatical sentences which did not make sense or needed to be reconstructed to make sense.

In addition to the three articles *a*, *the*, and *Ø*, studied in most recent research, *Ø+s* was analyzed for more complete and precise examination of "article" use. Though the distinction between *Ø* and

Ø+s was not the the matter of "determiner" but that of "noun form (singular or plural), it became apparent that it was useful to make the distinction. The use of articles was first analyzed in relation to the semantic/pragmatic categories of the contexts where articles were used, and in relation to syntactic rules to be observed for the chosen articles. For the semantic/pragmatic analysis, the categories developed by Bickerton (1981) were used as Huebner (1983, 1985) did to examine acquisition of articles. The categories involve the specificity of referents and the hearer's knowledge. In addition, relationship between the accuracy of article use and NP structure was examined to see whether complexity of NPs would present difficulty.

CHAPTER IV

RESULTS

In this chapter, findings of the study are presented from various perspectives, and various aspects of article use among Japanese students are revealed. Their tendencies and accuracy in article use are examined in relation to the syntactic rules and to the semantic/pragmatic functions. The difficulty order of the four articles *a, the, Ø* and *Ø+s* is determined.

PLAN OF THE STUDY

Japanese students have a hard time using English articles correctly and appropriately. In order to specify the areas in which they have difficulty, their use of English articles *a, the, Ø* and *Ø+s* was analyzed in relation to syntactic rules and semantic/pragmatic functions of the articles.

PROCEDURE

Forty eight compositions by Japanese students, containing over 98 words were selected as data for analysis. The number of words ranged from 98 to 548 with a mean average of 268 words per composition. The number of NPs contained ranged from 14 to 122

with a mean average of 49. The total number of NPs was 2355. From the total number of NPs, some NPs were eliminated as not applicable for analysis, e.g., NPs in ungrammatical sentences, and NPs containing other determiners such as possessives or demonstratives. This process reduced the number of NPs for analysis to 1883. Appendix A, "List of subjects and article use" gives more information about subjects and the data they produced.

For some parts of the analysis, the above subjects were divided into two groups by their proficiency level. As described in the previous chapter, the subjects 1 through 21 were all ESL students, and the subjects 22 through 48 were all accepted to either undergraduate courses or graduate courses in the U.S. Though only a few TOEFL scores were obtained from the former group of subjects, all the members in the latter group had TOEFL scores over 540. Thus, it can be assumed that the proficiency level of the latter group was relatively higher than that of the former group.

Article use was examined mainly in relation to semantic/pragmatic contexts in which the articles were used. Following Huebner's system of analysis, Bickerton's semantic categories of articles were used. In Bickerton's categories, the semantic contexts are divided into four basic types depending on whether an NP has a specific referent or not and whether the NP is assumed to be known to the hearer (or reader).

Four "articles," namely, *a, the, Ø* and *Ø+s* were analyzed. Accuracy rate of article use was determined both by the percentage

correct over total occurrence of each article, and by the percentage of suppliance of each article in obligatory contexts.

Article use was further analyzed in relation to the syntactic structures of the NPs. Structures were divided into 15 types by the kinds of modifiers they had. Premodifiers were divided into four groups by the number of elements in the modifiers, and postmodifiers were classified as prepositional phrases, relative clauses, to-infinitives, participles or complementizers.

RESULTS

System of Article Use among Japanese Students

The present study is cross-sectional, and does not provide sufficient quantity of data about each individual to draw a conclusion regarding the individual's system in article use. Especially the subjects with lower proficiency have provided only a small quantity of data.

Though there is no clear evidence of the learners' system in article use, the accuracy rate of 81.5% (the accuracy rates will be discussed in detail in the following section of this chapter) implies that their article use is not arbitrary. Examining the article use reveals certain salient tendencies.

Semantic/Pragmatic Contexts and Tendency in Article Use. Systems are hard to find in individuals, but some tendencies in some individuals are observed. Similar tendencies are also observed in the overall data from these subjects. The occurrence of articles in

relation to semantic/pragmatic contexts in the total subject pool is summarized in Table I.

TABLE I

FORMS USED BY SUBJECTS

	Target	a	one	the	Ø	Ø+s	some	Total	Correct	Percent
[-SR +HK]								**97**	**82**	84.54%
1. a generics	a	7		1	4			12	7	58.33%
2. the generics	the			1	1			2	1	50.00%
3. Ø generics	Ø				12	1		13	12	92.31%
4. Ø+s generics	Ø+s			4	4	62		70	62	88.57%
[-SR -HK]								**601**	**481**	80.03%
5. Predicate indef:sing	a	33		1	22	1		57	33	57.89%
6. Nonspecific indef: sing	a	52	6	6	27			91	58	63.74%
7. Predicate indef:pl	Ø+s	1			1	6		8	6	75.00%
8. Nonspecific indef:pl	Ø+s	3		5	37	248	*20*	313	267	85.30%
9. Predicate indef:UC	Ø	1			6			7	6	85.71%
10. Nonspecific indef:UC	Ø	4		6	108	4	3	125	111	88.80%
[+SR -HK]								**320**	**255**	79.69%
11. Referential indef: sing	a	*85*	*13*	11	26	1	1	137	96	70.07%
12. Referential indef: pl	Ø+s	1		4	6	93	*17*	121	108	89.26%
13. Referential indef:UC	Ø	3		7	44	1	7	62	51	82.26%
[+SR +HK]										
Unique								**379**	**286**	75.46%
14. for all	the			2	1			3	2	66.67%
15. for a given setting	the	3		54	17			74	54	72.97%
16. by entailment	the	1		10	6			17	10	58.82%
17. by specified order or rank in a set	the	1		18	2			21	18	85.71%
18. by previous-mention	the	9	2	127	14	3		155	127	81.94%
19. by PP or relative clause	the	6		44	6	5		61	44	72.13%
20. Other referential def.	the	2		31	15			48	31	64.58%
		212	21	332	359	425	48	1397	1104	79.03%
								483	**429**	88.82%
21. Ø idiom	Ø	7		32	307	1		347	307	88.47%
22. a idiom	a	43			6			49	43	87.76%
23. the idiom	the			65	8			73	65	89.04%
24. Time words	Ø				14			14	14	100.00%
		50	0	97	335	1	0	483	429	88.82%
Total		262	21	429	694	426	48	1880	1533	81.54%

Note: Shaded areas contain numbers of incorrect instances.

Several subjects (#12, 23, 27, 34, 35, 39,) produced *the* in [+SR -HK] contexts more frequently than in [-SR -HK] contexts. A similar tendency is found in the total subject pool as shown in Figure 3 below.

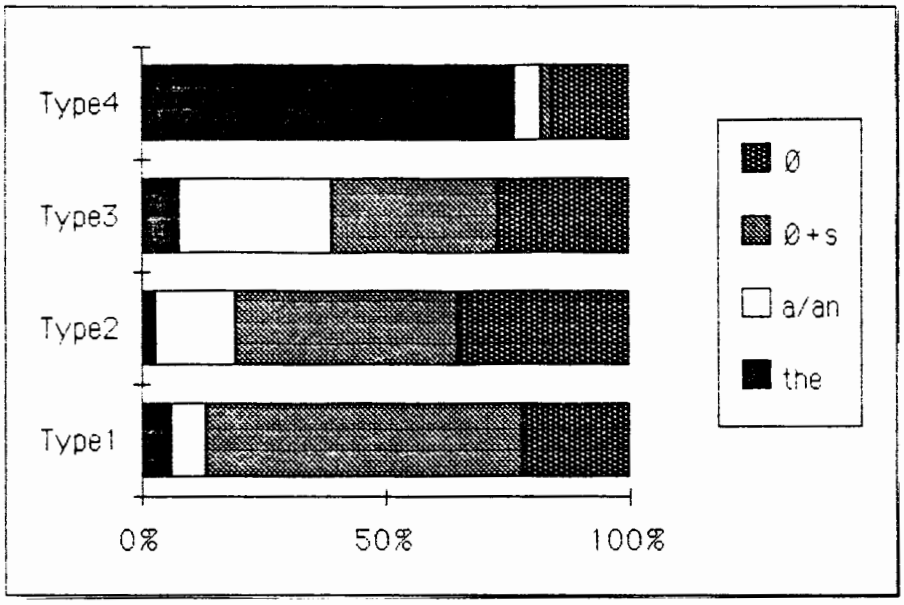


Figure 3. Articles used in each semantic type.

In this analysis, Type 1 is [-SR +HK] semantic type(i.e., generics), Type 2 is [-SR -HK] (non-referential indefinite as in "I did not wear a uniform"), Type 3 is [+SR -HK] (referential indefinite as in "her mother made a lunch box for her") and Type 4 is [+SR +HK] (definite). Occurrence of *the* in Type 4 is by definition correct, and some occurrence of *the* in Type 1 can be correct. On the other hand, no occurrence of *the* in Type 2 or Type 3 can be correct. Overuse of *the* is observed both in Type 2 and Type 3, but overuse in Type 3 constitutes a much larger proportion. In Type 2, occurrence of *the* constitutes only 3.1% of article use (18 instances out of 572 instances

in this type), but in Type 3, it constitutes 7.8% (22 instances out of 282 instances). Figures in Appendix D show each subject's use of articles in the four semantic contexts.

Closer Look at Contexts. Looking at the four types of contexts, it seems that there are more instances of *Ø* and *Ø+s* in Type 2 than in the other types, but it is not possible to discriminate correct instances of *Ø* and *Ø+s* from incorrect instances of these articles. If most of the instances are correct, the fact that there are more *Ø* and *Ø+s* in Type 2 can be due simply to the content of the writings, rather than to the subjects' rules of article use. Closer look at Table I makes it possible to observe more tendencies which may be caused by applying rules different from those of native speakers of English.

The incorrect use of *Ø* in place of *a* or *the*, which is possibly the omission of an article *the* or *a*, is found much more frequently in Type 1 and Type 2 than in the other two types. In Type 1, an incorrect *Ø* in place of *a* or *the* occurs 5 times out of 14 contexts requiring *a* or *the*, which is 35.7% of the total contexts. In Type 2, the use of *Ø* in place of *a* occurs 49 times, or 32.9%, in a total of 148 *a*-contexts. In Types 3 and 4, an incorrect *Ø*, possibly caused by omission of *a* or *the*, constitutes 19.0% and 16.1% respectively. It may be noted that in this study non-existence of articles before nouns is always regarded as "use of *Ø*" no matter whether subjects may have used *Ø* intentionally or failed to use *a* or *the* since it is not possible to distinguish between them.

The above tendency of "omission" is even more evident in "*a* generics" contexts, and in "predicate indefinite singular" contexts,

which are the contexts requiring *a* before predicate nominals such as "He is a student." Four occurrences out of 12 "*a* generics" contexts are supplied with *Ø* which constitutes 33.3%, and 22 occurrences out of 57 "predicate indefinite singular" contexts are supplied with *Ø* which is 38.5%. Out of 24 errors in these contexts, 22 are errors caused by using *Ø* This makes the percentage of articles used correctly in this context type as low as 57.9%.

Syntactic Structure and Tendencies in Article Use. Some subjects such as #27, 41, 42 tend to overuse *the* before nouns post-modified by prepositional phrases(PP). Though the quantity of data is not significant, a frequency of overuse is also observed in the total subject pool. Out of 24 errors made among nouns modified by (PP), 9 are errors caused by using *the* where *a* or *Ø* is required. Types of errors among those NPs and the frequencies of occurrence are shown in Table II.

TABLE II

TYPES OF ERRORS AMONG NOUN PHRASES CONTAINING PREPOSITIONAL PHRASES

	frequency
Ø in *a* or *the* context	7
the in *Ø* or *a* context	9
a in *the* contexts	5
others	3

Accuracy Rates

Overall success rate is 79.0% in Type 1-4 contexts, and 81.5% in all contexts (including contexts where idioms are used). The accuracy rate in idioms and commonly used expressions is as high as 88.8%.

The average accuracy rate among all the subjects is 78.5%, which is very close to the accuracy rate in the overall data.

The average accuracy rates for the lower and advanced proficiency levels in Type 1-4 contexts are 64.0% and 84.2%, and the rates in all contexts are 69.5% and 85.9% respectively. The accuracy rates for articles used in idioms and commonly used expressions are high for both levels, 82.1% for the lower level and 91.9 % for the advanced level.

The above accuracy rate is the proportion of syntactically and semantically correct instances among all the articles used. No distinction can be made between the correct proprotion of the four articles over total use and the proportion of articles supplied in obligatory contexts. They are identical by definition. Since the analyzed articles include *Ø* and *Ø+s*, the number of articles used is the same as the number of pre-noun positions which can take articles. Thus, some kind of article is supplied in every pre-noun position, and the number of successfully supplied articles and that of correctly used articles are the same.

Difficulty Ranking of Articles

Success rate of use of each article differs to a great deal, depending on whether it is judged by the percentage correct over

total use or by suppliance in obligatory contexts. In determining the ranking, articles used only in 1-4 contexts are examined since articles used in idioms and commonly used expressions do not represent the subjects' rules to choose appropriate articles for each context. Rather, the article use in this category represents how accurately the subjects can use these conventional phrases.

The percentages of articles used correctly are: *the* 86.4%, *a/an* 83.0%, *Ø+s* 96.2% and *Ø* 47.4%. Therefore, the order of difficulty in terms of the correct proportion over total use is (from the most difficult to the least difficult), *Ø*> *a/an*> *the*> *Ø+s* as shown in Figure 4.

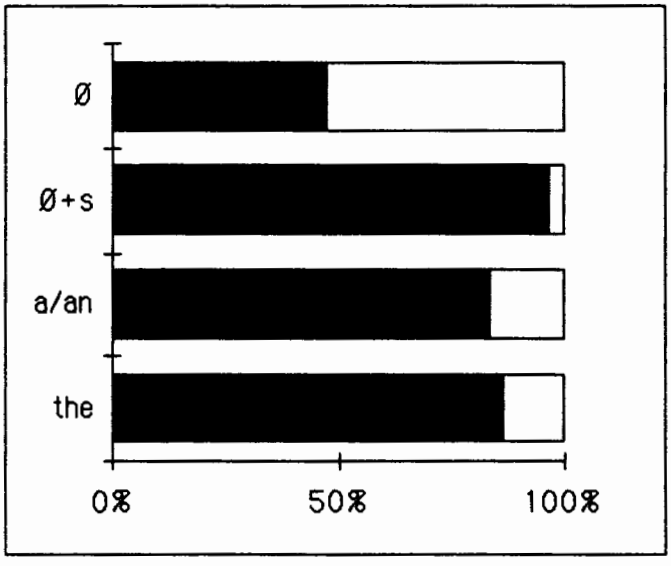


Figure 4. Percentages of articles used correctly over total use.

The rates of suppliance for the articles are: *the* 75.5%, *a/an* 63.3%, *Ø+s* 86.3% and *Ø* 86.3%. The ranking shows a significant difference from the ranking by percentage of correct use. The

difficulty order is *a/an* > *the* > *Ø*, *Ø+s* as shown in Figure 5. The *a/an* context is the most difficult in which to supply the right article, and *Ø* and *Ø+s* are the easiest articles to supply correctly.

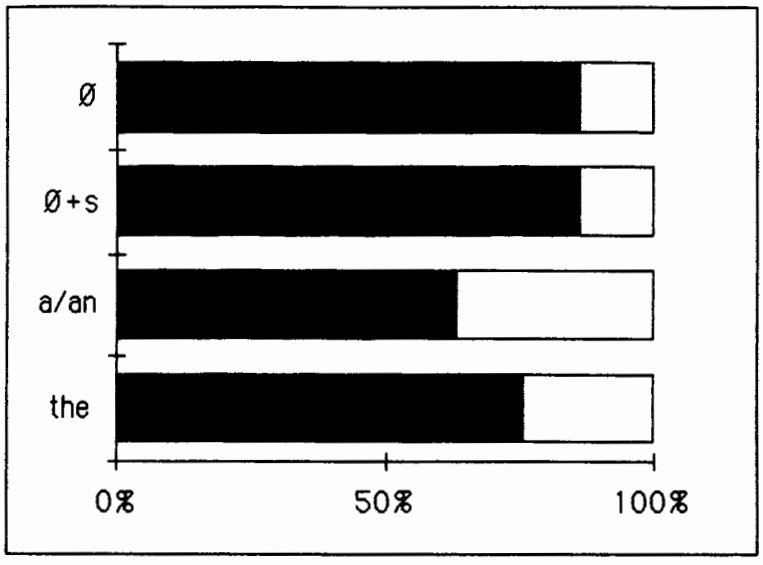


Figure 5. Percentages of articles supplied in obligatory contexts.

By both ranking methods, *Ø+s* is the easiest article, and *the* is easier than *a/an*. The article *Ø* however, is ranked very differently; the most difficult in terms of percentage of correct use, and the easiest in terms of suppliance in obligatory contexts.

Difficulty Rankings for Different Proficiency Levels. The order of difficulty differs somewhat for the two proficiency levels. Percentages of articles used correctly by the lower level subjects are: *the* 72.3%, *a/an* 76.3%, *Ø+s* 96.0%, and *Ø* 28.6%. Percentages of articles used correctly by the advanced level subjects are: *the* 89.6%, *a/an* 84.8%, *Ø+s* 96.3%, and *Ø* 57.5%. Thus, the order of difficulty remains the same as the total subject pool for the advanced level

subjects, but not for the lower level subjects. The order for the lower level subjects is, from the most difficult to the easiest: *Ø*› *the*› *a/an* ›*Ø+s*. The article *the* is more difficult than *a/an* in terms of percentage of correctly used articles.

The difficulty ranking as judged by percentage of articles supplied in obligatory contexts differs slightly for the two groups. For the lower level subjects, the order is, from the the most difficult to the easiest: *a/an*(39.7%)› *the*(54.7%)› *Ø+s*(76.4%)› *Ø* (81.8%). For the advanced level subjects, the order is: *a/an*(71.8%)› *the*(81.9%)› *Ø* (87.6%)› *Ø+s*(89.7%). The article *a/an* remains the most difficult for both groups, and *the* follows for both groups. However, the order of *Ø* and *Ø+s* is different for the two groups. The article *Ø* is the easiest for the lower level subjects while *Ø+s* is the easiest for the advanced level subjects.

Suppliance in Obligatory Contexts and Types of Errors. The percentages of articles supplied in obligatory contexts discussed above imply the difficulty of each article, and articles incorrectly supplied in each context would indicate types of errors in each context. Table III shows the percentage of articles supplied in contexts requiring *the*, *a/an*, *Ø*, and *Ø+s* respectively. It must be noted that percentages of articles supplied in obligatory contexts are slightly different from the percentages mentioned earlier since the earlier figures involve use of "one" and "some."

TABLE III

PERCENTAGES OF *A*, *THE*, *Ø* AND *Ø+S* USED IN REQUIRED CONTEXTS

Lower level subjects

	Total	a	the	Ø	Ø+s	one	some
the contexts	87	6.9%	54.0%	35.6%	2.3%	1.1%	0.0%
a contexts	80	36.3%	12.5%	41.3%	0.0%	*10.0%*	0.0%
Ø contexts	48	4.2%	8.3%	76.6%	4.2%	0.0%	*8.3%*
Ø+s contexts	134	0.7%	2.2%	19.4%	72.4%	0.0%	*5.2%*

Advanced level subjects

the contexts	294	5.4%	82.0%	10.5%	2.0%	0.3%	0.0%
a contexts	216	68.5%	4.2%	21.3%	0.9%	*5.1%*	0.5%
Ø contexts	159	3.8%	5.7%	84.3%	2.5%	0.0%	*3.8%*
Ø+s contexts	378	1.0%	2.6%	5.8%	82.5%	0.0%	*7.9%*

Total subject pool

the contexts	381	5.7%	75.3%	16.3%	2.1%	0.5%	0.0%
a contexts	296	59.8%	6.4%	26.7%	0.6%	*6.4%*	0.3%
Ø contexts	207	3.9%	6.3%	82.1%	2.9%	0.0%	*4.8%*
Ø+s contexts	512	0.1%	2.5%	9.4%	79.9%	0.0%	*7.2%*

Note. Total: total number of contexts. The underlined figure indicates the percentage of correctly used articles. Italics indicates that the figures include some incorrect instances although most are correct instances.

Among the total subject pool, the most common errors are: use of *Ø* when *the* is required, use of *Ø* when *a* is required, use of *the* when *Ø* is required, and use of *Ø* when *Ø+s* is required. The only

difference between the two groups is the more frequent use of *a* by the advanced subjects in contexts where *the* is required.

Manipulation of Semantic/Pragmatic Functions

Pragmatic accuracy. Pragmatic accuracy among the total subject pool is 89.8%. The accuracy rates by proficiency levels are 83.7% among the lower level students (#1-21), and 92.0% among the advanced level students (#22-48). These rates are scored by ignoring syntactic errors. In other words, *a/an*, *Ø+s* and *Ø* are all indefinite, and are regarded appropriate when used in indefinite contexts. The article *the* is definite and regarded correct when used in definite contexts.

Difficulty Ranking of Semantic/Pragmatic Types. As shown in Table I, percentage correct of the four semantic types are: Type 1 [-SR +HK] 84.5%, Type 2 [-SR -HK] 80.0%, Type 3 [+SR -HK] 79.7%, and Type 4 [+SR +HK] 75.5%. The numbers indicate that in Type 4 the largest number of incorrect instances occur. Figure 6 shows the ranking.

Correctness in the above numbers, however, involves both syntactic accuracy and semantic/pragmatic appropriateness, and does not necessarily represent difficulties of each semantic/pragmatic function. To see what proportion of incorrect instances is caused by inability to manipulate semantic/pragmatic functions, syntactic and semantic errors in each type are counted and shown in Table IV.

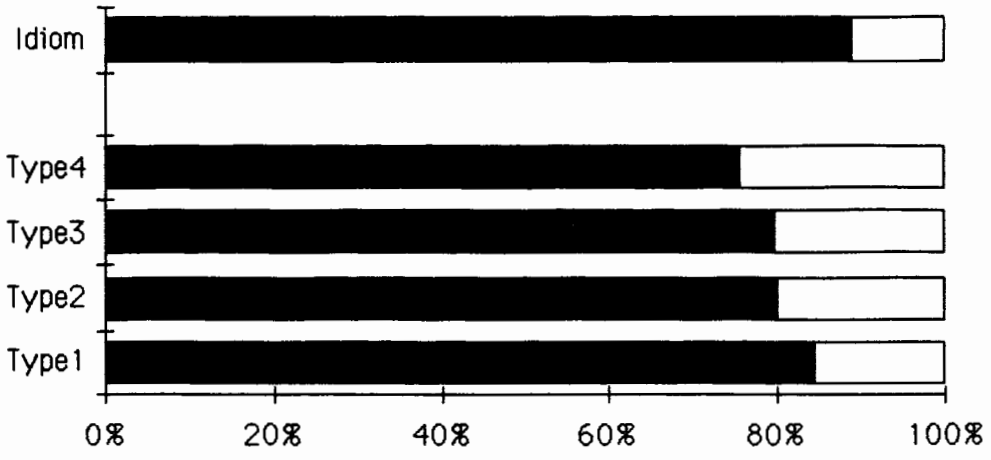


Figure 6. Percentage of articles used correctly in each semantic type.

TABLE IV

NUMBERS OF SYNTACTIC ERRORS AND OF SEMANTIC ERRORS IN EACH SEMANTIC TYPE

	Type 1	Type 2	Type 3	Type 4	1-4	idiom	total
Syntactic errors	10	101	41	47	199	6	205
semantic/ pragmatic errors	5	19	24	93	141	48	189
Total	15	120	65	93(140)	340	54	394

Semantic/pragmatic errors are mostly instances in which subjects fail to differentiate between definite and indefinite functions of articles, but there are a few instances where subjects fail to use singular or plural forms appropriately (e.g., NP #359, Subject 26;

"Some students participate in a club," in which the writer obviously means that students participate in several different clubs.) There is only one such instance in Type 2 and two in Type 3. The total number of errors in Type 4 is not identical with the sum of syntactic errors and semantic/pragmatic errors because some errors in Type 4 are syntactically and semantically incorrect at the same time, and thus, counted twice. For example , "*Ø+s* student" where "*the* student" is required is syntactically inaccurate and semantically inappropriate at the same time.

The proportion of pragmatic errors among total errors is the largest in Type 3 (24 out of 65, 36.9%), with the exception of Type 4, where all the errors (use of *a, Ø* and *Ø+s*) are semantic/pragmatic errors by definition. In Type 2, most errors are syntactic, and only 19 instances out of 120 (15.8%) are semantic/pragmatic errors. Type 3 [+SR -HK] as well as Type 4 [+SR +HK] are the contexts where large proportions of semantic errors occur.

A Closer Look at Each Context for Ranking of Difficulty. The percentages of articles used correctly in each context is shown in Table I, but Figures 7 and 8 make it easier to grasp how many instances occur in each context and what the proportions of correct instances are.

The percentage correct is very high in contexts of "*Ø* generics" (92.3%), "*Ø+s* generics"(88.6%), "Nonspecific referent: indefinite uncountable nouns (*Ø*)"(88.8%), "Nonspecific referent: indefinite plural nouns(*Ø+s*)"(85.3%), "Predicate nominal: indefinite countable

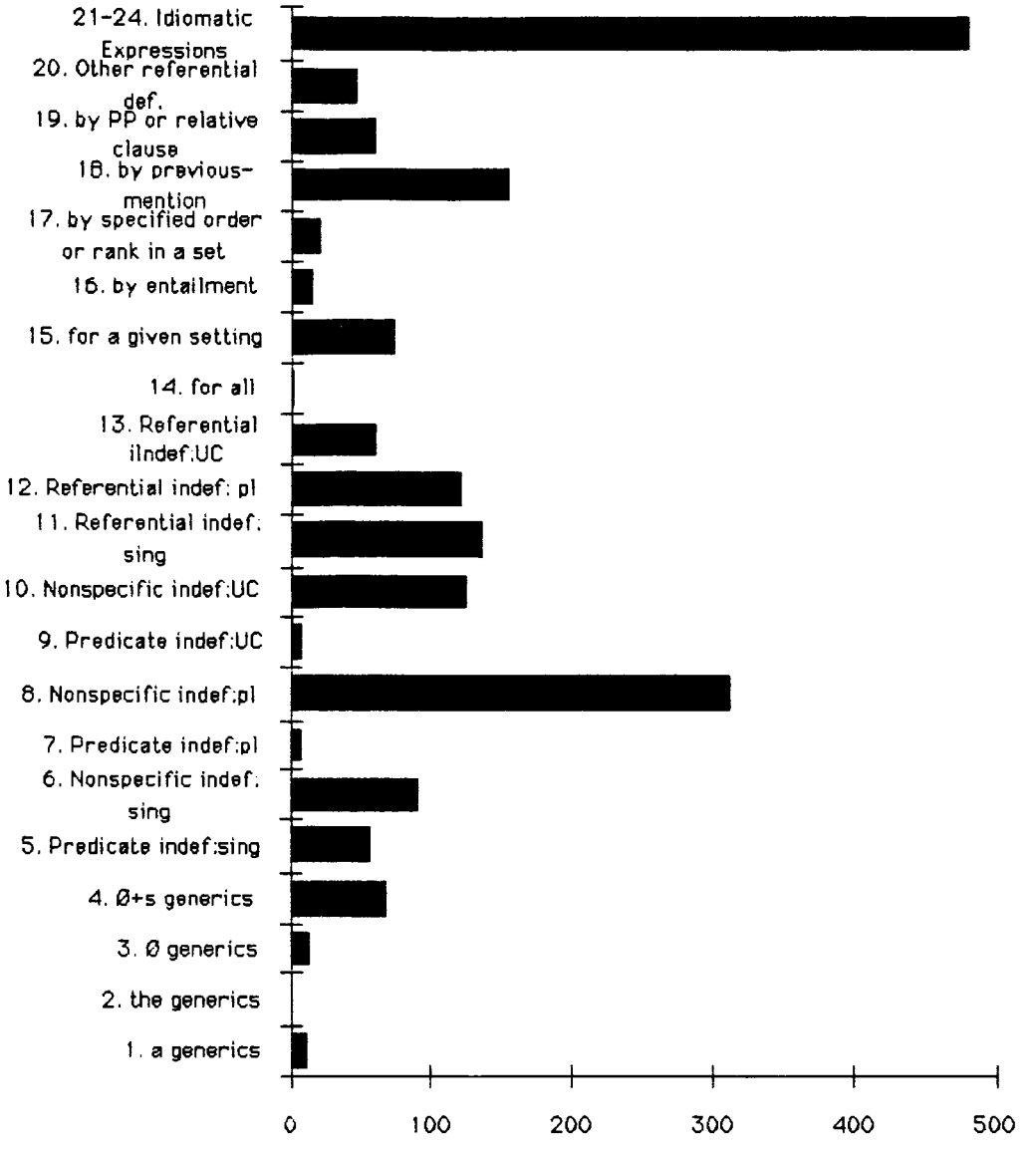


Figure 7. Occurrence of each semantic context.

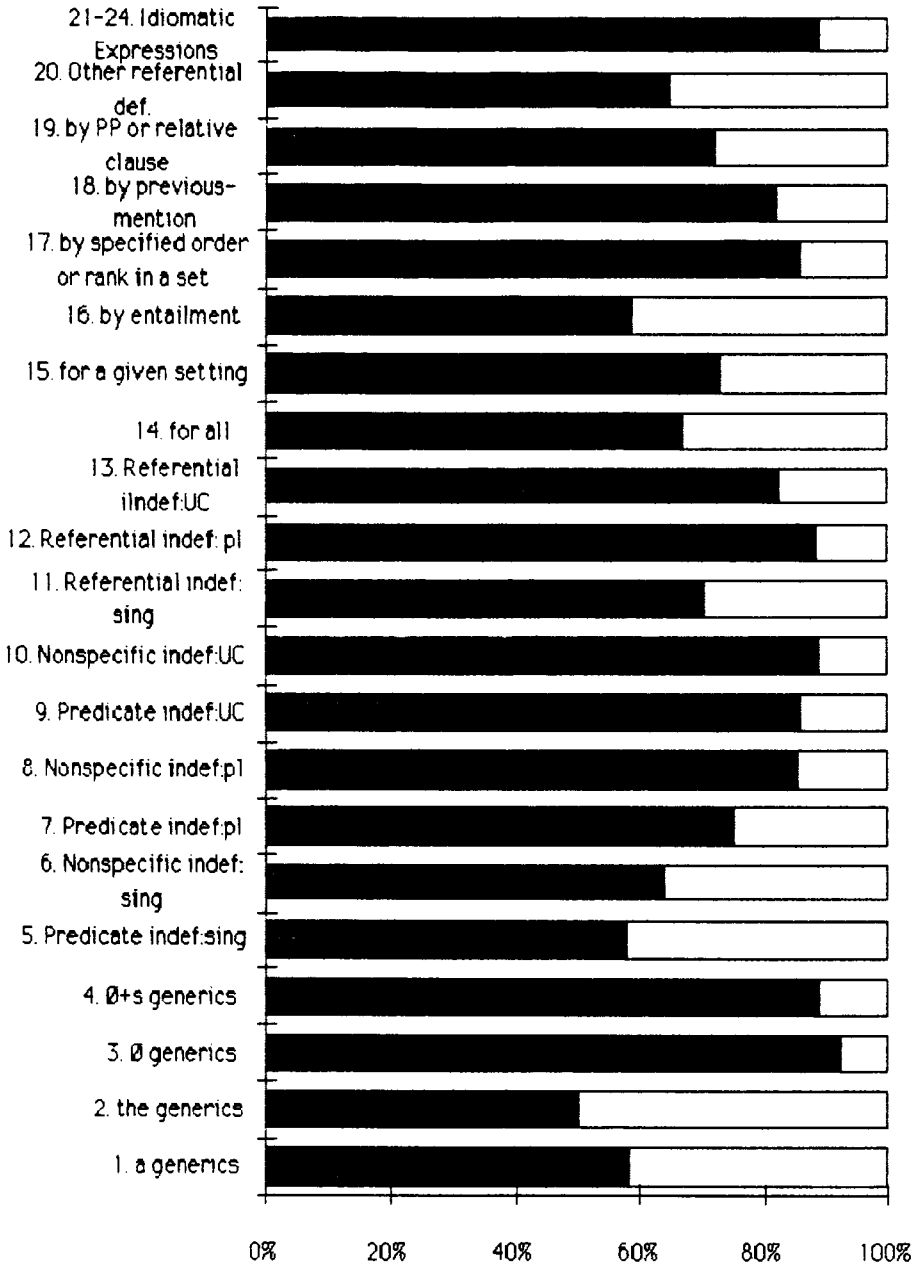


Figure 8. Percentage of articles used correctly in each semantic context.

nouns (*Ø*)"(85.7%), "Unique by specified order or rank in a set (*the*)"(85.7%) and "idiomatic expressions" (88.8%). The percentage

correct is moderately high in contexts of "Referential indefinite uncountable nouns (*Ø*) "(82.3%), and of "Unique by previous-mention(*the*)"(81.9%). These figures indicate that subjects successfully used articles in the contexts where *Ø* or *Ø+s* is required, and in one type of context requiring *the*, but the subjects did not use articles very successfully in contexts requiring *a*

On the other hand, the percentage correct is considerably lower in contexts of "predicate nominals: singular nouns" requiring *a* (57.9%) and of "Unique by entailment" requiring *the*(58.8%). Contexts of "*the* generics" will not be discussed because there are only two instances, and thus, not sufficient data for analysis.

As mentioned earlier, incorrect instances in Type 1-3 contexts can be either syntactic errors or semantic/pragmatic errors, and the figures for percentage correct discussed above do not necessarily represent the difficulty level of semantic/pragmatic functions. In Type 4 (definite contexts), however, the figures for percentage correct and the difficulty of semantic/pragmatic functions correlate. Thus, as the low percentage correct in contexts of "Unique by entailment" indicates, this semantic/pragmatic function has presented considerable difficulty to subjects.

It is necessary to examine use of *the* in Types 1-3 (generic and indefinite contexts) to see if semantic/pragmatic functions present difficulty. The article *the* is used more frequently in contexts of "referential indefinite singular nouns" and of "referential indefinite uncountable noun". In the former contexts, 11.5% of the articles used are *the*, and in the latter, 13.7% are *the*. The more frequent use of

the in these contexts indicates that Type 3 [+SR -HK] is more problematic than Type 1 [-SR +HK] and 2 [-SR -HK].

Syntactic Accuracy

The rates of syntactic accuracy are lower than those of semantic/pragmatic accuracy: in Types 1-4, 89.0% for the total subject pool, 74.8% for the lower level subjects, and 90% for the advanced level subjects.

Some syntactic rules may present more difficulty than others. Comparing the percentage correct of each context within Type 2 or Type 3 can make it possible to observe some facts regarding difficulty of syntactic rules.

In Types 2 and 3, contexts requiring the same semantic/ pragmatic functions of articles are further divided into three; namely, contexts before singular nouns, plural nouns, and uncountable nouns. By comparing the three, it is possible to see what kind of nouns may be more difficult than others.

In contexts of "predicate nominals," articles are used correctly before singular nouns 57.9%, before plural nouns 75%, and before uncountable nouns 85.7%. The positions requiring *Ø* have the largest number of correct instances, and the positions requiring *a* have the smallest number of correct instances.

A very similar result is observed in contexts of "Nonspecific referent indefinite." The figures of percentage correct are: 63.7% before singular nouns, 85.3% before plural nouns and 88.8% before uncountable nouns.

In Type 3 contexts, the percentages correct for "referential indefinite" contexts are: 70.1% before singular nouns, 89.3% before plural nouns and 82.3% before uncountable nouns. In contexts of this type as well as in the other contexts in Type 2, contexts requiring *a* have the lowest percentage correct, but contexts requiring *Ø+s* have the highest percentage correct.

Syntactic Accuracy vs. Semantic/Pragmatic Accuracy. Syntactic accuracy in Types 1-4 is 89.0% and semantic/pragmatic accuracy is 90.0%. The syntactic accuracy is only slightly lower than semantic/pragmatic accuracy. The gap between the two accuracy rates is much greater for the lower level students than for the advanced level students. Syntactic accuracy is 74.8% for the lower level subjects, and 90.0% for the advanced level subjects. Semantic/pragmatic accuracy is 84.6% for the lower level subjects and 92.0% for the advanced level subjects. The gaps between the two accuracy rates are 18.1% for the lower level subjects, and 6.0% for the advanced level subjects.

Errors and Types of Nouns. In the data obtained from the lower level subjects, syntactic errors are frequently found before countable nouns such as "student" (14 errors out of the total 151 errors), and "cafeteria"(6 times). In the data from the advanced subjects, many errors are found before uncountable nouns or nouns which can be often used alternatively either as a countable noun or as an uncountable noun. The nouns which have the largest number of syntactically incorrect articles before them are: "time" (7 errors), and names of meals "lunch," "breakfast," "dinner"(7 errors in Types 1-4).

A large number of incorrect articles used in "idioms and commonly used expressions" are the nouns which can be commonly used both in idioms and in other contexts, e.g., nouns such as "school" (8 errors), "class" (10 errors), and meals "breakfast," "lunch," "dinner" (9 errors).

Article Use and Syntactic Structures of NPs

To see if there is a relationship between complexity of NPs and production of correct articles, NPs were divided into 15 categories depending on whether the nouns have modifiers or not and on the kinds of modifiers they have. Table V shows the categories and number of correct and incorrect instances, and the percentage correct.

The percentages correct shown in the table indicate that in general the more elements the NPs have in their preceding modifiers, the lower the correct use of articles in the NPs. Exceptions are prepositional phrases "N+PP" (82.3% correct) vs."□+N+PP" (83.0%) and relative clauses "□+N+RC"(75.0%) vs. "□+□+N+RC" (75.0%). Otherwise, nouns without any modifiers have the highest percentage correct of 86.3%, and NPs with more elements in premodifiers have lower percentages correct.

Among the following modifiers, only prepositional phrases and relative clauses seem to have sufficient numbers of instances for valid data. The NPs with relative clauses have a lower percentage correct (N+RC: 76.0%, □+N+RC: 75.0%, □+□+N+RC: 75.0%) than the NPs with prepositional phrases(N+PP: 82.3%, □+N+PP: 83.0%, □+□+N+PP: 50.0%).

TABLE V

PERCENTAGE OF CORRECT ARTICLES
USED IN EACH NP STRUCTURE

	1-21			22 -48			total		
	C	T	%	C	T	%	C	T	%
N	255	329	77.5	649	771	90.0	949	1100	86.3
□+N	64	107	59.8	276	343	80.5	340	450	75.6
□+□+N	8	25	32.0	49	63	77.8	57	88	64.8
□+□+□+N	1	2	50.0	16	19	84.2	17	21	81.0
□+□+□+□+N	1	1	100				1	1	100
N+PP	6	10	60.0	45	53	84.9	51	62	81.0
□+N+PP	4	5	80.0	25	30	83.3	29	35	83.0
□+□+N+PP	0	1	0	5	9	55.6	5	10	50.0
□+□+□+N+PP	0	0	0	0	1	0	0	1	0
N+RC	6	8	75.0	29	38	76.3	35	46	76.0
□+N+RC	2	2	100	13	18	72.2	15	20	75.0
□+□+N+RC	0	2	0	6	6	100	6	8	75.0
N+to infinitive	2	4	50.0	10	12	83.3	12	16	75.0
participles	0	0		0	0		5	6	83.3
complementizer:that	0	0		1	1		1	1	100

Note: (1-21: lower level subjects, 22-48: advanced level subjects, C: correct instances, T: total of incorrect instances and correct instances, N:nouns, □: element in pre-modifiers, RC: relative clauses)

Prepositional Phrases and Errors. The types of errors occurring in NPs with prepositional phrases were discussed earlier in relation to some of the tendencies in article use among subjects. The most frequent errors are found in supplying *the* in contexts where *a* or *Ø* are required.

The frequencies of prepositions which occurred in the data and percentage correct were also analyzed. The results are summarized in Table VI.

The quantity of data is not sufficient to make any conclusions about relationship between types of prepositions and article use. As far as the data in this study are concerned, the prepositions used most frequently, "in" and "of", do have a significant difference in the percentage correct of the articles used in the NPs.

Relative Clauses and Types of Errors. Table VII shows the types of errors which occurred in NPs with relative clauses and their frequencies. Errors by omission or, errors using *Ø* in contexts where *the* or *a* is necessary occurred 12 times. Errors by supplying *the* where *a* or *Ø* is necessary are less frequent (5 times).

Sentence Positions of NPs and Article Use

Subject Positions. Frequency of NPs in subject positions was counted, and the percentages correct were scored. The percentages correct are: 70.8% (63 correct in the total of 89) for the lower level subjects, 91.3% (221 in 242) for the advanced level subjects and 85.8% (284 in 331) for the total subject pool. The number of NPs in subject positions is much smaller than that of NPs in predicate

TABLE VI

PREPOSITIONS USED IN NOUN PHRASES AND PERCENTAGES OF CORRECT ARTICLE USE

Preposition	correct	incorrect	percentage
of	41	10	80.4%
in	20	7	78.5%
about	5	2	71.4%
with	3	0	
for	6	3	66.7%
between	1	0	
to	1	0	
on	1	0	
against	2	0	
as	1	0	
from	1	0	
at	1	0	
within	1	0	

TABLE VII

RELATIVE CLAUSES AND
ERRORS IN ARTICLE USE

Used	Required	Frequency
Ø	the	8
Ø	a	4
the	a	2
the	Ø	3
a	the	1

positions because the subjects frequently used pronouns in subject positions.

Types of Errors in Subject Positions. In other researchers' studies, unique tendencies were found in article use in subject position NPs: thus, types of errors in subject position NPs were examined in this study for comparison. Table VIII shows the types of errors and frequencies in Types 1-4.

The most frequent type of error is the use of *Ø* in contexts where *the*, *Ø+s* or *a* is required (14 instances in *the* contexts, 10 instances in *Ø+s* contexts, 6 instances in *a* contexts). The other types of incorrect instances are much fewer.

It may be noted again that in this study the distinction between *Ø* and *Ø+s* involve plural form of nouns; thus, the use of *Ø* in place of *Ø+s* in the above table means that plural form of the noun was used in a context where an uncoutable noun without *the* or *a* should

TABLE VIII

TYPES OF ERRORS IN SUBJECT POSITION AND FREQUENCIES

Article Used	Article Required	Lower	Advanced	Total
the	Ø+s	1	2	3
the	a	0	2	2
the	Ø	0	1	1
a	the	2	3	5
Ø	a	3	3	6
Ø	the	12	2	14
Ø	Ø+s	7	3	10
Ø+s	the	0	2	2
Ø+s	Ø	1	0	1
one	the	1	1	2
the	the+s	0	2	2

have been used. For example, "*Ø* breads" in "They ate breads" is the use of *Ø+s* in the context where *Ø* is required.

Subject Position vs. Predicate Position. The percentages of articles used correctly in predicate position NPs in Types 1-4 are: 61.7% for the lower level subjects, 82.1% for the advanced level subjects, and 79.5% for the total subject pool. The percentages are much lower than those for NPs in subject position. The percentages can rise if articles in "idioms" are included, since articles are used with high accuracy in idioms, and because all the NPs in idioms in the

data are in predicate positions. Including NPs in idioms, the percentages of correct article use are: 69.2% for the lower level subjects, 84.8% for the advanced level subjects and 82.0% for the total subject pool.

SUMMARY OF RESULTS

Various aspects of article use among Japanese students were analyzed in the present study, and the major results are summarized as follows:

1) Article use among Japanese students was found to be rather "systematic" than arbitrary. The most salient tendency was use of *the* in [+SR -HK] contexts.

2) Among the four articles, *a*, *the*, *Ø* and *Ø+s*, analyzed in this study, the orders of difficulty were determined in terms of percentages of articles used correctly and of percentages of articles supplied in obligatory contexts. The orders were found to be different: the former was found (from the most difficult to the easiest) *Ø* > *a* > *the* > *Ø+s*, and the latter was *a* > *the* > *Ø=Ø+s*. The orders also differed slightly for different proficiency levels.

3) Syntactic accuracy and semantic/pragmatic accuracy were found to be only slightly different. In Types 1-4, syntactic accuracy was 89.0%, while semantic/pragmatic accuracy was 90.0%.

4) The syntactic structures of NPs and article use were examined and a general relationship was found between the two. Complex NPs

with pre- or postmodification were found more difficult than nouns without modification.

5) The relationship between article use and the sentence position of NPs was examined, and it was found that articles in subject positions were used more accurately. The most salient type of errors found in subject positions was use of *Ø* in place of *a, the* or *Ø+s*

CHAPTER V

DISCUSSION

In this chapter, the features of article use among Japanese found in this study are discussed in comparison with the findings in previous studies. The sources of difficulties are speculated upon, especially in relation to grammatical descriptions in English textbooks.

TENDENCIES IN ARTICLE USE

Article Use among Japanese: Systematic or Random?

Due to the insufficient quantity of data, it is not possible to draw a definite conclusion about a system of article use among Japanese students. However, it is likely that the subjects use articles according to some rules, rather than arbitrarily. The high accuracy rates of article use, 81.5% among the total subject pool, would not be possible if the subjects use the articles at random.

The accuracy rates over total use of articles differ a great deal between the lower level subjects (64.0% in 1-4 Type contexts, 69.5% in all contexts) and the advanced students (84.2%, 85.9%). This difference indicates that Japanese students improve their article use as they acquire higher proficiency levels. The improvement suggests that there may be an on-going process of revising hypotheses

regarding rules of article use in order to acquire the native speaker's system. Otherwise, improvement would be unlikely to take place.

Overuse of *the*

Overuse of *the* in Type 3 [+SR -HK] contexts (e.g., "I saw *the* short video about Japanese high school students") was found among the subjects, and this tendency is compatible with the results in other studies (Huebner, 1983; Parrish, 1987; Thomas, 1989, and Yamada & Matsuura, 1982). In Master's study (1988) overgeneralization of *the* is found among the subjects with lower proficiency, although Master does not specify in what contexts the tendency was found. Overuse of *the* is found among both Japanese speakers (Parrish, Yamada & Matsuura, Master) and speakers of other languages (Huebner, Thomas). However, the researchers do not agree about what may have caused the overuse of *the*.

The overuse of *the*, or overspecification, is attributed to egocentricity in studies of first language acquisition (Brown 1973, and Warden 1976), and Yamada and Matsuura (1982) speculate that the overspecification by Japanese students may be related to the tendency possibly caused by egocentricity in first language acquisition. On the other hand, Thomas claims that overuse of *the* among adult L2 learners is unlikely to be attributed to egocentrism, and that overuse of *the* in both L1 and L2 acquisition may be due to an innate sensitivity to the specificity of nouns, as was claimed by Bickerton (1981).

The innate sensitivity to the specificity of nouns alone is not a probable cause of overuse of *the*, considering the fact that the overuse was exclusively or mostly found among the speakers of languages which lack formal equivalents of articles (Master, Thomas). The tendency is more likely to be attributed to the difficulty of considering the hearer's knowledge for Japanese speakers, who lack the need to consider either specificity or hearer's knowledge in their own language. Japanese students may not know that they have to consider the hearer's knowledge in using articles or to what extent they have to consider it. They may have a hard time deciding how much they can assume that the hearers know. The Japanese language has formal equivalents of demonstratives, *sono*(that [thing] near the listener) *kono* (this [thing] near the speaker) and *ano*(that [thing] away from both) which are sometimes called "prenominals," but their functions and meanings are very different from English articles. Despite the difference, the English definite article *the* is often translated to *sono* and taught as if they were equivalents. Treatment of these different grammatical items as "equivalents" may have caused confusion among students. Speculation about the non-existence of equivalents of English articles in Japanese and the possibly inadequate treatment of articles in instruction will be discussed more in detail later in this chapter.

Overuse of *Ø*

Overuse of *Ø* or possible omission of articles *a* or *the* was found in all contexts, and especially in Type 2 [-SR -HK] contexts (e.g.,

"when I was *Ø* high school student..."). Master reports that the use of *Ø* is dominant in all contexts among speakers whose languages do not have articles. Overuse of *Ø* is also reported in Thomas (1989) and in Parrish (1987).

The reason Japanese students tend to overuse *Ø* before predicate nominals may be the unique semantic function of articles in this type of NP. In a phrase like "when I was a student," there is no real entity to be referred to, and the noun "student" functions as a tool of categorization or description of attribution. The tendency may be reinforced by the equation of *a* to *one*, commonly found in English textbooks used in Japan. The article *a* appears at a very early stage of English instruction, and the first and the last explanation in one textbook (Sato, 1986) is "a: one (entity) or one (person)" . It would not make sense to Japanese students to count attribution of some sort, and use *a*

No use of articles *the* or *a* is very often regarded as failure to use articles such as seen in Thomas' (1989) statement "the [-Art] group produced *Ø* more frequently (or perhaps, more realistically, failed to use any article)" (p. 349). Among the lower level students, this may be true to a greater extent. In fact, the subjects with the lowest accuracy rates used very few *a's* and *the's*, and used almost exclusively *Ø* and *Ø+s* articles. Two of the subjects used only *Ø* and *Ø+s* despite the fact that there were contexts where *a* and *the* were required. In those cases, the non-existence of articles *the* or *a* before singular nouns is most likely caused by failure to use articles. However, in this study, all non-occurrences of *the* or *a* are discussed

as "use of *Ø* or *Ø+s*" no matter whether the speaker may have intentionally used *Ø* or failed to use any articles.

The perception of overuse of *Ø* and *Ø+s* simply as the negligence or failure to use articles can be very misleading. In Master's study, only the subject with the lower level proficiency used *Ø* frequently. In the present study, however, use of *Ø* and *Ø+s* in place of *the* or *a* is a very common type of error among the advanced subjects as well as the lower level subjects. In this study, 71 instances out of 151 incorrect instances of the lower level students are use of *Ø* and *Ø+s* where *the* or *a* is necessary, and 92 instances out of 196 incorrect instances among the advanced level students fall into the same type of error. These figures leave nearly identical proportions of the errors of this type: 47.0% among the lower level subjects, and 46.9% among the advanced level subjects. The high proportion of overuse of *Ø* and *Ø+s* among the advanced level students is unlikely to be caused by neglect to use articles.

Master mentions that "control of *a* is part of another system (adjustment of the [+/- count] feature) that matures somewhat independently of the article system)" (p. 34). Control of *a* is naturally related to control of *Ø* and *Ø+s* because failure to use *a* leads to incorrect use of *Ø* and because control of *Ø+s* requires manipulation of the [+count] and [-count] system. Inability to manipulate this system or distinction between countable nouns and uncountable nouns seems to cause overuse of *Ø* in the advanced level students. In fact, there are many instances which suggest that

subjects failed to discern the countability of nouns, as shown by the examples below.

Entry no.	680	(seem to be) fun time
	711	(she had) a breakfast
	786	(spend time on) pastime
	802	(about) grade
	1124	(after she has) late dinner
	1145	(leading) much happier life

The above examples of incorrect instances all contain nouns which might be difficult for Japanese students to decide whether to count or not.

Syntactic Structure and Some Tendencies. Although the quantity of data is not sufficient to make a definite statement, the subjects tended to overuse *the* before nouns which are post-modified by prepositional phrases. Among 24 incorrect instances, 9 instances were use of *the* where *Ø* or *a* is necessary. This may be due to descriptions of pedagogical grammar based on a structuralist account. Grannis (1972) claims that "many grammarians point out the use of the definite article with nouns followed by genitive 'of' phrases" (p. 285). Some pedagogical grammar seems to be based on this account. Robberecht (1983) for example, has the following rule in his list of items in pedagogical grammar: "The NP is made definite by an earlier mention or by a postmodifier" (p. 71). In a 699 page book devoted solely to describing usage of articles, Kumayama (1985) states that modified nouns are specified in that the meaning of nouns is limited to the range of the modification. Article use and modification will be discussed more in detail later in this chapter.

ACCURACY IN ARTICLE USE

Accuracy Rate: Are Articles Really Difficult?

Despite the commonly accepted claim that article use is extremely difficult for Japanese students (see for example, Brender, 1989; Yamada & Matsuura, 1990), the subjects in the present study have relatively high rates of accuracy. Overall accuracy rates involving both syntactic accuracy and semantic/pragmatic appropriateness are 79.0% in Type 1-4 contexts and 81.5% in all contexts in the overall subject pool.

The high accuracy rates cannot be by chance alone, but some instances could have simply happened to be correct. The articles used most frequently are *Ø* and *Ø+s*. As explained in Chapter III, the required articles were determined to benefit the subjects when more than one article could be alternatively used in the relevant context, and if the articles used matched the required articles, they were regarded as correct. This way of determining the required articles may have increased the proportion of *Ø* and *Ø+s* contexts in all contexts. Figure 9 below illustrates the proportion of context requiring the respective articles.

The contexts requiring *Ø+s* constitute the largest proportion, 35.8%, and the contexts requiring *Ø* constitute 14.8%. On the other hand, the distribution of the articles actually used by the subjects is illustrated in Figure 10.

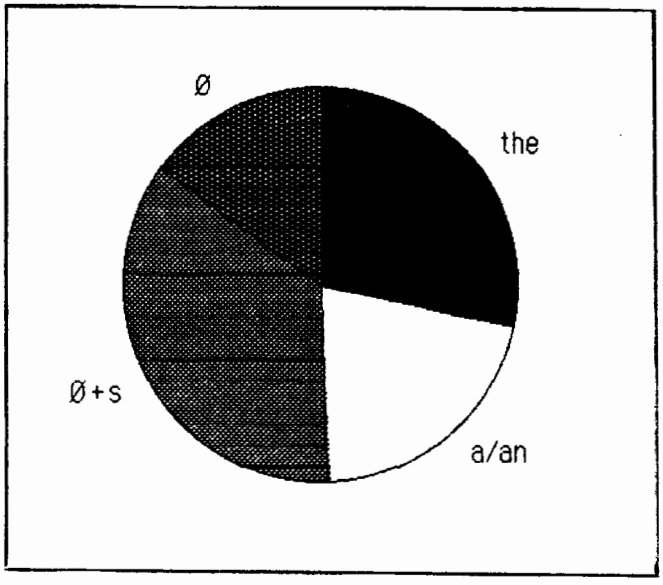


Figure 9. Distribution of required articles.

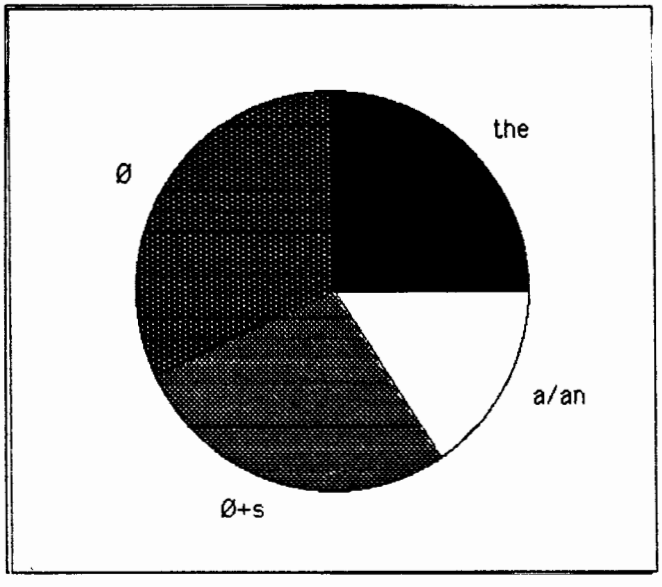


Figure 10. Distribution of articles used by subjects.

The article *Ø* is used most frequently (32.0%), exceeding the proportion of contexts requiring it (Figure 9), and the second most frequently used article *Ø+s* constitutes 27.0%. As described in the results, the percentage correct for *Ø+s* is the highest, and reaches as high as 96%. This suggests that Japanese students can use articles with high accuracy rates partly because a large proportion of contexts require the article *Ø+s* which Japanese students can manipulate most easily and successfully.

The frequent occurrence of *Ø+s* contexts could be a relief for Japanese students since they can achieve a high accuracy rate just with the ability to use *Ø+s* well. Master (1990) tallied all the articles used with common nouns in an issue of "Newsweek" (1989) and found that 46% of the nouns had *Ø* 35% took *the* and 19% took *a* This suggests that Japanese students could generally achieve a relatively high accuracy rate if they use *Ø* and *Ø+s* correctly. However, it also suggests that Japanese students may be more confused about when to use *a* or *the* than they appear to be, on the basis of the accuracy rates.

There is another factor that could make the accuracy rates higher than the Japanese students' real competence in article use. As mentioned earlier, the required articles were usually decided to benefit the subjects. There were many more contexts than expected in which there was more than one possible article, and in those cases what the subjects used was regarded as the "required" article. A different choice of article usually causes slight changes in meaning or in style, i.e., formal or informal, colloquial. Pica (1983) claims that

there are even cases in which "the article choice could vary without regard to contextual factors and without interfering with communication" (p. 230).

In the data of the present study, one of the most common kinds of possible variation in article choice is between articles for "generics" [-SR +HK] and articles for "referential indefinite" [+SR -HK]. Though there is an obvious difference in meaning, either meaning could be appropriate in some contexts. The subjects in this study wrote about Japanese high schools after they saw a video about a Japanese high school. Consequently, in their compositions the subjects might have been talking about the specific high school which they saw on the video, or about high schools in Japan in general. In some essays, it was clear which meaning the noun phrase had to take, but in others, it was not possible for a reader to know which meaning the writer intended. Readers generally accept the meaning as written in the text if the choice of article is grammatically correct and its meaning is not awkward. This variability in the choice of article means that the subjects could attain a higher accuracy rate than their competence would warrant. What is more significant, it implies that the subjects do not necessarily convey what they intend. In other words, it is probably more difficult to communicate intended meaning than to use correct articles.

One question rises concerning the above statement. It is possible that the subjects did not intend to express specificity/non-specificity or definiteness/indefiniteness at all. It would not matter so much for Japanese speakers whether the noun phrases they use are definite or

specific, because the Japanese speakers do not overtly express these distinctions in their own language unless the need to express the meanings is so salient that other words such as prenominals or modifiers are used to specify referents. Because of this lack of need, they are not conscious of these concepts. Often the meaning is expected to be understood by readers by means of the context. Kitao (1986) points out that "writers of English are considered to have more responsibility for the readers' comprehension than Japanese writers do and Japanese readers have more responsibility for their own comprehension than English readers do" (p. 13).

What teachers have to decide, then, is whether they should teach students to take more responsibility for the reader's comprehension and teach them to use articles to mean what they intend to mean, or to leave the students to use articles which may be interpreted ambiguously.

SYNTACTIC RULES VS. SEMANTIC/PRAGMATIC FUNCTIONS

What is Difficult, Syntactic Rules or Semantic/Pragmatic Functions?

Syntactic accuracy among the total subject pool in Type 1-4 contexts is 89.0%, and the semantic/pragmatic accuracy is 90.0%. The almost identical accuracy rates imply that both syntactic rules and semantic/pragmatic functions are somewhat difficult for Japanese students.

As discussed earlier in this chapter, the subjects may have not succeeded in expressing what they intended to mean, but if the

meaning is not awkward, the reader would accept the meaning conveyed by articles used by the writer. Considering the possible discrepancy between what the NP was intended to mean and what the NP actually means to the reader, semantic/pragmatic meaning may be more difficult. But a definite conclusion cannot be made on the basis of this claim since the intended meanings are not recoverable.

What is more significant is the difference in accuracy rates between the groups of subjects with different proficiency levels. Syntactic accuracy is 74.8% for the lower level subjects and 90.0% for the advanced level subjects. On the other hand, semantic/pragmatic accuracy is 84.6% among the lower level subjects, and 92.0% among the advanced level. Although Japanese students may manipulate semantic/pragmatic functions more accurately than syntactic rules, as they improve overall English proficiency, the progress may be much slower in the manipulation of semantic functions than in the observation of syntactic rules. Syntactic rules may appear to be very difficult at the early stage of learning English, but Japanese students can efficiently acquire the rules. On the contrary, semantic/pragmatic functions may not appear to be very difficult in the beginning (due to the coincidence of general frequent occurrence of $\emptyset$+s and $\emptyset$ contexts and Japanese tendency to overuse $\emptyset$ and $\emptyset$+s), but Japanese students may have a hard time mastering them.

Difficulty of Semantic/Pragmatic Types

Percentage correct of each semantic type is: Type 1 [-SR +HK] 84.5%, Type 2 [-SR -HK].80.0%, Type 3 [+SR -HK] 79.7% and Type 4 [+SR +HK] 75.5%. Hence, the order from the most difficult to the easiest is: Type 4› Type 3› Type 2› Type 1.

The most difficult semantic/pragmatic contexts in the present study are the contexts in Type 4. Since the percentage correct in this type directly reflects the difficulty of semantic/pragmatic function of [+SR +HK], the manipulation of [+SR +HK] is found to be the most difficult aspect of article use in terms of semantic/pragmatic functions. This may be because the writer (or the speaker) has to decide at the same time that the NP is specific and that it can be assumed to be known to a potential reader (a hearer).

In using articles in Type 1-3 contexts for example, failure to discriminate [-SR +HK] from [-SR -HK], or [-SR -HK] from [+SR -HK] does not necessarily lead to semantic/pragmatic errors since *a, Ø, Ø+s* are all appropriate in all of the three contexts. In [-SR -HK] contexts, semantic/pragmatic errors occur only when a writer regards a nonreferential NP as a referential NP and assumes that the NP is known to the reader. On the other hand, in [+SR -HK] contexts, failure to discern [-HK] from [+HK] alone leads to errors. The percentage of pragmatic errors (36.9%) is much higher than that of Type 2 (15.8%), and hence, is compatible with the above speculation.

Examining each numbered context from 1 through 20, both the contexts which require *Ø* or *Ø+s* and the contexts which may have explicit cues for definiteness have high accuracy rates. The contexts

requiring *Ø* or *Ø+s* (from the highest accuracy rate to the lowest) are "*Ø* generics," "*Ø+s* generics," "Nonspecific referent: indefinite uncountable nouns," and "Nonspecific referent: indefinite plural nouns."

Although supplying correct articles in Type 4 is more difficult than in other contexts, explicit verbal signals help a great deal. For example, the high accuracy (85.7%) in "Unique by specified order or rank in a set" can be explained by availability of verbal signals such as "last" "first" "the biggest" and so on. The accuracy rate of articles in "Unique by previous-mention" is also high (81.9%) and can be explained by the existence of co-referential NPs which appeared earlier in the discourse.

Use of the article *the* in "Unique by previous-mention" seems to be the most basic and easiest rule in article usage, and is regarded as the easiest by Master (1988a), but the accuracy rate is not as high as "Unique by specified order or rank." This indicates that the rule of supplying *the* before NPs mentioned previously is not as easy as it seems. As Yamada points out, the first mention can be done with synonyms or equivalent NPs and the subjects in Yamada's study failed to supply *the* before the NP which was previously mentioned by using a synonym or a near synonym. In the present study, it was found that even native speakers might disagree among each other about the previous-mention contexts. For instance , in the sequence "There were two students in the video. The girl woke up early in the morning and the boy slept in.," native speakers whom I asked for their judgement on accuracy did not always agree.

Definite contexts which do not provide any explicit verbal signals present more difficulty to Japanese students. Many subjects failed to provide *the* in "Unique by entailment" contexts, and the accuracy rate was 58.8%. Yamada and Matsuura (1982) also found that the subjects in their study had less than 30% correct response for NPs specified by entailment. To decide what can be entailed by the previous context is found to be very difficult for Japanese students.

Other situations which present difficulty to Japanese students are: "Unique for a given setting"(73.0%) and "Unique by PP or relative clause" (72.1%), and "Other referential definite" (64.6%). Like "entailment," "Unique for a given setting" contexts do not provide explicit direct signals for definiteness, and hence cause difficulty to Japanese students.

On the other hand, "Unique by PP or relative clause" and "other referential definite" actually provide some signals. "Other referential definite" are mostly NPs modified by adjectives such as "same," "Japanese," and "typical." These modifiers may cause more confusion among Japanese students because whether the modified NPs take *the* or not depends solely on what the NPs mean. If the NPs were specified by the modifiers to the extent that only one or one set of specific referent(s) is singled out and is assumed known to the hearer, the NPs take *the*. Thus, the existence of the modifiers complicate the article choice rather than facilitate.

All the problematic contexts above have one thing in common. That is, the need to consider the meaning of the NPs. Dependence on forms would do more harm than good.

Difficulty of Syntactic Rules

Semantic/pragmatic functions and syntactic rules are closely interrelated, and it is not possible to examine them completely separately. For this reason, in the above discussion about semantic/pragmatic functions, syntactic rules are sometimes mentioned.

The rates of syntactic accuracy are somewhat lower than those of semantic/pragmatic accuracy: 89.0% for the total subject pool, 74.8% for the lower level subjects, and 90.0% for the advanced level subjects. The low accuracy rate is mainly due to overuse of *Ø* or supplying *Ø* in contexts where *Ø+s*, *the* or *a* are necessary. Though not as common as incorrect instances of *Ø* use of *a* or *Ø+s* in place of *Ø* is also a common error.

Other kinds of incorrect instances are very limited in number. For instance, only two instances of the co-occurrence of *a* and plural forms are found in the data: "a lots of"(entry #986) and "a club activities"(entry #1401).

Predominant overuse of *Ø* was discussed earlier in this chapter and the conclusion was that overuse of *Ø* was not always failure to use any article, but rather attributed to the difficulty in distinguishing between countable nouns and uncountable nouns.

Sentence Position and Difficulty of Article Use. As Huebner (1979) and Parrish (1983) found in their studies, subjects tended to use *Ø* before NPs in subject positions. However, the rate of accuracy is much higher for NPs in sentence positions than those in predicate positions. Therefore, it is NPs in predicate positions which present

more difficulty. One of the reasons may be that in English NPs which serve as subjects usually have simpler structures than those in predicates.

Countable vs. Uncountable Nouns. Why is the distinction between countable and uncountable nouns is so difficult for Japanese students? There are many possible reasons. In the Japanese language no distinction is made between singular and plural nouns; thus, Japanese students are not used to differentiating between NPs which have single referents and NPs which have more than one referent. For Japanese students, it would not matter whether there is one or more than one referent.

Secondly, Japanese students may be confused by concepts of countability since many of the nouns which are supposed to be uncountable can be counted when adding some meaning (e.g., "many spices" meaning "many kinds of spices") or when used with *of*-partitive phrases such as "a glass of" and " a piece of." The Japanese language has so-called "classifiers" which function in almost the same way as *of*-partitive phrases. It is possible to count virtually everything by using classifiers, and judgement between English countable and uncountable nouns is impossible by using Japanese criteria for countability.

Thirdly, the countability of certain nouns may be culture-specific. For example, fish for eating may be recognized as a piece of salmon or cod, which can not be easily counted. But for most Japanese, the first kind of fish that they would think of is usually small kinds of fish, which they usually eat as a whole. It may be very

difficult for Japanese students to regard fish as uncountable accoring to their way of thinking. Koizumi (1990) also points out that many instances of plural forms are, after all, refections of the American way of thinking.

Another cause of confusion may lie in the manner of instruction in classes or textbooks. In English instruction both in Japan and in the United States, nouns are often divided into two groups, count and non-count, ignoring the fact that many nouns can actually be countable or uncountable depending on what the speaker wants it to mean. Koizumi expresses the same concern, and gives many examples as follows (p. 5-23):

(1) a. I saw no lights there.
b. I saw no light there.
(2) a. I have no memory of that night.
b. I have many pleasant memories of our trip.
(3) a. My effort to raise money for the project has failed.
b. My efforts to raise money for the project have failed.

Similarly, many of the nouns used by the subjects in the present study can function as either a countable noun or uncountable noun. The following errors are examples of NPs containing these problematic nouns.

"has a dinner"(has dinner) vs. "had late dinner"(had a late dinner)
"A commuting time is..." (Commuting time is...)
"he did not have a time to eat breakfast" (did not have time to...) vs. "he had hard time." (he had a hard time)

If nouns were indeed clearly divided into the two groups, it would make it much easier for Japanese learners to use the right articles for NPs. Since the distinction is not clear-cut, and since there are many factors to consider, over-simplified rules could be more an obstacle than an aid for the students. The distinction between countable and uncountable nouns appear to be a syntactic matter; however, the distinction involves the "meaning" to be conveyed.

THE DIFFICULTY ORDER OF ARTICLES

Difficulty order was determined by two methods, namely, the percentage of articles used correctly, and suppliance in the obligatory contexts. There was a significant difference between the difficulty order as determined by the percentage correct and the order as determined by suppliance in obligatory contexts.

The Difficulty Order Determined by Percentage Correct

The difficulty order by the percentage correct, from the most difficult to the easiest, is: *Ø* (47%)› *a/an* (83%)› *the* (86%) ›*Ø+s* (96%) (Figure 4). The article *Ø* is used most frequently, but is also used most inaccurately. The subjects either fail by neglect to supply articles *a, the,* or plural form *Ø+s* or they misunderstand countable nouns as uncountable. The other articles have much higher percentages of correctness. When these articles are used, they are correct most of the time. While the articles *Ø* and *Ø+s* were analyzed as a single category of article *Ø* in previous studies, the present study shows that there is a large gap between the percentage correct

for *Ø* and that for *Ø+s* It is evident from this study that it is useful to analyze these two as separate categories.

The difficulty order varies slightly for different proficiency levels. For the lower level subjects, the order is: *Ø*(29%)› *the*(72%)› *a/an*(76%)› *Ø+s*(96%). For the advanced subjects, the order is identical with that of the total subject pool: *Ø*(58%)› *a/an*(85%)› *the* (90%)› Ø+*s*(96%). The lower level subjects seem to have a harder time in producing *the* correctly. Otherwise, *Ø+s* remains the easiest to produce correctly, and *Ø* remains the most difficult to use correctly. This indicates that the lower level students tend to overuse *the* more in overall contexts. The overuse of *the* among the lower level students could be caused by the dynamic revision of their hypotheses about the target rules, as suggested by Huebner (1979). The lower level subjects may have recently started using *the* and overuse it for the time-being until they adjust their rules more closely to the target rules.

The above order is generally compatible with the results of Yamada and Matsuura's (1982) study In their study, the difficulty order is: *Ø*› *a/an*› *the* for the intermediate level students, and *a/an* › *Ø*› *the* for the advanced level students. They claim that *the* is the easiest article due to an overspecification strategy. What should be noted, however, is their claim that the most frequent errors of their subjects, constituting about 57% of total errors, is use of *the* in contexts where a or *Ø* is necessary. This seems contradictory to the above claim about the difficulty order.

The Difficulty Order Determined by Suppliance in Obligatory Contexts

The difficulty order by suppliance in obligatory contexts, from the most difficult to the easiest, is: *a/an*(63%)› *the*(76%)› *Ø, Ø+s* (86%, 86%). To supply *a/an* in the contexts which require *a/an* is found to be the most difficult for Japanese students. To supply *the* where it is necessary is also difficult, following the suppliance of *a*

The difficulty order by suppliance discussed above is exactly compatible with the order found by Master (1987) who also used the notion of suppliance in obligatory contexts. His order of accuracy is, from the least accurate to the most accurate: *a/an*› *the*› *Ø* He states, however, that *Ø* is overused with the result that *Ø* accuracy is almost 100%, which seems somewhat contradictory.

The Comparison of the Difficulty Orders

The gap between the two difficulty orders is substantial. This can explain seemingly very contradictory statements given by the previous researchers. The concepts of "difficulty" and "accuracy" in themselves may be misleading. The correct production of articles and their suppliance in obligatory contexts are interrelated, and it is insufficient to examine only one of the two and to discuss "difficulty" or "accuracy."

The article which is seemingly the most paradoxical is *the*. The article *the* is ranked the second easiest following *Ø+s* when judged by the percentage correct, but earlier in this chapter a conclusion was drawn that Type 4 [+SR +HK] (in which *the* is always required) was the most difficult semantic type. The contradiction can be

perhaps explained by syntactic rules regarding *the*. Once students decide an NP is definite, they do not have to discriminate countable nouns from uncountable nouns since both take *the* whether it is a mass noun, plural form or singular form. Therefore, if *the* is correctly produced in Type 4 contexts, they are syntactically correct most of the time.

The difficulty in supplying *a* or *the* naturally leads to the incorrect use of *Ø* and it is misleading to conclude one is more difficult than the other. Except that the *Ø+s* article, a plural form, is the easiest form for the Japanese students, all the other articles are troublesome for them. The type of difficulty varies. The difficulty order determined by percentage correct indicates how difficult it is to produce correct forms, and not to produce incorrect forms. The difficulty order by suppliance in obligatory contexts indicates which contexts are more difficult than the others.

IDIOMS AND COMMONLY USED EXPRESSIONS

In the above discussions concerning accuracy, data obtained in the contexts of "idioms and commonly used expressions" were excluded since the choice of articles in these contexts involves a different kind of competence.

In Type 1-4 contexts, manipulations of semantic/pragmatic functions and of syntactic rules are crucial in choosing what article to use, but they are not always necessary in article choice for idioms

and commonly used expressions. Rather, it is necessary to memorize chunks of phrases and utilize them in appropriate situations.

The Importance of the Idiomatic Expressions

The subjects in the present study exhibit considerably high accuracy rates in idioms and commonly used expressions: 88.8% in the total subject pool, 82.1% for the lower level subjects, and 91.9% for the advanced level subjects. The high accuracy rate even among the lower level subjects implies that articles contained in idioms are the first articles which Japanese students become able to use correctly.

The high accuracy rates in articles used in idioms contribute a great deal to overall accuracy in the subjects' writing. Not only are they easy for the Japanese subjects to use, NPs in idioms and commonly used expressions constitute a substantial proportion of the number of NPs used in a composition. This is particularly true with the lower level subjects. The total number of NPs used by the lower level subjects is 501, and 151 of these are contained in idioms and commonly used expressions, constituting 30.1%. In the advanced level data, the total number of NPs is 1379, and 332 (24.0%) are in idioms.

The content of the compositions describes very common, daily life. The frequent occurrence of idioms and commonly used expressions implies that an essential part of daily communication may be carried out mostly with idioms. The lower level subjects' compositions are much shorter than those of the advanced students. The number of words range from 98 to 258 with an average of 166

words. The advanced level students' compositions range from 171 to 548 words with an average of 347 words. Differences in content depend on whether a subject just narrates the events in the video, or goes on to describe his/her own high school days and give comments. The narration of events seems to require a large number of idioms and commonly used expressions such as "go to school" "after class" "go to bed" etc.

The lower level subjects rely heavily on idiomatic expressions, and use articles correctly in communication. This indicates the importance and usefulness of idiomatic expressions. These expressions not only facilitate communication, but also enable Japanese students to use grammatical items (in this case, articles) correctly without mastery of rather complicated functions and rules.

Roles of Idioms in Acquisition of Article Usage

Hakuta (1976) points out that prefabricated routines and patterns serve as input to the rule formation process. Idioms and commonly used expressions are also prefabricated patterns. Since Japanese students' compositions, especially the lower level students', consist of a great many idioms, they may play a critical role in the acquisition of article usage.

Hakuta claims that "[prefabricated patterns] enable learners to express functions which they are yet unable to construct from their linguistic system" and that later "the externally consistent prefabricated patterns become assimilated into the internal structure" (p. 333). The problem is, however, that article usage is

very often idiosyncratic in idioms. Alternately, article usage in idioms may involve the most difficult aspect of articles. For example, uncountable abstract nouns in predicates, such as "eat breakfast" and "I go to school" can hardly become definite and take *the*. But when the same nouns are used to express slightly different meaning, they become countable nouns or become definite as in "she had a typical Japanese breakfast" or "The station is near the school."

For the above reasons, treatment of article use in idioms needs to draw special attention. Students should neither overgeneralize article use into other NPs, or apply regular article usage to idioms. In fact, most of the errors in articles used in idioms seem to be the result of applying regular article usage.

MODIFIERS AND ARTICLE USE

Modifiers and Accuracy of Article Use

The result of this study shows a relationship between complexity of NP structures and production of correct articles. In general, the more complex the NP is, the more difficult for Japanese students to produce correct articles in the pre-noun positions.

Premodification

The above relationship is the most salient in the relation between numbers of elements in premodifiers and percentage correct of articles in the NPs. Percentage correct before bare nouns (N) is 86.3%, before nouns with one element premodifiers (□+N) 75.6%, before nouns with two element premodifiers (□+□+N) 64.8%.

(Percentage correct before nouns with □+□+□+N and □+□+□+□+N premodifiers may not be valid since the data are not sufficient in quantity: 38 instances of □+□+□+N and 2 instances of □+□+□+□+N.) The more elements a premodifier contains, the more unlikely that students produce correct articles.

Many of the □+N premodifiers have structures "noun+noun" and "adjective+noun". Both structures seem to create difficulty for Japanese students for different reasons.

Difficulty with "Noun+Noun". Most incorrect instances of articles before NPs which have "uncountable noun+countable noun" structures are use of *Ø* in place of *a*, found among both the lower level subjects and the advanced level subjects; e.g., "*Ø* hair dryer," "*Ø* lunch box.", "*Ø* high school student." ("high school" is regarded as one element, and is very often used as an uncountable noun.) The subjects may be too concerned with the rule "*Ø*+uncountable noun," and fail to recognize that the choice between *a* and *Ø* is associated with the head nouns. This may be a result of grammatical explanations which usually say "Use *a* before (or attach *a* to) a singular form of a countable noun." The explanations usually ignore the "meaning" of *a* and of NPs. Students are usually taught to identify forms or types of nouns to choose articles. Petersen (1990) points out that it is not the types of nouns but the nature of the substance to be described that actually determines the choice of article. He claims that the process by which native speakers construct NPs starts with articles, and not the other way around. If what is to be described is more like a concrete unit, a native speaker would

start with *a* and then search for the right noun as in "I ate a...a...a hot dog!" (p. 13) Otherwise, in visualizing something shapeless, they would go "I ate ...uh...uh...meat!" (p.13). Petersen's view of native speakers' process for article choice seems very insightful. If the process he describes reflects what is actually going on in a native speaker's mind in choosing articles, the discrepancies between what native speakers do and what students are taught to do may explain a great deal about the difficulties of articles.

Difficulty with "Possessive Noun+Noun." Though there are only two instances in the data, confusion caused by possessive nouns may be noteworthy. Unlike "Noun+Noun" structure, the preceding noun determines the article choice. For example, one subject mentions a female student, and then talks about her mother as "a female student's mother." The subject chose *a* probably because "mother" was first mentioned. Master (1988a) specifically points out that "the article is associated with the possessive noun, not with the head noun" (p. 5). This type error is of note because the subject's attempt to follow rules of article usage is apparent, but would not be rewarded with correctness.

Difficulty with "Adjective+Noun." Most of the incorrect instances before □+N structures occur before "adjective+nouns." Master (1988a) states, "Adjectives in and of themselves, to the surprise of many EFL students, do not influence the choice of article" (p. 5). If that is the case, why do so many incorrect instances occur before adjectives? Master continues that EFL students would argue that "distilled water" in "Your battery needs distilled water" is a definite

type of water and thus should be preceded by *the*. Though the students' argument does not work with the adjective "distilled" as Master claims, their argument makes a good point. Kanaguchi (1970) admits that some adjectives in fact affect article choice, and lists 53 "special adjectives," of which 49 require either *a* or *the*. Though those adjectives are special in their relation with articles, they are all very frequently used adjectives such as "average," "certain," "famous," "main," "contrary," and so on. Native speakers could intuitively tell that the adjectives which require *the* seem to make nouns somehow unique, and more definite.

Master's statement may be misleading while Kanaguchi's list is too lengthy for students to memorize. Whether to teach simplified "rules of thumb" or detailed rules, which are more true to actual use, may be a controversial issue among ESL teachers. Oversimplified rules can puzzle and upset students, but at the same time, detailed precise rules would overwhelm students to the extent that they feel desperate. Neither of these approaches is appealing. Perhaps some compromise should be made. This will be further discussed in the following chapter.

Another function of adjectives, which should not be overlooked, is that adjectives sometimes make conceptual nouns more concrete and specific. Earlier in this chapter it was mentioned that the subjects had a hard time using nouns which are countable or uncountable depending on the context and what the NPs mean. Adjectives are involved in this. Use of *a* is required in phrases like

"had a late dinner" and "have a hard time" because of the presence of adjectives.

If □+N involves troublesome factors described above, one can imagine that □+□+N can be even more bothersome for students. In fact this seems to be the case. In addition to consideration of the above factors, it appears that students may forget to use articles before lengthy premodifiers. A long distance between the pre-noun position and the (head) noun could make it difficult for students to be aware of the need for articles. Or students may pay too much attention on construction of long premodifiers, e.g., combining meanings of each element, deciding order of the elements and so forth.

Despite the fact that premodification is an obstacle for article use, most textbooks and grammar reference books, both Japanese and American, do not deal with this problem. They usually use only bare nouns in examples to illustrate article use (Azar, 1989; Iizuka, 1990; Watanuki, 1983). While it is obviously easier to display relations between articles and nouns by giving examples with bare nouns, students cannot avoid using premodification. Premodification is the primary modification. It is much easier and much more common than postmodification, such as prepositional phrases and relative clauses. Out of 1865 analyzed NPs in the data, 634 NPs contain premodification, of which 74 take both premodification and postmodification. The fact that most grammatical explanation for L2 students emphasizes the relationship between articles and nouns

might have made it more difficult for these students to use articles correctly before premodifiers.

Postmodfication

Accuracy of Articles Used in Postmodified NPs. Like NPs with premodifiers, NPs containing postmodification have a lower percentage correct than NPs without any modification. The percentage of articles used correctly before N+PP is 83.0%, a little lower than the percentage correct of articles before bare nouns (N), which is 86.3%. NPs containing relative clauses have a much lower rate, which is 76.0%.

Postmodification in Pedagogical Grammars. Unlike preceding modifiers, postmodification, especially relative clauses, are mentioned in grammatical descriptions about article usage in many textbooks and grammar reference books for ESL students. The following are examples of explanations and sample sentences showing how articles are used:

> (a) When nouns have definite modifiers which specify the nouns, the nouns take *the*. E.g., 1) Mr. Robinson is the principal of our school. 2) Tasha is the most beautiful girl in our class. [from a grammar handbook for high school students] (Watanuki, 1989, p.47)

> (b) The article *the* is used before the nouns specified by modifiers. E.g., 1) He was the first man to come. 2) Mr. Smith is the principal of our school. [from a supplementary textbook used in a public high school in Japan] (Iizuka, 1990, p. 402)

(c) "'The boy under the tree is Tom.' (specified by the modifier)"
‹This textbook only lists examples and a very brief explanation for each example.› [from an English grammar textbook used in a high school in Japan] (Yoshida and Suenaga, 1990, p.118)

Wrase (1982) suggests a system for teaching how to use *a, an,* and *the* in writing. In her system, students are taught to ask three questions about the noun. The second question is, whether there is "anything definite right after the noun" (p.4). Her system and all the explanations above are correct, but do not seem sufficient and clear enough for Japanese students.

The above grammatical descriptions are problematic for the following reasons. 1) Most pedagogical grammar, including the above, tends to emphasize the fact that postmodified nouns "usually" take *the.* They do not clarify the fact that NPs postmodified by very similar phrases can take either *a* or *the,* causing change in meaning. 2) The descriptions always contain the word "specific" or "definite" (or their Japanese equivalents) without defining what "specific" or "definite" is. 3) They do not give enough examples. The examples in the citations are the only examples they give. There is no way for Japanese students to understand article usage with only a few examples.

According to Bickerton's Semantic Types, nouns which have specific referents do not take *the* unless the referents are assumed known to the hearer. None of the descriptions above mention "hearer's knowledge." In fact, Christopherson (1939) opposes the

view that the use of *the* in phrases like "the man I met in the street" is due to delimitation of restrictive adjuncts (modifiers). Christopherson points out the necessity of mentioning the context (in this case the fact that the speaker has met a man.in the street) beforehand to use *the*, and claims that "the use of the article with *man* would still depend on a knowledge, on the hearer's part" (p. 38). Grannis (1972) also has attributed the difficulty of the article *the* to grammarians' dependence on forms in the description of article use. He claims that consideration of meaning, mainly consideration of the hearer's "prior knowledge about the referent" is missing in "grammar." The choice of article based on forms is a misbelief.

Kanaguchi (1970) fully admits that there is variability in article choice before postmodified NPs, and illustrates how similar NPs have different meanings depending on the choice of article, e.g., "This is the fact that I know." vs. "This is a fact that I know" (p. 264). What seems noteworthy in examining Kanaguchi's examples, is that numerous examples with explanations about meanings may be clearer and more accessible for students than precise but wordy descriptions of rules.

In Kanaguchi's examples, contrasts help clarify the functions of articles, but the examples in the textbooks shown above do not have counterparts with a different article, and it is not mentioned whether a different article would also work in a similar NP. Actually it is easy for Japanese students to tell that an NP is definite if it has *the*, but it is very doubtful that they know what the NP really means. It seems

that what the Japanese students have been trained to do is to see constructed sentences and NPs and to decide why the NPs take certain articles, in terms of forms. In other words, they may have been taught to justify already produced articles, but have not been taught how to produce correct articles.

Modification and Countability of Nouns. Another difficulty with the relationship between article use and modifiers is the treatment of uncountable nouns and plural nouns. As Master(1988a) puts it, "a typical way to paraphrase *the* in English is to say 'the only one'" (p.472). However, it is impossible to decide "the only one" when uncountable mass nouns or plural nouns are modified. Christopherson deals with those words separately from a single count noun in discussing how restrictive adjuncts can affect article choice, and explains the complexity of determining definite limits. The most decisive factor, according to Christopherson, is context.

The possible reasons why postmodification poses problems have been discussed mainly in relation to the descriptions of article usage. Surprisingly, in spite of the emphasis on the delimitation caused by postmodifiers, the data in this study do not have as many incorrect instances of use of *the* in place of *a*, *Ø* or *Ø+s* as expected. It could be either because the students may not be too puzzled by the grammatical descriptions, or Japanese students' general tendency of overusing *Ø* may be more prevailing.

What should be noted here is that out of 73 NPs with relative clauses in the data, as many as 27 require *Ø*. This is another evidence of inadequacy in emphasizing definiteness in postmodified

NPs. The high proportion of *Ø* is partially due to the way in which the required articles were determined (i.e., if more than one article could be correct in the situation, the student's choice was regarded as "correct" or "required."

Specificity and Definiteness: Dichotomy or Continuum?

The difficulty with modified plural nouns and mass nouns lies in the fact that "definiteness" cannot be as definite as with a singular noun. There is never "the only one" referent. Christopherson (1939) seems to be aware of the vagueness of part in continuate-word (mass nouns and plural nouns) limited by modifiers. Unlike singular countable nouns, there is no "only one" referent for "continuate words." Thus, the continuate words can only be definite when a part is to be definite is specified. According to Christopherson, "The main rule is that if the restriction is not part of the article-primary (all that is modified by the article) but is given in advance, the *the*-form is used" (p. 42). In other words, contexts determine the definiteness of the NPs.

Contexts seem to play a decisive role in determining specificity or definiteness of noun phrases. However, during the course of analysis, it became apparent that specificity or definiteness was not a clear-cut dichotomy. By examining contexts, it was not easy to decide whether the context could make the NP definite or not. Depending on the context along with restrictive meaning of modifiers, NPs can be either definite or indefinite. Both the restrictive power of modifiers and the specificity expressed in the context did not seem so clear.

Perhaps, specificity and definiteness are not dichotomies, but more like continuums.

In some instances, even native speakers could not decide what article was really required. They said the choice between the definite article *the* and indefinite articles *a* or *Ø(-s)* would not really make a difference. For example, one subject was writing about a certain high school, and about students in that school. The subject wrote something like "students in the classroom." The question was, why "*Ø* students," and not "the students." Native speakers claimed both would be correct. Perhaps, it is because of weak specificity in the previous context.

Petersen (1990), in discussing when to use *the*, repeatedly states that *the* is used when context sufficiently specifies the referent. If specificity is a clear-cut dichotomy, such a statement would not have been possible.

Despite suspicion about specificity and definiteness, many researchers (see for example, Master, 1988; Whitman, 1974) discuss teaching article usage using binary systems almost as if specific/non-specific and definite/indefinite are clear-cut distinctions. Moreover, they do not comment on how to determine "specificity" or "definiteness." It may be the case that many ESL students in fact know that they need to use *the* when an NP is definite. What they do not know, however, is what exactly "definiteness" is in English. If they know that "definiteness" involves both specificity and hearer knowledge, they may not know how to determine whether their

potential hearer would know about it. This may be very frustrating for the students.

SOURCES OF DIFFICULTY

Although it has been widely assumed that Japanese students have enormous difficulty with article use, very few studies have been done about what aspects of article use are problematic, and why. The problematic aspects of article use have been discussed in detail in this chapter based on the results of the present study. The reasons why they present difficulty have been mentioned as well, but there may be other reasons. The reasons, or sources of difficulty in article use are summarized as follows.

Non-existence of Articles in Japanese Language

The fact that Japanese language does not have articles as grammatical items seems to be the essential problem not because Japanese speakers cannot acquire the forms, but because Japanese speakers do not have need to express the concepts such as definiteness, specificity and countability that are conveyed by articles. Furthermore, similar concepts may be perceived in different ways in English. As discussed earlier, there are ways to express specificity (e.g., use of prenominals *kore* or *sore*) or plurality (e.g., use of classifiers such as "-hon" for counting cylinderical objects) in Japanese if these meanings are conspicuous and need to be expressed. Furthermore, some English instruction and textbooks rely on those "equivalents" or direct translation. However, the

"definiteness" or "specificity" expressed by prenominals is very different from the meaning of articles, and countability using classifiers is also different from English countability. Language and perception are interrelated, and acquiring article use requires an English speaker's way of perception of the world. Unless students know what articles are for, and the concepts to be conveyed by articles, they cannot acquire article usage. Koizumi (1990), Petersen (1988, 1990) and Oda (1990) agree with this view. Oda states that "Western grammarians would never understand the bewilderment of Japanese students. We (Japanese) would like to know why English has articles" (p. 15, trans.) What's more, according to him, Western grammar books all take the existence of articles for granted, and English grammar books in Japan are all translated imitations of Western grammar books.

Meaning and Form

English textbooks and instruction may put too much emphasis on forms, e.g., articles and types of nouns, and articles and modifiers, but neglect the meaning of articles. What should not be forgotten is that students can never use articles successfully unless they can understand the meanings to be expressed by articles, and how context determines the choice of articles. Most textbooks deal with articles without modifiers, at the sentence-level, and they seldom deal with how context or discourse and modification affect article choice. What should be taught is the "process" of choosing articles.

Hearer Knowledge and Cultural Assumption

Cultural assumption should be taken into consideration in deciding what the speaker can assume the hearer to know. This is possibly why contexts such as "Unique by entailment" and "Unique for a given setting" present difficulty to students. The importance of Cultural Assumption is emphasized by Petersen, Pica and Master. Pica (1983) states that "participants [in her study] had to have considerable cultural knowledge of the referent in its linguistic context in order to make associations, note synonymy, and recognize entailment" (p. 228). Despite its importance, this type of cultural assumption is rarely dealt with in textbooks.

SUMMARY

Japanese students who participated in the study generally used articles with relatively high accuracy rates. Their use of articles is not arbitrary. The subjects have common tendencies in article use, namely, overuse of *Ø* in all contexts, and overuse of *the* particularly in [+SR -HK] contexts. The overuse of *the* may occur because the subjects do not know that they have to consider hearer knowledge and because they do not know what they can assume their hearers to know (if they know they have to consider hearer knowledge).

Article usage of the four articles *a*, *the*, *Ø* and *Ø+s* is interrelated, and determining the difficulty order among the four is not easy. The article *Ø+s* seems to be the easiest, and *a* and *Ø* seem more difficult than *the*.

The subjects show almost the same level of accuracy in observing the syntactic rules and in manipulating the semantic/pragmatic functions. However, the subjects may have more problems with semantic/pragmatic functions since the largest proportion of the contexts in the data turned out to be *Ø+s* contexts in which Japanese students use articles correctly and with ease. Furthermore, using articles correctly does not necessarily mean that the subjects succeed in expressing what they intend to mean (e.g., generic or referential indefinite).

Modification presents enormous difficulty to Japanese students. Modified phrases have more specific meaning than NPs without modifiers; thus, the decision as to whether to use the definite article or not before modified NPs is much more difficult for students. How to make this kind of decision is not handled in textbooks, and grammatical explanations in textbooks are often inadequate. It seems that the Japanese students' major source of problems is the emphasis on "form" and neglect of "meaning" in English instruction.

CHAPTER VI

CONCLUSIONS

In this chapter, suggestions for further research are made based on the results and limitations of the present study. Furthermore, pedagogical implications are discussed, and some considerations are recommended for teaching articles.

RESEARCH IMPLICATIONS

Limitations of the Study

Control of the Content. In this study, the content of compositions was controlled to a certain extent, and during the course of analysis it became evident that the control of the message to be conveyed was critical to the examination of article use. Discourse or context limits the possibility of article choice to a certain extent. However, very often there is more than one possible choice of article in the same context. Choice of one article may change the NP slightly in meaning or style, but readers cannot be sure about what the writers intended. When articles used by a subject made sense in the context, the article was regarded as correct. When a subject failed to use a correct article, "the required" article had to be determined on the basis of what the writer must have intended to mean. This was very difficult for the experimenter to determine. However, the control of

the content helped the experimenter infer what subjects intended to mean most of the time.

On the other hand, not all the content written in the compositions was controlled. It is doubtful that all the articles regarded "correct" really meant what the subjects intended to mean. One such case, which actually was found in many of the compositions, was plural nouns used in contexts where the writer could be either talking about generics or about the referential indefinite (which naturally would become a referential definite by the second mention). In describing a typical scene in high school, the writer may have been narrating what s/he saw in the video, or s/he might have overgeneralized what s/he saw and may have been describing things in general. Nouns such as "Students" "a teacher" can be interpreted either in [+SR -HK] contexts or [-SR +HK] contexts. If the articles used by the subjects sounded right to native speakers, The intended meaning was determined based on the forms. That is to say, if a noun appeared as "a teacher" and the same form was used for the second mention without causing awkwardness in the discourse, it was regarded both NPs as "generics." If the noun appeared as "the teacher" on the second mention, the noun was interpreted as [+SR -HK] when it was previously mentioned, and as [+SR +HK] when it was mentioned the second time. As mentioned earlier in this chapter, this method of determining the required articles may have been so generous that it raised subjects' accuracy rates.

Before writing, the subjects were encouraged to talk about both the events in the video and Japanese high schools (including the one

they attended). This direction was given to widen the subject matter and the variety of contexts in the writing. In fact, it seems that the subject matter and the variety of contexts were widened, but the control of content was loosened.

Another direction given to the subjects was to write assuming that their potential reader did not know about the content of the video or Japanese high school life. It was not clear to the subjects whether they were supposed to assume that the reader would know that the writer had viewed the video. Thus, some subjects started writing with "I saw a video about Japanese high school students," and others started with "The video was...." These different assumptions were accepted in the study as long as article use was appropriate in the discourse. However, some subjects wrote assuming the reader would know more. An extreme example was the use of a personal pronoun without mentioning the referent in advance --"she is a high school student...." This kind of instance was rare, but what it can imply is that some writers may have assumed more hearer knowledge than the experimenter expected. Hence the discrepancies between the writers' assumptions and the experimenter's understanding of their assumption could have distorted the data.

Limitations of Article Functions .Brown (1973) lists 8 categories of contexts in which a noun becomes definite. Out of the 8 categories, 3 are completely missing in this study. The three contexts are: (1) "unique for a given social group, (2) "unique by pointing nodding, etc." (3) "unique because of characteristics that get attention." The data in the present study come from writing, which immediately

eliminated (1) and (2). Context (3) describes the circumstances in which "one can count on attention having been 'captured' because of the stimulus characteristics of the referent; its intensity, its movement, any abrupt change, including cessation" (p. 346). Since such circumstances were unlikely to occur in writing, it was not included in the study. Since the study is missing these three categories of contexts, it is not a complete study of article use. How Japanese students can use articles in these contexts remains to be answered by later studies.

The data contain only 3 instances of the definite contexts "unique for all," and hence does not explain article use by Japanese students in this semantic category either.

Suggestions for Further Research

Intended Meaning and Article Use. In the present study, it was speculated that the meaning and functions of articles were more problematic than they appear to be because "correct" use of articles did not necessarily reflect the choice of article which the subjects needed in order to express their intended meaning. Studies about article use and meaning intended by Japanese students will possibly clarify what Japanese students' confusion is, or whether Japanese students are indifferent about the meaning of articles.

Article use for the three functions mentioned above should be examined further. Pica (1983) speculates that introductory use of *the* may be problematic for ESL students. The article *the* is used to introduce an item when the referent is assumed to be to be mutually

known by the speaker and the hearer. In Pica, a typical situation in which introductory *the* is used is when referents are visible. Since this function of articles is one of the three missing functions in this study, further research is recommended to examine those functions of articles use among Japanese students.

Textbook Analysis. One speculation of the study was that many of the incorrect instances may be attributed to the way article usage is treated in textbooks. Only a small sampling of books were examined in the present study. More comprehensive analysis of textbooks and relationship between the treatment of articles and article use among students is recommended.

Experimental Study. Some possible problems in English textbooks and instruction have been pointed out in this study, and alternative approaches (which will be discussed more in detail in this chapter) were implied. For example, the focus on meaning and function rather than form was suggested, and teaching "how" to choose articles, rather than identification of articles already produced, was emphasized. In order to determine whether the suggested approach would work better than the conventional approach, experimental studies are recommended.

PEDAGOGICAL IMPLICATIONS

Form vs. Meaning

The fact that there is a big difference between the syntactic accuracy of the lower level subjects and that of the advanced level

subjects indicates that Japanese students improve in syntactic accuracy as they improve in overall English proficiency. This is probably because the students try to observe rules of articles as they learn more about the rules. English textbooks and classroom instruction probably help students learn the rules. However, many of the syntactically correct instances were semantically or pragmatically inappropriate. The smaller difference between semantic/pragmatic accuracy of the lower level subjects and that of the advanced level subjects may suggest that the advanced level subjects have not acquired the semantic/pragmatic functions as well as the syntactic rules. This may be attributed to the way English article usage is explained in textbooks and in classrooms.

The treatment of article usage in textbooks and in classrooms seem to depend too much on "forms." Forms and overt cues such as "second-mention" and "*of*-prepositional phrases" are often discussed in textbooks and classrooms, but not "meaning" or "functions". "Meaning" here includes both semantic meaning which can be expressed overtly in sentences, and pragmatic meaning implied or assumed in contexts. The boundary between the two kinds of meanings is difficult to determine, but there is no doubt that both kinds of meaning play decisive roles in the choice of article.

Many subjects in the present study made errors before nouns which could function as either a countable noun or an uncountable noun. This can be explained by the way countable nouns and uncountable nouns are treated in English classes and in textbooks. Nouns are treated as if countable nouns are always countable and

uncountable nouns are always uncountable. These textbooks may add that "there are some exceptions." The fact is, many nouns can be either, and meaning changes when used as one over the other.

What Japanese students want is the English concept of "countability." If the concept is clear to students, they should better be able to apply the concept to understand meanings expressed by a countable noun or uncountable noun. And if they understand the difference in meaning, they should eventually be able to manipulate meanings in speaking or writing by using countable or uncountable nouns to express what they intend to mean.

The pragmatic meaning is seldom treated in textbooks or in classrooms, but may be the most problematic aspect of article usage for ESL students. Though teachers and textbooks may sometimes mention that students have to consider hearer knowledge, they almost never teach <u>how</u>., e.g., how and when speakers determine whether they can assume hearer knowledge, how much the hearer is supposed to know in order for the speaker to be able to use the definite article, and so forth.

The reason NPs with modification present more difficulty to students may also lie in the difficulty of manipulating meaning. The students may be used to choosing an article to match the noun in terms of form (i.e. choose *a* for a countable noun, and *Ø* for an uncountable noun, etc.), and they do not know how to deal with the extra meanings expressed by modifiers. They are taught that modified nouns may require the definite article, but it is not clear "when". The students may know that they need *the* "when the noun

is specific", but they do not know how to decide whether the noun is specific enough for them to use the definite article . In fact, when a modifier is used, the meaning of the NP is always more specific than the noun without any modifiers. The question is, "how specific is specific?"

Process vs. Product

Concepts before "Rules." It may be frustrating for teachers to find that their students have not mastered article usage after all the explanation that they have been given. However, what should be taught to ESL students may need more consideration. Intermediate or advanced students often know about "rules" regarding article usage. For instance, they probably know that they need *the* when the noun is "definite" and that they need *a* if a noun is a singular countable noun and is "indefinite". But, the students still cannot decide which article to use when they speak or write because they do not know what is "definite" or what is "indefinite."

What needs to be taken into consideration is the actual process native speakers employ to communicate. Meaning must come first. If an object to be mentioned is one concrete entity which is specific but not known by the hearer, the speaker comes up with *a* If a similar entity is assumed to be known by the hearer, the speaker comes up with *the* It is very unlikely that native speakers first consider type of nouns and then to determine the right article. Native speakers use an article because there is a need for the article, whereas Japanese

students who lack need to express the concepts to be conveyed by articles do not feel the needs to use articles.

Syntactic attention to concepts such as "specificity," "plurality," and "definiteness" are almost completely missing in Japanese language. Teachers who are native speakers of English need to remember that seemingly self-explanatory concepts such as "plurality" can be very alien and difficult for those who do not share the same perception of the concepts. Whorf (1939) states that grammatical patterns are interpretations of experience. He says, "number (singular vs. plural) is an attempted interpretation of a whole large order of experience, ... it attempts to say how experience is to be segmented, what experience is to be called 'one' and what 'several'" (p. 137). He divides plurality into two, real plurals and imaginary plurals. Imaginary plurals cannot be objectively experienced, but are mentally "objectified" by "habitual thought" of speakers of English. Japanese students, lacking the experiences and the habitual thought, do not know what plurals are for, and cannot use them as native speakers do.

It seems that language acquisition is dependent on cognitive development or the experience of the learner to some extent. Students cannot use the language beyond what they have experienced. Hence, English perception of concepts should be taught to students, and the need to express the concepts should be presented before (or along with) grammatical rules.

Rutherford (1987) accepts the existence of Universal Grammar and its applicability to L2 acquisition, but states that "grammatical

consciousness-raising" is needed when there are L1/L2 differences, and when L2 data to trigger the re-setting of an L1 parameter is not readily available. Article usage is probably one of the cases in which consciousness-raising is needed.

Cultural Assumption. The English concept of "definiteness" is also new to Japanese students. What makes it difficult to grasp "definiteness" seems to be the consideration of hearer knowledge. To determine when something is mutually identifiable is extremely difficult for Japanese students for many reasons. Japanese students may not even know that they need to take hearer knowledge into consideration since they have not really been taught about it. If they know they have to, it probably takes conscious effort to take hearer knowledge into consideration. The most formidable task for Japanese students is to know what is commonly assumed in the target language culture.

Native speakers use the definite article when they can assume that the referent is identifiable by the hearer. Their assumptions about hearer knowledge are often based on a cultural assumption. For example, it is assumed that a house has a door, a kitchen, and a refrigerator. Thus, as soon as a speaker mentions a "house," s/he would continue "the door," "the kitchen" and "the refrigerator," but not "the microwave oven." When ESL students are expected to use *the* in these kinds of contexts, students are actually expected to have the same cultural assumptions as native speakers. But, in fact, they often do not.

English teachers who are native speakers of English themselves should be careful about "assumptions." By telling students which article to use, the teachers may be imposing their cultural assumptions on the students. If the subject matter of the class is related to American culture, teachers may need to teach the cultural assumptions along with the choice of article. If students are talking about their native culture, correction of the article requires special attention. In analyzing the data in the present study, native speakers all agreed that they could not decide a "required" article for "entrance examination" in Japan unless they exactly knew what the system of entrance examinations were like in Japan. In this case, native speakers realized that they lacked information to determine the required article. However, there may be cases in which what native speakers take for granted is not really the case in the students' native culture. For example, in American culture, *a* room is supposed to have *a* door, and mentioning a room immediately requires *the* before "door". But in Japanese traditional houses, rooms are surrounded by sliding doors.

It is not possible for ESL students to know all the cultural assumptions shared by native speakers since, as Pica (1983) pointed out, there may be disagreements even among native speakers. What the students need to know is that there is always on-going activity, or process, to determine the definiteness, and to choose the right article. Article usage is not a fixed set of rules. Pica claims that a key to attaining proficiency in article use is "developing awareness of variations of article use within communicative contexts" (p.231).

Crymes (1984), in discussing the focus on process, gives an example of "talk and listen" system proposed by Via (1976) to show how a linguistic form (articles) can be practiced in meaningful communication In the following example, both speaker A and B are given two choices for utterances. Each speaker has only his/her own utterances in written form as the following (p. 5). They read silently and look up.

A: I'd like a book on running. OR

Do you have the latest reference book on antiques?

B: Here's one everyone is reading. OR

Is this the one you mean?

A. Yes. I think that's the one my grandmother told me about.

Oh, yes, that's the one they mentioned at the marathon clinic.

In this exercise, students have to choose an utterance by listening to the partner and by understanding what they say. This is very close to what could happen in real communication.

Pica suggests that students should engage in interaction with native speakers to attain article use. Raime (1988) suggests that students read newspaper and magazine articles and try to figure out article usage. These kinds of "input," however, would be helpful only if the students are aware of how a native speaker would decide what article to choose.

Recent systematic approaches to teaching articles (see for example, Whitman, 1974; Master 1988 a, b; Brender, 1989) are significant improvements compared with lengthy grammatical explanations which were probably the only available approaches in

the past. However, most of the new approaches still require students to make decision about "countability," "specificity," or "hearer knowledge," without letting students know what exactly they are (how different the perception of concepts are from those in L1), and how to make decisions about these. Article usage should be taught by letting students use the right articles in meaningful contexts. Rutherford's (1987) approach to teaching grammar is the most compatible with the discussion based on the present study. He views grammar as "a network of interdependent systems (e.g. discourse, syntax, semantic, pragmatics, etc.," and he also says that "acquisition of language form may better be facilitated by the learner's working through grammatical processes than by his working at assembling grammatical constructs" (p. 146). The "grammatical processes" are related to the answers to questions such as "What is it that one does with this bit of grammar?" and "Why does one say or write it this way rather than that way?" (p. 104).

Grammar is a means to do things. One must agree with Rutherford that students can acquire grammar by using it in meaningful communication, which is feasible in classrooms. "Comprehensive output" would work better than "comprehensive input."

REFERENCES

Azar, B.S. (1989). Understanding and using English grammar. Englewood Cliffs, NJ: Prentice Hall Regents.

Bertkua, J. (1974). An analysis of English learner speech. Language Learning, 24, 279-286.

Bickerton, D. (1981). Roots of language. Ann Arbor, MI: Karoma.

Brender, A. S. (1989) Three little words a, an, the. Tokyo: McGraw-Hill.

Brown, R. (1973). A first language. Cambridge, MA: Harvard University Press.

Celce-Murcia, M. & Larsen-Freeman, D. (1983). The grammar book. Cambridge, MA: Newberry House.

Crymes, R. (1983). Current Trends in ESL instruction. In J. F. Haskell (ed.). Selected Articles from the TESOL Newsletter.

Christopherson, P. (1939). The articles: A study of their theory and use in English. Copenhagen: Munksgaard.

Cziko, G.A. (1986). Testing the language bioprogram hypothesis: A review of children's acquisition of articles. Language, 62, 878-898.

Danielson, D. & Hayden, R. (1973). Using English: your second language. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Ellis, R. (1989). Understanding second language acquisition. Oxford: Oxford University Press.

Grannis, O. (1972). The definite article conspiracy in English. Language Learning, 22(2), 275-289.

Hakuta, K. (1976). A case study of Japanese child learning English as a second language. Language Learning, 26, 321-351.

Huebner, T. (1979). Order-of-acquisition vs. dynamic paradigm: A comparison of method in interlanguage research.. TESOL Quarterly, 13(1), 21-28.

Huebner, T. (1983). A longitudinal analysis of the acquisition of English. Ann Arbor, MI: Karoma Publishers.

Huebner, T. (1985). System and variability in interlanguage syntax. Language Learning: 35, 141-163.

Hurford, J.r., & Heasley, B. (1983). Semantics: a course book. Cambridge: Cambridge University Press.

Iizuka, S. (1990). "Prime" sogo eigo ["Prime" comprehensive English]. Tokyo: Buneido.

Kanaguchi, Y. (1970). Eigo kanshi katsuyo jiten [A dictionary for English article usage]. Tokyo: Taishukan shoten.

Kimura, A. (1973). Eibunpou seikai [Precise English Grammar]. Tokyo: Baifukan.

Kitao, K. & Kitao, S. K. (1986). Difficulties Japanese students have in reading English. (Report No. FL 016 187). (ERIC Document Reproduction Service No. ED 278 214)

Koizumi, K. (1989). Eigo no naka no fukusuu to kanshi [Plurality and articles in English]. Tokyo: Japan Times

Krashen, S.D. (1987). Applications of psycholinguistic research to the classroom. In M.H. Long & J.C. Richards (Eds.), Methodology in TESOL: A book of readings (pp. 33-44). New York: Newbury House.

Kumayama, A. (1985). Eigo kanshi yoho jiten [A dictionary of English article usage]. Tokyo: Taishukan shoten.

Lane, S. (1981, May). Determining the determiner: Aspects of teaching "the" and "a" in ESL. Paper presented at the National Association of Foreign Student Affairs Conference, Nashville, TN.

Maratsos, M.P. (1976). The use of definite and indefinite reference in young children. Cambridge, England: Cambridge University Press.

Master, P. (1987, March). Acquiring the English Article System: A Cross-Linguistic Interlanguage Analysis. Paper presented at the 22nd Annual TESOL Convention, Chicago, IL.

Master, P. (1988a). Teaching the English article system (Part 1), English Teaching Forum, 26(2), 2-7.

Master, P. (1988b). Teaching the English article system (Part 2), English Teaching Forum, 26 (3),18-25.

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

Oda, M. (1990). Eibunpo gakushu no kiso [Foundations of the study of English grammar]. Tokyo: Kenkyusha.

Parrish, B. (1987). A new look at methodologies in the study of article acquisition for learners of ESL: study of article acquisition for learners of ESL. Language Learning, 37 (3), 361-383.

Petersen, Mark (1988). Nihonjin no Eigo [The English of Japanese], Tokyo, Japan: Iwanami-shoten.

Petersen, Mark (1990). Zoku Nihonjin no Eigo [The English of Japanese Part 2], Tokyo: Iwanami-shoten.

Pica, T. (1983). The article in American English: What textbooks don't tell us. In N. Wolfson & E. Judd (Eds.). Sociolinguistics and language acquisition. (p. 222-233). Rowley, MA: Newbury House.

Quirk, R., Greenbaum, S., Leech, G., & Svartvik J. (1972). The grammar of contemporary English. London: Longman.

Quirk, R. & Greenbaum, S. (1973). A concise grammar of contemporary English London: Harcourt Brace Jovanovich.

Radford, A. (1988). Transformational Grammar. Cambridge: Cambridge University Press.

Raime, A. (1988). Grammar troublespots: An editing guide for ESL students. New York: Martins Press.

Richards, J. (1971). A non-contrastive approach to error analysis, English Language Teaching, 25 (3), 204-219.

Richards, J., Platt, J., & Weber, H. (1985). Longman dictionary of applied linguistics. Essex: Longman.

Rinnert, C. & Hansen, M. (1986, November). Teaching the English article system. Paper presented at Japan Association of Language Teachers' International Conference on Language Teaching and Learning, Hamamatsu, Japan.

Robberecht, P. (1983). Towards a pedagogical grammar of determiners: a contrastive approach. In J. Fisiak (Ed.), Papers and studies in contrastive linguistics, 17, 61-77.

Rutherford, W.E. (1987). Second language grammar: learning and teaching. New York: Longman

Sato, T. (1980). New prince English course 1. Tokyo: Kairyudo.

Seliger, H.W. (1979). On the nature and function of language rules in language teaching. TESOL Quarterly, 13 (3), 359-369.

Thomas, M. (1989). The acquisition of English articles by first- and second- language learners. Applied Psycholinguistics, 10 (3), 335-355.

Tomiyama, M. (1980). Grammatical errors communication breakdown. TESOL Quarterly, 14 (1), 71-79

Via, R. A. (!976). English in three acts. Honolulu, HI: University Press of Hawaii.

Warden, D.A. (1976). The influence of context on children's use of identifying expressions and references. British Journal of Psychology, 67(1).

Warden, D.A. (1981). Learning to identify referents. British Journal of Psychology, 73, 93-99.

Watanuki, Y. (1983). Kiso kara yoku wakaru eibunpo [Easy-to-understand English grammar from basics]. Tokyo: Obunsha.

Whitman, R.L. (1974). Teaching the article in English, TESOL Quarterly, 8(3), 253-262.

Whorf, B. (1939). The relation of habitual thought and behavior to language. In J.B. Carroll (Ed.), Language, thought and reality: selected writings of Benjamin Lee Whorf (pp 134-159). MA: The Massachusetts Institute of Technology.

Wrase, J. (1982, November). Should I write "a" or "the?" Paper presented at the Teachers of English to Speakers of Other Languages (TESOL) Conference, Baltimore, MD.

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

Yoshida, M. & Matsunaga, K. (1990). "Prime" English grammar. Tokyo: Buneido.

APPENDIX A

LIST OF SUBJECTS

SUBJECT LIST

S	Source	M/F	Age	USA	TOEF	ESL	Words	NPs	analyz	Used Articles					Correct					Correct %
										the	a/an	Ø+s	Ø	Total	the	a/an	Ø+s	Ø	Total	
1	C-2-1	F	20	2m		2m	172	35	23	6	6	4	4	20	5	5	4	2	16	80.00%
2	C-2-2	F	21	2m		2m	165	30	27	2	0	3	9	14	1	0	3	2	6	42.86%
3	C-2-3	M	18	2m		2m	258	45	43	11	6	8	8	33	6	4	8	4	22	66.67%
4	C-2-4	F	24	6m		6m	199	42	32	4	1	8	3	16	4	1	8	1	14	87.50%
5	C-2-5	F	21	2m		2m	190	33	27	0	4	4	9	17	0	4	4	0	8	47.06%
6	C-3-1	M	23	2m	460	2m	174	30	24	2	1	12	4	19	2	1	10	0	13	68.42%
7	C-3-3	M	20	1y		1y	112	18	15	0	1	1	7	9	0	0	1	1	2	22.22%
8	C-3-4	M	21	9m		9m	120	23	19	1	1	0	13	15	1	1	0	3	5	33.33%
9	C-4-1	M	19	9m	470	9m	139	32	26	2	2	9	4	17	0	2	9	1	12	70.59%
10	C-4-2	M	23	8m		8m	165	22	18	7	0	3	1	11	7	0	3	0	10	90.91%
11	C-4-3	F	21	1.5y	440	1y	110	14	10	0	1	1	1	3	0	1	1	0	2	66.67%
12	C-5-2	M	19	1y		1y	189	34	29	7	1	5	10	23	4	1	5	4	14	60.87%
13	C-5-3	F	21	8m		8m	150	28	21	3	0	5	5	13	2	0	5	1	8	61.54%
14	C-5-4	M	20	1y		1y	154	38	30	3	4	7	4	18	3	1	7	3	14	77.78%
15	C-5-5	F	25	8m		8m	167	37	30	4	4	9	6	23	4	4	8	5	21	91.30%
16	P-3-1	M	27	2y		1y	180	28	22	0	0	3	8	11	0	0	3	1	4	36.36%
17	P-3-2	M	20	6m		6m	132	18	15	2	1	5	4	12	1	1	5	1	8	66.67%
18	P-3-3	M	23	6m	440	6m	244	49	33	3	3	4	11	21	3	2	3	4	11	52.38%
19	P-4-3	M	19	5m		5m	197	39	32	0	0	3	13	16	0	0	3	3	6	37.50%
20	Heli-1	M	29	3m		3m	175	30	20	7	2	5	2	16	3	1	5	0	9	56.25%
21	Heli-2	M	31	2m		2m	98	15	7	1	0	2	0	3	1	0	2	0	3	100.00%
22	P-R-1	F	43	2y?	583	6m	290	53	50	3	9	8	16	36	3	7	8	10	28	77.78%
23	P-R-2	F	32	2y	540	3m	306	62	52	14	8	5	15	42	12	7	4	7	30	71.43%
24	P-R-3	M	26	1y		x	291	48	37	5	11	5	5	26	5	8	5	0	18	69.23%
25	P-R-4	F	29	2y	583	3m	173	37	34	6	1	12	7	26	6	0	12	4	22	84.62%
26	P-R-5	F	25	9m	553	x	171	30	21	4	3	6	4	17	4	1	6	2	13	76.47%
27	P-R-6	F	25	2y	540	6m	376	63	55	21	6	12	7	46	11	5	11	4	31	67.39%
28	P-R-7	F	24	2y	580	3m	324	67	55	18	6	6	4	34	18	5	6	3	32	94.12%
29	P-R-8	M	26	3y	542	9m	340	54	40	3	12	6	3	24	3	7	6	2	18	75.00%
30	EEP-1	M	33	2m	600	x	443	90	71	10	16	14	8	48	10	13	14	3	40	83.33%
31	EEP-2	M	25	5d	577	x	548	122	99	33	5	13	23	74	32	5	13	11	61	82.43%
32	EEP-3	F	24	1,5y	550	x	356	60	49	2	1	10	16	29	1	0	10	5	16	55.17%
33	EEP-4	F	30	1y	600	x	193	42	37	2	0	16	13	31	2	0	16	5	23	74.19%
34	EEP-5	F	23	1y	587	x	506	86	68	15	4	21	7	47	14	3	21	4	42	89.36%
35	EEP-6	F	28	9m	570	4m	375	56	49	6	8	13	4	31	5	8	13	1	27	87.10%
36	EEP-7	F	25	5y	613	1y	475	91	72	17	8	16	12	53	17	8	16	4	45	84.91%
37	EEP-8	F	42	4m	600	1.5m	465	91	70	16	14	15	12	57	15	13	13	9	50	87.72%
38	EEP-9	M	26	1.5m		x	259	54	47	4	5	26	4	39	4	5	23	3	35	89.74%
39	-10	M	23	2y	640	x	408	66	54	14	9	9	13	45	11	8	7	11	37	82.22%
40	-11	M	25	2m	570	2m	258	44	35	5	10	9	5	29	5	10	8	3	26	89.66%
41	-12	M	26	1m	580		367	60	46	17	1	13	9	40	14	0	13	4	31	77.50%
42	-13	F	24	4.5y	627	x	438	66	60	16	2	17	5	40	13	2	16	4	35	87.50%
43	-14	F	22	3m	603	1m	483	77	47	5	9	6	14	34	4	8	6	13	31	91.18%
44	-15	F	23	2y	630	x	327	57	45	4	6	14	7	31	4	6	13	5	28	90.32%
45	-16	F	25	1m	603	x	236	48	35	8	5	10	3	26	8	5	10	3	26	100.00%
46	-17	F	31	5d	623	x	328	61	46	2	3	12	7	24	2	3	12	6	23	95.83%
47	-18	F	25	2y	583	x	391	76	64	12	8	12	4	36	12	6	12	3	33	91.67%
48	-19	M	31	3m	639	2m	239	54	42	5	4	18	6	33	5	4	18	5	32	96.97%
	M:21		Aver	5d-5y		mean	268	49	39	332	212	425	359	1328	287	176	409	170	1041	78.39%
	F:27		25			max	548	122	99											
Total						min	98	14	7											Average
word	12856																			
NP	2355																			[1-21]
Ana	1883																			62.71%
																				[22-48]
																				83.44%

Among the NPs, NPs with other determiners such as possesives or demonstratives are not analyzed.

For the analysis above, two determiners "one" and "some" analyzed in the "Used form" analysis are excluded, and articles used in idiomatic expressions are also excluded. Thus, the total numbers do not match the number of analyzed NP.

Note: "S" stands for subjects' codes. "Used Articles" are the numbers of articles used by the subjects. Below "Correct" are the numbers of articles used correctly. "Correct %" shows the percentages of articles used correctly.

APPENDIX B

AN EXAMPLE OF WRITING SAMPLE

An Example of Writing Sample

47

F, 25, 2 yrs in US, 583, no ESL, 2nd BA

No. of words: 391

CNP: 76

NP for analysis: 64

I watched **a video tape called "A Video letter from Japan"**. It mostly focused on **the lives of *Japanese high school students*** There were **two models**, one was **a girl** and the other was **a boy**. **The girl** got up at 6:00 a.m. with **the sounds of *several alarm clocks she had set*** so she would have **plenty of time** to get ready for **school**. On the other hand, **the boy** got up at 7:00 a.m., which made him not be able to have **breakfast** (he just had **a glass of milk**) but left **some time** for him to fix **his hair** with **moose + dryer**. They introduced **many subjects that *all the students* had to take**. I found **some students** falling asleep.

Some students were wearing **school uniforms** and others weren't.

It all depends on **the rules which *each school* has**. I remember I had to wear **school uniforms** to school but **the rules** weren't as strict as **other private schools**. But **one of the most ridiculous rules at *my high school*** was that you were not allowed to wear **a coat, gloves, or a muffler** to **school**. Since I had to ride **my bicycle** to **school** for **one hour**, it was **a hell** for me. It seems that **schools in *big cities*** such as **Tokyo** have made **their school rules** less strict **these days**. Anyway, after school,

many students attended **their club activities** such as **koto, kendo, volleyball**, and so forth. Then, while **the boy model** went home and had **dinner** and played **the saxophone** and went to bed. **the girl model** went to study more at **a cram school** and got back home at 10:30. She warmed up **some leftovers** and had her late dinner alone, which looked miserable.

I thought this video introduced **some typical aspects of *Japanese high school students' lives*** That'll be nice if they can introduce these students' lives during **weekend** when they don't go to school. I'm curious about it, too. When I was in **high school**, I had **a club activity** during **weekend**, so it made me go to school **seven days a week**. I didn't like to study very much, especially **chemistry and physics** but I loved being at **school** with all my friends,. What I liked most was **the school festival we have *once a year*.**

APPENDIX C

AN EXAMPLE OF LIST OF NOUN PHRASES

An Example of List of Noun Phrases

#47

No. of NP: 64

NP for analysis:

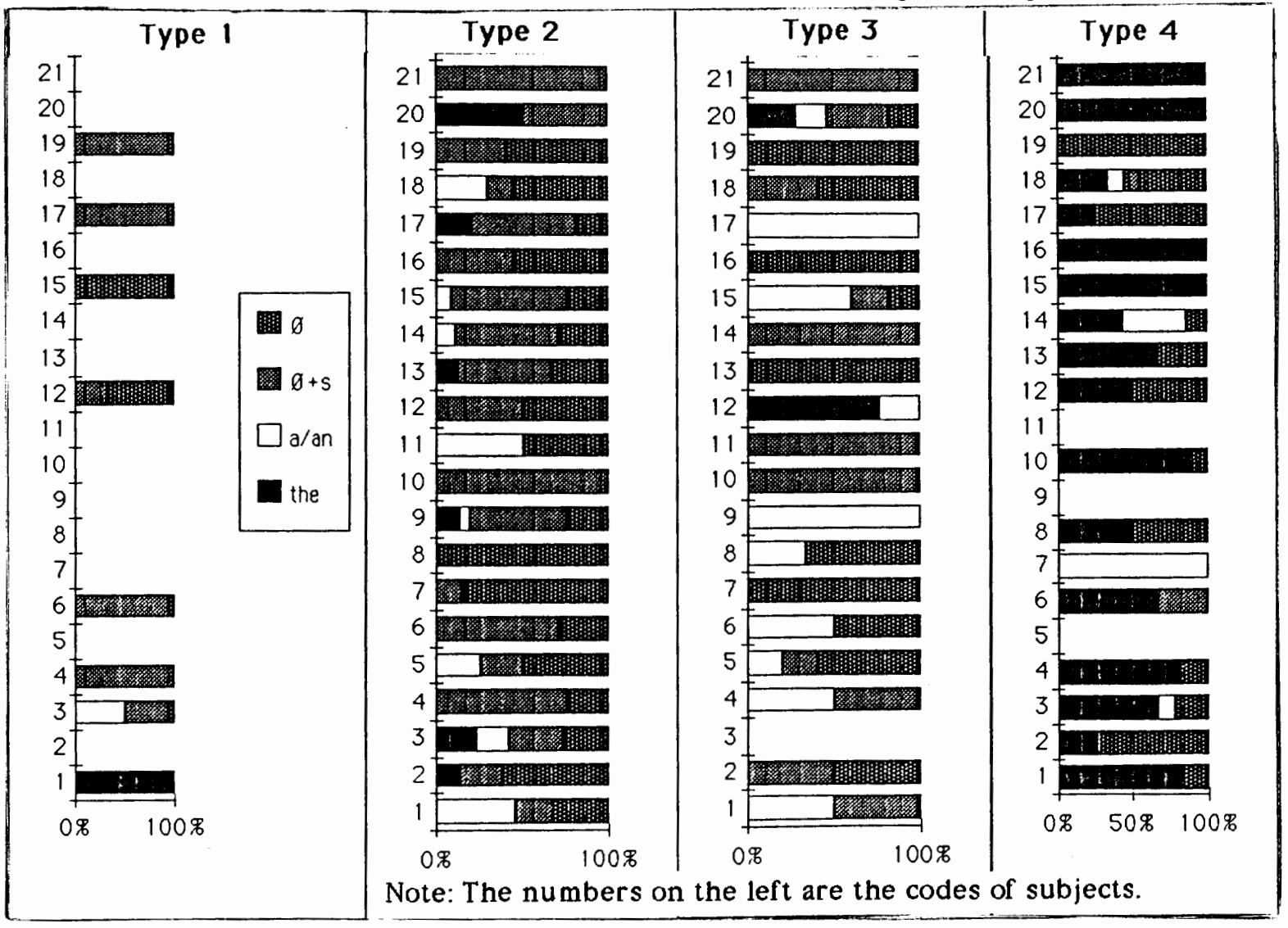
Entry	S	L	Noun phrases	Used	Req	Semantic	Syntactic
2235	47	1	a video tape called "A Video letter from Japan.	a	a	+,-	a+C+participle
2236		2	(focused on) the lives of Japanese high school students	the	the	+,+,	the+pl+of+pl..
2237			Japanese high school students	Ø	Ø	-,-	Ø+adj+pl
2238		3	(there are) two models	Ø	Ø	+,-	Ø+no.+pl
2239			(one was) a girl	a	a	-,-	a+C, pred
2240			(the other was) a boy	a	a	-,-	a+C, pred
2241		4	The girl (got up)	the	the	+,+	the+C, sub,
2242			**(with) the sounds of several alarm clocks she had set**	the	the	+,+	the+pl+of+Ø+Q+pl+RC
2243			(of) several alarm clocks she had set	Ø	Ø	+,-	of..Ø+pl+RC
2244		5	(have) **plenty of** time	Ø	Ø	idiomatic	
2245			(of) time	Ø	Ø	idiomatic	
2246		6	(get ready for) school	Ø	Ø	idiomatic	
2247			(on) the other hand	the	the	idiomatic	
2248			the boy (got up)	the	the	+,+	the+C, sub,
2249		7	(have) breakfast	Ø	Ø	idiomatic	
2250			(had) a glass of milk	a	a	idiomatic	
2251		8	(of) milk	Ø	Ø	idiomatic	
2252			(left) some time	some	some	+,-	some+U
2253			(fix) his hair				
2254			(with) mousse and dryer	Ø,Ø	Ø,a	+,-	Ø+U, a+C
2255		9	(introduced) **many** subjects that all the students had to take	Ø	Ø	+,-	Ø+pl+RC

2256		all the students had to take	the	the	+,+	the+pl
2257	10	(found) some students (falling asleep)	some	some	+,-	some+pl
2258	11	Some students (were)	some	some	+,-	some+pl, sub
2259		(wearing) school uniforms	Ø	Ø	+,-	Ø+pl
2260	12	(depends on) the rules which each school has	the	the/Ø,	+,+	the+pl+RC
2261		each school				
2262	14	(I had to wear) school uniforms	Ø+pl	Ø+pl/a+C	+,-	Ø+pl
2263		the rules (weren't)	the	the	+,+	the+pl, sub
2264	15	(as) other private schools	Ø	Ø	+,-	Ø+other+adj+pl
2265		one of the most rediculous rules at my high school was that..	one of the	one of the	+,+	one of the+superlative+pl
2266		(at) my high school				
2267	16	(wear) a coat, gloves, or a muffler	a,Ø,a	a,Ø,a	-,-	a+C, Ø+pl, a+C
2268		(to) school	Ø	Ø	idiomatic	
2269		(ride) my bicylce				
2270	17	(to) school	Ø	Ø	idiomatic	
2271		(for) one hour	one	one	-,-	one(no)+C

APPENDIX D

ARTICLES USED IN EACH CONTEXT BY EACH SUBJECT

ARTICLES USED IN EACH SEMANTIC TYPE BY EACH SUBJECT: SUBJECTS 1-21



Note: The numbers on the left are the codes of subjects.

ARTICLES USED IN EACH SEMANTIC TYPE BY EACH SUBJECT: SUBJECTS 22-48