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Korean EFL Learners' Interlanguage Null Objects: A Syntactic-discourse Exploration of Unlearning Patterns

한국인 영어 학습자의 공목적어 사용: 중간언어발달에 대한 통사-담화론적 연구

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by

Saehee Hwang

A Dissertation Submitted to
the Department of Foreign Language Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in English Language Education

At the
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ABSTRACT

Korean EFL Learners' Interlanguage Null Objects: A Syntactic-discourse Exploration of Unlearning Patterns

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It has been suggested that null objects in Korean are licensed by the topic-prominent feature of the language: namely, topic-chaining and the topic NP deletion rule (Huang, 1984). However, null objects do not appear in English because neither topic chains nor topic-drop is allowed. Such syntactic and pragmatic differences between Korean and English often cause Korean EFL learners to produce null objects in their L2.

The present study investigated (i) how frequently Korean EFL learners produce null objects, (ii) what causes such a null object phenomenon, and (iii) whether it can be unlearned. The thesis consists of a pilot study and a main study.

In the pilot study, 36 Korean high school students and 9 native English speakers participated in a story-retelling task. The results show that null objects were produced more frequently than null subjects and that more proficient learners tended to use null objects less frequently. In addition, null objects were produced more frequently in recoverable contexts than in non-recoverable contexts.

The main study investigates on a larger scale detailed properties of null object production by Korean EFL learners. It examines whether the learners' production of a

null object is related to various factors, such as English proficiency, the recoverability of its reference in the discourse, and the complexity of the argument structure of its verb.

A total of 167 Korean college students and 9 native English speakers participated in the main study, and performed two types of writing tasks (i.e., discourse-based and sentence-based tasks).

The results show that the Korean EFL learners produced null objects more frequently than null subjects in both the discourse-based and the sentence-based writing tasks. This asymmetry was also observed in the pilot study and is consistent with previous findings (Yuan, 1997; Park, 2004; Hwang, 2005). The thesis argues that unlearning null objects is more difficult and takes more time than unlearning null subjects because it involves acquiring the correct argument structures of each verb.

Second, as the learners' English proficiency improved, their production of null objects decreased. This result is not consistent with Yuan (1997), but supports Hwang's (2005) research. This suggests that the learners were able to unlearn topic-prominent properties responsible for object-drop (i.e., topic-chains and the topic-NP deletion rule) and acquire the obligatory nature of overt objects in English.

Third, null objects were produced more frequently in the discourse-based task than in the sentence-based task. This indicates that object-drop in L2 English is closely related to the recoverability of reference in the discourse context, as it is in L1 Korean. It suggests that null objects in the learner language are licensed by topic chains and the topic NP deletion rule, transferred from L1.

Finally, the learners' production of null objects was affected by the verb's linguistic characteristics. As for the complexity of complement structures, the more

complex the argument structure of a verb, the more frequently null objects were produced. In addition, the learners tended to drop the objects of familiar verbs less frequently than those of less familiar verbs. Finally, the learners produced null objects very frequently when a verb in English allows its object to be optional.

The findings of this study carry pedagogical implications concerning how to help Korean EFL learners unlearn null objects. Instruction on English verb complementation, particularly construction grammar-based instruction, will lead Korean EFL learners not to produce null objects. In addition, discourse-based grammar teaching will be valuable and effective since object-drops are closely related to the referential patterns of NPs in connected discourse.

Keywords: null objects, topic-prominence, discourse-based languages, topic-chains, topic-NP deletion, English verb complementation

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LIST OF ABBREVIATIONS

ASP: aspect

CL: classifier, also called measure word in Chinese

DEC: declarative

e: empty category

MLU: mean length of utterance

N: noun

NP: noun phrase

OBJ: object

PAST: past

Q: question

SUB: subject

TOP: topic

V: verb

VP: verb phrase

CHAPTER 1. INTRODUCTION

Acquiring a second language generally implies unlearning L1 grammatical influences and adopting linguistic properties of the target language. The present study addresses one of the unlearning issues: how Korean EFL learners unlearn L1-induced null objects and acquire the obligatory nature of overt objects in English. This chapter presents the statement of the problem and the motivation and need for the present study. In section 1.2, the relevant research questions are raised. Finally, section 1.3 outlines the organization of the dissertation.

1.1. Statement of the Problem and Purpose of the Study

It has been widely known that learner language displayed in the acquisition of a second language[1] is initially under the influence of the first language and gradually adopts the norms of the target language until it develops native-like competence (Selinker, 1972). Some linguistic features transferred from the mother tongue are adapted to the target norms after a relatively short period of time, whereas other features remain in the interlanguage for quite some time. One example of such features that are difficult to unlearn is null objects and topic-prominence observable in the interlanguage of Korean EFL learners.

[1] In this study, the term "second language (L2)" refers to any language other than the native tongue, whether it is learned in a naturalistic setting or in an instructional environment. Also, the terms "acquisition" and "learning" are used interchangeably without any theoretical implications.

Typologically, Korean is classified as a topic-prominent[2] language (Li & Thompson, 1976), wherein the basic syntactic unit is a topic-chain formed by a sequence of successive topic-comment constructions (Tsao, 1977). Notably, the topic NPs referring to the same entity as the discourse topic can be deleted through the topic-NP deletion rule. For example, in example (1), the first NP "na-ke shu" serves as a discourse topic, and all the subsequent NPs with the same referent have been deleted, whether they are in the subject position or in the object position. Consequently, the resulting discourse consists of one topic and multiple comments about it.

(1) (*na-ke shu*)$_i$, *e*$_i$ *hua* *xiao, e*$_i$ *ye* *da, e*$_i$ *hen nankan, suoyi wo mei mai e*$_i$.
TOP TOPSUB TOP SUB SUB SUB OBJ

That-CL tree Ø flowers small Ø leaves big Ø very ugly so I not buy Ø

"The tree, (its) flowers are small, (its) leaves are big, (it) is very ugly, so I did not buy (it)." (Chinese: Xiao, 1998)

[2] Li & Thomson (1976) divided languages into four basic types: (i) languages that are subject-prominent (e.g., Indo-European languages); (ii) languages that are topic-prominent (e.g., Chinese); (iii) languages that are both subject-prominent and topic-prominent (e.g., Japanese, Korean); (iv) languages that are neither subject-prominent nor topic-prominent (e.g., Tagalog). In subject-prominent languages, the basic sentential structure depends on the "subject-predicate" grammatical relation, whereas in topic-prominent languages, the basic sentence structure is the "topic-comment"construction. According to Li & Thompson, Korean is classified as a language that is both subject-prominent and topic-prominent because it allows for both "subject-predicate" and "topic-comment" constructions. Although Li & Thompson point out that topic is a discourse notion, their discussion of topic remains at the sentence level.

Following Tsao (1977), the present study presupposes that topic is a discourse notion that extends its semantic domain to more than one sentence and thus controls deletion of all the coreferential NPs in a topic chain. In addition, in the study, "topic-prominence" is defined as a topic-bound property in a discourse, resulting in a topic-chain and topic NP deletion. On the other hand, "subject-prominence" is defined as dependence on the "subject-predicate" relation on the sentence-level.

If the same content were delivered by a native English speaker, the discourse would appear as follows:

(2) "*The tree has small flowers and big leaves.* ***It*** *is very ugly. So I didn't buy* ***it****.*"

Since English is a subject-prominent language, there is no omission of subjects or objects resulting from topic-chaining and topic deletion. Thus, overt arguments, rather than null arguments, should be used, as the bold-faced words of the second and third sentence show in (2).

Moreover, in general, English sentences have a subject-predicate structure, not a topic-comment structure. That is, there is only one position before a verb, which is occupied by a grammatical subject. Thus, double-nominative constructions, which have both a topic and a subject (e.g., "The tree, flowers are small"), are not possible in English.

Although a topic-prominent language allows both subjects and objects to be phonetically unrealized, previous research has not agreed upon whether null subjects are related to *pro*-drop, or to topic-drop, or to both (Huang, 1984; Roebuck *et al.*, 1999; Wang *et al.*, 1992). However, null objects have generally been agreed to be associated with topic-drop (Huang, 1984). Huang proposes that null objects in topic-prominent languages result from topicalizing objects into sentence-initial positions and deleting them after forming topic-chains. Although topicalization is also possible in English, it is infrequent and marked. More importantly, since neither topic chains nor topic-drop is allowed, null objects do not appear in English. Such syntactic and pragmatic differences

between Korean and English often cause Korean EFL learners to produce null objects in their L2. Previous research on null arguments has suggested that, when learning English, speakers of Korean-type languages are able to supply overt subjects from a very early period (Lakshmanan, 1991) but that they have difficulty providing overt objects (Zobl, 1994; Yuan, 1997; Park, 2004; Hwang, 2005).

Few studies have investigated how speakers of topic-prominent languages deal with null objects in L2 English, and even fewer have looked into learners' production data. Many of the previous studies have examined L2 learners' performance in a grammaticality judgment task (Zobl, 1994; Yuan, 1997; Hwang, 2005), but no research has focused on how intermediate or advanced-level learners of East-Asian languages produce null objects in L2 English. Thus, it remains to be proven empirically whether, as Yuan (1997) argued, even advanced-level learners have persistent difficulty in unlearning null objects in L2 English.

Moreover, the relationship between null objects and topic-prominence should also be supported empirically. Although null objects are commonly believed to be a characteristic feature of topic-prominent languages, associated with topic-drops, not *pro*-drops (Huang, 1984), little research has actually investigated whether the null objects found in Korean EFL learners' interlanguage have the same characteristics as null objects in Korean.

Finally, little attention has been paid to the question of whether and how the production of a null object is associated with complementation types of verbs. It may be possible that null objects are produced more frequently in specific types of argument structures than in others. Even though unlearning a null object is assumed to become

possible by parameter resetting (i.e., from [+topic-drop] parameter to [-topic-drop] parameter), some variations may exist in the production of a null object that are influenced by the complexities of the complement structure of a verb.

This dissertation investigates (i) how frequently Korean EFL learners produce null objects, (ii) what causes such null object phenomenon, and (iii) whether it can be unlearned. This dissertation consists of a pilot study and a main study. Conducting a story-retelling task, the pilot study takes a preliminary look at the overall patterns of null object production by Korean EFL learners and addresses the following two questions: (1) how frequently do Korean EFL learners produce null objects in connected discourse?, and (2) how is their production of null objects associated with English proficiency?.

The main study investigates on a larger scale detailed properties of null object production by Korean EFL learners. The study focuses on the production patterns associated with the learners' English proficiency, task types (i.e., discourse-based and sentence-based writing task), and complement types (i.e., monotransitive, complex transitive, and ditransitive with a non-clausal or clausal complement). Thus, it will be examined how the learners' production of null objects is related to their English proficiency, the recoverability of their referents in the discourse, and the complexity of the argument structure of their verbs.

1.2. Research Questions

This dissertation was designed to explore null objects produced by Korean EFL

learners in speaking and writing. The study deals with the following research questions.

1. What are the developmental patterns of Korean EFL learners' interlanguage null objects?
   - How frequent is their production of null objects?
   - How is their unlearning of null objects associated with English proficiency?
2. What are syntactic-discourse factors underlying Korean EFL learners' production of null objects?
   - Is their production of a null object related to the recoverability of its reference in the discourse?
   - Is their production of a null object related to the complexity of the argument structure of its verb?

1.3. Organization of the Study

This dissertation consists of five chapters. Chapter 1 introduces the motivation and the necessity for the present study and poses the research questions. Chapter 2 presents the theoretical background of the null object phenomenon and reviews previous studies on the phenomenon in L1 and L2 acquisition. It then provides the linguistic descriptions of verb complementation in English. Chapter 3 overviews the research design and the findings of the pilot study and describes the experimental design of the

main study. Chapter 4 presents and discusses the research findings. Finally, Chapter 5 presents a summary of the major findings of the study and also provides pedagogical implications, limitations of the study and suggestions for future research.

CHAPTER 2.THEORETICAL BACKGROUND

This chapter presents the theoretical background of the dissertation. The first section provides an overview of the null object phenomenon, focusing on the two syntactic parameters: the *pro*-drop parameter (section 2.1.1) and the topic-drop parameter (section 2.1.2). Although English does not allow null objects, under certain circumstances, some objects are phonetically unrealized. Section 2.1.3 shows the syntactic and semantic features of object omission in English, observing that object-drop in English is a fundamentally lexical phenomenon and thus different from null objects in topic-prominent languages such as Korean.

The second section gives an overview of previous research on the null object phenomenon in L1 and L2 acquisition. Section 2.2.1 and section 2.2.2 provide L1 and L2 acquisition research on the null object phenomenon, respectively.

The final section presents different types of verb complementation in English, focusing on the "verb + object NP + *to* infinitive" structure, which is classified into three distinct constructions: monotransitive, complex transitive, and ditransitive construction.

2.1. The Null Object Phenomenon

2.1.1. Null Subjects and the Pro-drop Parameter

The null subject phenomenon has been vastly investigated in the field of generative linguistics since the discovery of the relation between non-overt subjects and rich verbal inflection. Perlmutter (1971) first observed that languages like Spanish (1a) and Italian (1b) drop subjects in tensed clauses:

(1) a. *ø Voy al cine.*

"(I) go to the movies."

b. *ø Vado al cinema.*

"(I) go to the movies."

Similarly, Taraldsen (1978) noted that a subject can drop if a language has overt agreement morphology to recover its content. On the other hand, an overt subject is required if a language has an impoverished inflectional system.

Chomsky (1981) attributes this variation to the so-called "*pro*-drop parameter". The languages that allow null subjects due to their rich agreement system (e.g., Italian, Spanish, Portuguese) are referred to as [+*pro*-drop] languages, whereas languages that lack such rich verbal inflection and require overt subjects (e.g., English, German, French) are called [-*pro*-drop] languages.

The *pro*-drop parameter cannot, however, explain why East-Asian languages which have no agreement morphology (e.g., Chinese, Japanese and Korean) also permit null subjects. To resolve this problem, Huang (1984) suggests that null subjects are possible both in languages with strong agreement and in those with no agreement at all. Jaeggli and Safir (1989) later elaborated on Huang's suggestion and created the

Morphological Uniformity Principle (MUP), which states that only languages with a uniform inflectional paradigm permit null subjects:

(2) *Morphological Uniformity Principle (MUP)*

Null subjects are permitted in all and only languages with morphologically uniform inflectional paradigms.

(3) *Morphological Uniformity*

An inflectional paradigm P in a language L is morphologically uniform iff P has either only underived inflectional forms or only derived inflectional forms.

Under this principle, Chinese and Korean are morphologically uniform as they have no inflectional affixation, and consequently allow null subjects. On the other hand, English has a mixed morphological paradigm. Except for a few verbs like *be* and *have*, the majority of verbs in English are inflected only in the third person singular present tense. English, therefore, disallows null subjects and must overtly represent every subject.

At first sight, the MUP hypothesis seems to make correct predictions for not only Italian- and Chinese-type null subject languages, but also English-type non-null subject languages. It is conceptually unclear, however, why there should be a connection between morphological uniformity and the licensing of null subjects (Y. Huang, 1995). Moreover, the hypothesis does not predict anything about the availability of null objects.

It cannot explain why null objects are prevalent in Chinese-type languages but remain unacceptable in Italian-type languages.

2.1.2. Null Objects and the Topic-drop Parameter

Although both East-Asian languages and Indo-European *pro*-drop languages allow subjects to drop, they differ from each other in one important respect: the former, but not the latter, allows objects to drop. In Chinese, for instance, objects as well as subjects can be phonetically unrealized in finite clauses, as in the following examples[3]:

(4) A: *Zhangsan kanjian Lisi lema?*

Zhangsan see Lisi ASP Q

"Did Zhangsan see Lisi?"

B: ø kanjian ø le.

See ASP

"(He) saw (him)." (Chinese: Huang, 1989, p.187)

Similarly, Korean can drop objects if their referents are recoverable from the context.

[3]According to Yuan (1997), Chinese allows objects to be either overt or null, but overt objects often sound redundant.

(5) A: *Ecey* *ø* *ku keiku mek-et-ni?*

Yesterday the cake eat-PAST-Q

"Did (you) eat the cake yesterday?"

B: Ung, ø ø mek-et-ta.

Yes, eat-PAST-DEC

"Yes, (I) ate (it)." (Korean: Ahn, H-J & Kwon, Y-J, 2012, p.96)

In order to explain this variation in object drop, Huang (1984) proposes that there are two distinct parameters involved in the availability of null arguments: the *pro*-drop parameter and the topic-drop parameter. The *pro*-drop parameter refers to the availability of null subjects[4] (i.e., whether subjects will be omitted or not), whereas the topic-drop parameter concerns the availability of null objects. According to these parameters, English is a [-*pro*-drop] [-topic-drop] language and therefore does not allow either subjects or objects to drop. Chinese, on the other hand, is a [+*pro*-drop] [+topic-

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[4] In fact, Huang (1984) claimed that a null subject can be either a *pro* or a variable, depending on where it occurs in a sentence. More specifically, null subjects c-commanded by the matrix antecedent are believed to be *pro*s, whereas null subjects in other contexts are variables.

Null subject as a *pro*: Zhangsan$_i$ xiwang [e_i. keyi kanjian Lisi].
Zhangsan hope can see Lisi
'Zhangsan$_i$ hopes that [he$_i$ can see Lisi].' (Chinese, Huang, 1984, p.538)
Null subject as a *variable*: *e* lai-le.
Come-LE
'[He], came.' (Chinese, Huang, 1984, p.537)

Researchers have not reached a consensus on whether null subjects in Korean are *pro*-drop (Cole, 1987; Kang, 1986; Kim, S. H., 1993; Moon, 1989; Yoon, 1990, Zushi, 2003) or topic-drop (Huang, 1984). However, there are sufficient reasons to assume their syntactic status is *pros* because they carry their own theta-roles and can alternate with a resumptive pronoun, *caki* (Kim, S. Y., 2006). Thus, the present study assumes that null subjects in Korean are affected by the *pro*-drop parameter.

drop] language that allows both subjects and objects to be null, while Italian is a [+*pro*-drop] [-topic-drop] language that allows subjects, but not objects, to be null.

According to Yang (in preparation), East-Asian languages such as Chinese and Korean are discourse-based languages, which share some intriguing inter-clausal discourse properties not observed in sentence-based languages. One of the most distinctive features of discourse-based languages is topic-prominence. Topic-prominent languages display so-called "topic-comment" sentential structure. That is, each sentence consists of a topic and a comment "about" it (Li & Thompson, 1976).

Other interesting features of discourse-based languages are a topic-chain rule and a topic NP deletion rule (Tsao, 1977). A topic-chain is a so-called chain of clauses that share a single topic. The topic is usually mentioned at the beginning of the first clause and subsequent mentions of the same topic are left unpronounced. In Chinese example (6), the topic "wo" appears overtly in the first clause, but later mentions of the same topic in the second and third clauses are not pronounced.

(6) ***Wo*** *dakai bingxiang, Ø dao le yi-bei niunai, Ø zuo le yi-ge sanmingzhi.*

I open fridge, Ø pour one-cup milk, Ø make one sandwich.

"I opened the fridge, poured a glass of milk and made a sandwich."

(Li, 2004, p.27)

A topic-chain rule allows a topic to form a chain that connects to its discourse antecedent beyond the sentence boundary. The topic is then deleted through the topic-NP deletion rule.

This is also how objects become null in such languages. Huang (1984) proposes that null objects in Chinese are variables[5] locally Ā-bound by a topic. They cannot be pronominals because they cannot be bound by any matrix argument, as in (7a), and must be coreferential with the discourse topic, as in (7b) and (7c):

(7)a. *Zhangsan*$_i$ *shuo Lisi bu renshi* $e_{*i/j}$.

Zhangsan say Lisi not know

"Zhangsan$_i$ says Lisi doesn't know (him$_{*i/j}$)."

b. *Neige ren*$_i$ *Zhangsan shuo Lisi bu renshi* e_i.

that man Zhangsan say Lisi not know

"That man$_i$, Zhangsan said Lisi didn't know e_i."

c. $[_{TOP} e_i]$, *Zhangsan shuo Lisi bu renshi* e_i.

Zhangsan say Lisi not know

"*[Him$_i$], Zhangsan said that Lisi didn't know e_i."

(Chinese: Huang, 1984, p.542)

(7a) and (7b) are identical except that the topic is not overtly present in (7a). According to Huang, the embedded object in (7a) has been topicalized to the sentence-initial position as has the embedded object in (7b). Due to the topic NP deletion rule, the topicalized object in (7a) has been dropped in (7c), because a topic NP can be deleted if it is identified with a topic in the preceding sentence (Huang, 1984, 1989; Shi, 1989;

[5]According to the Principle C of the binding theory (Chomsky, 1981), a variable cannot be coreferential with any c-commanding nominal in an argument position but it is Ā-bound by a discourse topic.

Tsao, 1977). The rule applies across sentences, resulting in a topic chain, a structure that is one of the basic syntactic units in discourse-based languages.

A topic chain is a discourse unit formed by a sequence of successive topic-comment constructions (Tsao, 1977). In addition, it is a basic syntactic unit that can perform all the syntactic functions of CP (Shi, 1989). For instance, a topic chain can function as either a subject or a verbal complement.

The following example of a topic chain shows that not only subjects and objects but also possessive pronouns can be omitted due to their relations to the topic phrase.

(8) (*na-ke shu*)$_i$, *e*$_i$ *hua xiao*, *e*$_i$ *ye da*, *e*$_i$ *hen nankan, suoyi wo mei mai e*$_i$.
TOP TOP SUB TOP SUB SUB SUB OBJ

That-CL tree Ø flowers small Ø leaves big Ø very ugly so I not buy Ø

"The tree, (its) flowers are small, (its) leaves are big, (it) is very ugly, so I did not buy (it)." (Chinese: Xiao, 1998, p.10)

Although topicalization is also possible in English[6], it is infrequent and marked. More importantly, English allows neither topic chains nor topic-drop. Thus, null objects as in (7a) are not allowed in English.

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[6]Two types of topic constructions, where the sentence-initial constituent delivers the topic of the sentence and the rest of the sentence serves as a comment about it, are found in English: namely topicalization and left-dislocation.

(1)a. *This book*$_i$*, I really like* t_i. (topicalization)
b. *As for this book, I think you should read it.* (left-dislocation) (Chomsky, 1997, p.91)

In (1a), the phrase "this book" has been topicalized to the sentence-initial position through a syntactic movement, leaving a trace behind, while the same phrase has been base-generated in (1b). In the spoken discourse, the preposition "as for" in (1b) can be omitted as in (2).

2.1.3. The Object-drop in English

In principle, English is a [-*pro*-drop] [-topic-drop] language that requires the overt representation of each argument. Except for certain restrictive genres like diaries and recipes, every tensed verb requires an overt subject. Thus, supplying a subject is straightforward and rule-governed. Objects in English, however, pose a rather complicated problem. Objects appear to be omissible in some contexts. In particular, many transitive verbs have intransitive uses. For example, the verb "drink" can be used with or without a direct object, as in (9):

(9)a. *He drank coke with a straw*.

b. *He drank with a straw.*

As shown in (10), however, English does not always allow object-drop.

(10)a. *The tiger killed the snake*.

b. **The tiger killed*.

---

(2) *This book, I think you should read it*.

However, the base-generated topic should have a coreferential pronoun in the sentence.

In topic-prominent languages, on the other hand, the topic does not necessarily have a coreferential empty or overt constituent in the sentence as in (3).

(3) *neichang huo, xingkui xiaofangdui lai de zao.*
that fire fortunately fire-brigade come COMP early
"That fire, fortunately the fire-brigade came early." (Huang, 1984)

According to Cummins & Roberge (2005), null objects in English are null bare nouns similar to null cognate objects[7]. These objects have non-referential and non-individuated meaning[8], as in examples (11) and (12):

(11) *I really like to read ∅ (=books) but John spends all his free time baking ∅ (=bread).* (Pérez-Leroux, A.,Pirvulescu, M., &Roberge, Y., 2011, p. 282)

(12) a. *The chef-in-training chopped and diced all afternoon.*

b. *Tigers only kill at night.*

c. *The singer always aimed to dazzle/please/disappoint/impress/charm.*

d. *Pat gave and gave, but Chris just took and took.*

e. *The sewing instructor always cut in straight lines.*

(Goldberg, 2001, p.506)

According to Goldberg (2001), in addition to this non-specificity, null objects in English have a very intriguing feature: the verbs that allow them have very specific aspectual characteristics. In particular, they are aspectually iterative (11, 12a, 12d) or

---

[7] Cognate objects are objects that are etymologically related to the verb as in "He dreamed a happy dream."

[8] Even definite referential objects are sometimes omitted in English when their references are recoverable from the discourse context (O'Grady, Yamashita, & Cho, 2008).

(1) a. *Pull the string, and I'll pull Ø (=the string), too.*
b. *Max started the project on Tuesday, and finished Ø (=the project) on Wednesday.*
c. *I didn't like the seat I was assigned, so I traded Ø (=the seat).*
(O'Grady, Yamashita, & Cho, 2008, p.67)

Note that all the sentences in (1) involve coordinate structures with *and* or *so*, which may form a special context where objects are omissible. However, no satisfactory linguistic explanation has yet been proposed about how this kind of omission is made possible in English.

generic (12b, 12c, 12e) and designate either atelic or temporally unbounded events. If a sentence describes a specific rather than a generic event, the object cannot be omitted as in (13) and (14) (Fillmore, 1986):

(13)a.*What happened to that carrot?*

*I chopped *(it).*

b.*What happened to that gazelle?*

*The tiger killed *(it).*

(14) *Nikel told me to take a blue box from the locker. *I took ∅(=it).*

(Larjavaara, 2000, p.77)

One final peculiar property of object-drop in English is that it is a lexical rather than a rule-governed phenomenon (Allerton, 1975, 1982; Goldberg, 2001). For example, even though the verbs "eat" and "devour" share similar syntactic and semantic characteristics, the former, but not the latter, allows its object to drop.

(15)a. *John ate (his food).*

b. *John devoured *(his food).*

(Pérez-Leroux, A., Pirvulescu, M., & Roberge, Y. , 2008, p. 372)

In summary, object-drop is a lexical phenomenon in English, whereas in Korean, it is a rule-governed phenomenon attributable to the discourse-based properties of the language.

2.2. Null Objects in L1 and L2 Acquisition

2.2.1. Null Objects in L1 Acquisition

It is a well-known fact that regardless of their native language, children in the early stages of language acquisition tend to drop subjects frequently (Bloom, 1970; Pinker, 1984). Research on English-speaking children, however, uniformly shows that unlike subjects, objects rarely drop in children's early language acquisition. Hyams and Wexler (1993) reported a strong asymmetry between subject-drop and object-drop in L1 acquisition. Although English-speaking children dropped subjects considerably, they seldom dropped objects. In Period 1, for example, Adam omitted subjects 55% of the time, and Eve 48% of the time. In the same period, on the other hand, Adam omitted objects 7% of the time, and Eve 9% of the time. Since these figures include a number of optionally transitive verbs (e.g., *read, wash*, *eat*), it is possible that the rates of null objects were overestimated, implying that actual object omissions are much less frequent in L1 acquisition.

On the other hand, children acquiring a [+topic-drop] language as their first language tend to omit objects frequently in their early grammars (Wang, Lillo-Martin, Best, and Levitt, 1992; Kim, S-Y, 1999). More importantly, object omission rates increase over time as those children mature. Considering that topic-drop languages allow objects to be null through topic-chains and the topic NP deletion rule, it may be natural that null objects are observed frequently in the early grammars of such languages.

Analyzing the elicited discourse data of nine Chinese children, nine English-speaking children, and nine Chinese adults, Wang, Lillo-Martin, Best, and Levitt (1992) found that the Chinese and American children behaved differently in terms of null subjects and null objects. With respect to subjects, the American children showed a sharp decrease over time in their use of subject-less sentences but the Chinese children continued to drop subjects. With regard to objects, however, the American children used null objects much less frequently than null subjects. The 2-year-olds (MLU 3.51) dropped objects only 8.3% of the time, whereas the older children dropped virtually none. On the other hand, the Chinese children dropped objects much more frequently than their American counterparts and figures increased over the age/MLU ranges (from 20.2% to 26.0%).

Similarly, S-Y Kim (1999) investigated the object-drop of two Korean-speaking children (aged 1;6-2;0 and 2;3-2;4) and found that the children dropped more objects as they matured: one from about 8 % at 1;6 to 48% at 2;0 and the other from 67% at 2;3 to 80% at 2;4.

2.2.2. Null Objects in L2 Acquisition

Unlike null subjects, null objects have not been investigated extensively from the perspective of L2 acquisition. In fact, only a few studies have looked at how East Asian L1 speakers produce null objects when learning English. Despite this dearth of research, one common observation suggests that although topic-prominent East-Asian languages like Korean allow both subjects and objects to be null, speakers of those languages tend to provide overt subjects from the beginning of L2 English acquisition but continue to drop objects until they become advanced in their L2 English. In other words, speakers of Korean-type languages drop more objects than subjects when learning English (Zobl, 1994; Yuan, 1997; Hwang, 2005; Park, 2004).

Interestingly, although both Italian-type languages and Korean-type languages allow null subjects, only speakers of Italian-type languages drop subjects frequently in the early stages of learning English (Lakshmanan, 1991, 1994). Lakshmanan (1991) investigated the English interlanguage produced by four children: two Spanish-speaking children, one French-speaking and one Japanese-speaking child. Of the four children, the Japanese child did not drop subjects from the very beginning although she had not acquired English inflections yet. In contrast, the other three children with Romance L1 backgrounds dropped quite a few subjects.

In a longitudinal study of six English-learning Korean children, Park (2004) found a similar result: even the early-stage learners did not readily drop subjects. Two children at stage 1 dropped subjects only 1.5 % and 2.5 % of the time, respectively. The children at more advanced stages tended to drop subjects less frequently (from 0.2 % to 2.7 %).

Objects, however, were dropped more readily (from 3.9% to 7.0%). Furthermore, Park found no significant relationship between the number of null objects and the length of the children's stay in the United States. In other words, the more proficient learners did not necessarily produce fewer null objects.

Zobl (1994) carried out a large-scale study relevant to subject-object asymmetry. He conducted a grammaticality judgment task consisting of English sentences with Chinese-speaking English learners. The results showed that while incorrect null subject sentences were rejected 75% of the time, the rejection rate of incorrect null object sentences was only 43.8%. Zobl did not provide a clear explanation for this asymmetry.

Yuan (1997) also investigated the asymmetry between unlearning null subjects and null objects in Chinese speakers' L2 English. He conducted a grammaticality judgment task of 54 sentences with 159 Chinese adult learners of English. The results were consistent with the findings of Zobl (1994): the Chinese learners were more likely to detect the ungrammaticality of null subjects in English than that of null objects. Yuan proposed that the difficulty in rejecting null objects lies in the lack of informative evidence to unset the [+topic-drop] setting in Chinese learners' L2 English. Regarding null subjects, however, there exists evidence in L2 input that indicates the specification of AGR and T in English. Upon noticing that English has verbal inflections, Chinese learners are likely to realize that English *Infl* cannot license subject *pro*. Consequently, even Chinese learners with rather low English proficiency can reject null subjects with relative ease.

Hwang (2005) investigated unlearning of null subjects and null objects in 60 Korean EFL learners. By administering a grammaticality judgment task of 64 sentences,

Hwang found that although the Korean EFL learners had more difficulty rejecting null objects than null subjects, their rejection of incorrect null objects increased significantly as their English proficiency improved. This result indicates that, as opposed to Yuan (1997), the unlearning of null objects is not impossible and that the Korean subjects could actually reset the topic-drop parameter from [+topic-drop] to [-topic-drop].

2.3. Verb Complementation in English

The following from Quirk et al. (1985, p. 1171) is a list of English verb complementation types.

Table 2.1 Verb Complementation Types

Variants	Example
COPULAR (Types *SVC* and *SVA*)	
Adjectival C_s	*The girl seemed restless.*
Nominal C_s	*William is my friend.*
Adverbial complementation	*The kitchen is downstairs.*
MONOTRANSITIVE (Type *SVO*)	
Noun phrase as O (with passive)	*Tom caught the ball.*
Noun phrase as O (without passive)	*Paul lacks confidence.*
That-clause as O	*I think that we have met.*
Wh-clause as O	*Can you guess what she said?*
Wh-infiniitve as O	*I learned how to sail a boat.*
to-infinitive (-S) as O	*We've decided to move house.*
-*ing* clause (-S) as O	*She enjoys playing squash.*
to-infinitive (+S) as O	*They want us to help.*
-*ing* clause (+S) as O	*I hate the children quarrelling.*

COMPLEX TRANSITIVE (Type *SVOC* and *SVOA*)

Adjectival C_o	*That music drives me mad.*
Nominal C_o	*They named the ship 'Zeus'.*
O + *ad*verbial	*I left the key at home.*
O + *to*-infinitive	*They knew him to be a spy.*
O + bare infinitive	*I saw her leave the room.*
O + *-ing* clause	*I heard someone shouting.*
O + *-ed* clause	*I got the watch repaired.*

DITRANSITIVE (Type *SVOO*)

Noun phrase as O & O	*They offered her some food.*
With prepositional O	*Please say something to us.*
O_i + *that*-clause	*They told me that I was ill.*
O_i + *wh*-clause	*He asked me what time it was.*
O_i + *wh*-infinitive clause	*Mary showed us what to do.*
O_i + *to*-infinitive	*I advised Mark to see a doctor.*

(+S = "with subject", -S = "without subject", C= complement, A=adverb, O=object)

The first verb-complement type is a copular construction, which does not involve any object but a subject complement[9]. The second one is a monotransitive construction, which takes a direct object. In the third type of complex transitive construction, there is another constituent after a direct object that supplements the object, without which the sentence becomes incomplete and ungrammatical. Finally, ditransitive constructions take two objects which refer to a recipient and a theme, respectively. In addition to this list, a more comprehensive description is provided in Quirk et al. (1985).

The superficially identical "verb + object NP + *to* infinitive" construction is classified into three distinct constructions: monotransitive, ditransitive, and complex transitive construction. First, in a monotransitive construction, "the NP after the verb and the *to*-infinitive" behave as one single constituent, and the NP after the verb is

[9]Here, a "complement" is defined narrowly as a constituent that completes a sentence by renaming or describing the subject.

analyzed as the subject of the infinitival clause rather than as the object of the main verb. As illustrated in (16), the NP after the verb and the *to*-infinitive can be replaced by a pronoun or another NP, and as shown in (17), it can be an answer to a *what*-question:

(16) a. *Ann wants* <u>*John to come to her birthday party*</u>.

b. *Ann wants* ***it****. / Ann wants* ***John's visit to her birthday party.***

(17) A:***What*** *does Ann want?*

B:*She wants* ***John to come to her birthday party***.

More importantly, the NP following the main verb cannot be made the subject of a passive construction, as in (18), because the NP functions as the subject of the infinitival clause, not the object of the main verb (Quirk et al., 1985):

(18)a. *Ann wants John to come to her birthday party.*

b.**John is wanted to come to Ann's birthday party.*

However, it is possible to passivize the infinitival clause as in (19):

(19)a. *I want/would like/would prefer him to finish the job.*

b. *I want/would like/would prefer the job to be finished (by him).*

(Breitenstein, 1980, p.197)

In a ditransitive construction, however, the NP after the matrix verb is analyzed as the indirect object of the verb and the *to*-infinitive as a clausal direct object. Therefore, the *to*-infinitive can be replaced by a pronoun, a NP, or a finite clause, while the NP after the verb still functions as an indirect object.

(20)a. *I told my children* ***to clean their room.***

b. *I told my children* ***something / their duty / that they should clean their room.***

Also, the *to*-infinitive can stand alone as the answer to a *wh*-question since the NP after the verb is a separate indirect object.

(21)a. ***What*** *did you tell your children?*

b. *I told them* ***to clean their room***.

Despite the fact that both the direct and indirect object can be the subject of a passive sentence in English, the infinitival clause cannot be the subject of a passive sentence, as in (22c):

(22)a. *I told my children to clean their room.*

b. *My children were told to clean their room.*

c. **To clean their room was told my children.*

Unlike monotransitive constructions, if the infinitive complement is passivized in a ditransitive construction, the resulting sentence does not have the same meaning and generally sounds ridiculous, as in (23b):

(23)a. *I told my children to clean their room.*

b.#*I told the room to be cleaned by my children.*

Lastly, in a complex transitive construction, the NP after the verb serves a double function. Syntactically, it behaves like a direct object of the matrix verb. Semantically, however, it serves as a subject of the infinitive clause complement. As in (24b) and (24c), complex transitive constructions have the same propositional meaning as a monotransitive construction, as in (24a), indicating that the "object" in the former is semantically equivalent to the subject of the clausal complement of the latter. As far as passivizability is concerned, on the other hand, the "object" of the former serves as an object: as shown in (24d), the "object" can be passivized.

(24)a. *She presumed that her father was dead*. (monotransitive)

b. *She presumed her father to be dead*. (complex transitive)

c. *She presumed her father dead*. (complex transitive)

d. *Her father was presumed (by her) to be dead*. (Quirk et al., 1985, p.1195)

In summary, as shown in Table 2.2, the seemingly identical complement configuration "N_1 *V* N_2 *to V* N_3" is classified into three different types, whose details

have already been overviewed in Table 2.1.

Table 2.2 Three Different Types of *N_1 V N_2 to V N_3*

Construction	*N_1*	*V*	*N_2*	*to V*	*N_3*
Monotransitive	S	V	O		
	Ann	*wants*	*John*	*to visit*	*her house.*
Complex transitive	S	V	O	C_o	
	Mike's mother	*allows*	*Him*	*to watch*	*TV.*
Ditransitive	S	V	O_i	O_d	
	Bella's mother	*tells*	*Her*	*to brush*	*teeth.*

CHAPTER 3. METHODOLOGY

This chapter presents the pilot study and the methodology used in the main study. Section 3.1 provides an overview of the research design and the findings of the pilot study. Section 3.2 presents the methodology employed in the main study: participants, target structures, instruments and data collection procedures, and the method of data coding and analysis.

3.1. A Pilot Study

Few empirical studies have examined how native speakers of a topic-prominent language like Korean acquire obligatoriness of overt objects in English. Moreover, most previous studies have used a grammaticality judgment task rather than looking at production data. Consequently, the present research has designed a pilot study to take a preliminary look at the overall patterns of null object production by Korean EFL learners, focusing on the following two questions:

(1) How frequently do Korean EFL learners produce null objects in connected discourse?

(2) How is their production of null objects associated with English proficiency?

3.1.1. Experimental Design

3.1.1.1. Participants

A total of 36 Korean high school students and 9 native English speakers participated in the pilot study. The Korean-speaking participants were from three different high schools located in Seoul, South Korea: 17 were in their first year and 19 were in their second year. Since the three schools were boys' high schools, the Korean participants were all male.

Table 3.1 Korean Participants of the Pilot Study

School name	Number of participants
JHS	9 (1st grader), 9 (2nd grader)
SHS	10 (2nd grader)
STHS	8 (1st grader)

The participants from J High School were all from the English newspaper-writing school club and were highly motivated to learn and speak English. Ten out of the 18 students had lived in an English-speaking country for one to five years, and most participants had a very advanced command of English. On the other hand, the participants from S High School were from a random second year class. Their English teacher reported that the learners were at an average proficiency level in their English

class. As they did not have many chances to engage in authentic communication in English, some of them were very shy and felt uncomfortable performing the given tasks in English. The last group came from S Technical High School, a vocational school where English is not a major subject. Most of the participants from this school were not proficient in English and some of them had not yet acquired the basic sentential structure of English (i.e., the so-called SOV word order). All of them produced only a small number of sentences in the story-retelling task.

The Korean participants took the elicitation task, which will be described in Section 4.1.1.2.1. The participants were divided into three proficiency groups according to their performances in the task.

Table 3.2 Three Proficiency Groups in the Pilot Study

Group	Number of participants	English proficiency
Level 1	16 (all from JHS)	most proficient
Level 2	10 (2 from JHS, 7 from SHS, 1from STHS)	intermediate
Level 3	10 (3 from SHS, 7 from STHS)	least proficient

In addition to the 36 Korean EFL learners, 9 native English speakers (6 males, 3 females) also participated in the study, providing target norms against which the learner language of the Korean participants was compared.

Table 3.3. The English-Speaking Participants

Gender	Age	Nationality	Major
Female	31	Korean-American	English literature
Female	27	Korean-New Zealander	English language Education
Male	23	Korean-American	Economics
Male	25	American	Diplomatic science
Male	24	Chinese-American	Economics & International Business
Female	27	Chinese-American	Chinese & Korean
Male	20	Australian	Korean
Male	21	American	Asian History
Male	33	Korean-American	Geography

All of the English-speaking participants except one spoke English as their first language (or mother tongue), but they also spoke Korean to some degree, in part because they were all living in Korea at the time of the study. One participant was bilingual in Korean and English. Although she only used Korean in her childhood, she began to acquire English when she immigrated to New Zealand at the age of 12.

3.1.1.2. Instruments and Procedures

The pilot study employed two different tasks: an elicited speaking task and a story-retelling task. The two tasks were administered on the same day through an individual interview with the researcher. The whole process took approximately 15 minutes per person, including the time spent watching the video clip for the story-retelling task.

3.1.1.2.1. The Elicited Speaking Task

This task required the learners to produce interrogative and negative sentences, with the intent to use them as the empirical basis for determining the learners' syntactic developmental stage in English. In other words, the learners' performances in this task were used to determine their relative proficiency levels and divide them into different groups. In particular, the participants were asked to produce five questions that they would like to ask a Korean actress, 'Kim Taehee', and five negative statements describing the same person, 'Kim Taehee', or a Korean singer, 'Rain'.

Every sentence produced by the learners was examined for the syntactic properties which are known to characterize developmental stages of Korean EFL learners in Hahn (2000). Each learner was then assigned to one of the proficiency groups, based upon the main characteristics of their interlanguage syntax[10].

[10] The learners' performance with negative and interrogative sentences may not reflect their general proficiency in English but it only shows some aspects of their syntactic development.

The following were the characteristics of the learner language of each proficiency group:

< Interrogative sentences>

Level 3 learners

i) primarily used prefabricated questions such as *"What is your name?", "Where are you from?", "How old are you?"*, which were sometimes inappropriate and did not fit in the context of the given task.

ii) made use of prefabricated expressions when producing a novel sentence, and produced, for example, *"What do you do really go 무한도전?"* using a familiar expression "*What do you do?*".

iii) did not employ proper inversion as in *"Why get you pretty?"*or *"Have you boyfriend?"*.

iv) did not employ inversion at all as in*"You have sister?"*.

v) frequently omitted necessary arguments and produced incomplete sentences such as "*Do you know beautiful?*" (= "*Do you know you are beautiful*?"), "*Where live in*?" (= "*Where do you live?*"), "*How much pretty?*" (= "*How pretty are you?*").

Level 2 learners

i) depended on many prefabricated questions such as *"Do you have a*

Nevertheless, such information can still be used in determining the learner's relative status along the L2 acquisition process.

boyfriend?", or *"What's your favorite subject?"*.

ii) lacked knowledge of the inversion of an interrogative sentence and produced an uninverted question such as *"Why you go to Japan?"*.

iii) simply added "do" before the subject and the verb as in *"What do you do in last weekend?"*, *"How much do you have earned money?"*, or "did" as in the example *"Why did you chose that job celebrity?"*.

iv) did not mark the correct tense on the inverted verb: *"What's your major when you were in university?"*

Level 1 learners

i) had no particular difficulty making interrogative sentences and even produced very complex structures such as *"Why did you decide to enter the society of the entertainment?"*, *"When did you know that you are beautiful?"*, or *"How do you feel about having a actor boyfriend?"*.

ii) created questions natural in the given context (e.g., *"Can you give me your phone number?"*).

< Negative sentences>

The Korean participants seemed to have more difficulty in creating negative sentences than in developing questions. Several level 3 learners even gave up producing negative sentences, saying that they did not know how to do so.

Level 3 learners

i) did not provide the necessary verb but only inserted a negative element such as *"not"*, *"don't"*, or *"doesn't"* after the subject: for example, *"You not famous."*, *"You not money."*, *"You don't money."*, *" You don't smart."*, or *"He doesn't fat."*.

ii) employed the "topic-comment" structure with a topic marker "is" in front of "not", as in the sentence, "He is not long hair.".

Level 2 learners

i) failed to provide the necessary auxiliary, such as "*do*", *"does"*, *"did"* and were unable to distinguish between *"no"* and *"not"*: *"She no have glasses."* or *"She no have boyfriend."*.

ii) did not inflect the negator "don't" as in *"She don't have a baby."* or *"She don't have long leg."*.

Level 1 learners

i) had no problem producing a negative sentence and were able to provide correct auxiliaries and tense inflections (e.g., *"She doesn't have a boyfriend."*).

3.1.1.2.2. The Story-retelling Task

In this task, the participants watched part of a silent movie ("The Kid", 1921) for about 7 minutes and gave a summary of the story. When they retold the story, they were provided with 12 still pictures from the movie clip and Korean translations of difficult vocabulary so that they could better recall the story and remain on the right track. Although they were told that their story did not have to be confined to the picture cues alone, most of them, especially the advanced level learners and native English speakers, followed the sequence of the given pictures and tried to describe all of them. However, the beginning-level learners and some intermediate-level learners had difficulty depicting some scenes, despite the fact that Korean translations were provided for difficult words. Consequently, they tended to skip some picture prompts.

This task was intended to investigate how frequently Korean EFL learners produce null subjects and null objects in actual speaking and how the frequency of null objects changes as the learners' English proficiency improves.

3.1.1.3. Coding and Analysis

After data collection, all speaking samples were transcribed and coded by the researcher. The following were the general guidelines adopted for coding.

1. All instances of transitive verbs were identified and examined (1) whether the direct object was overt or null, and (2) whether its referent was new or given in

the discourse.

2. As for ditransitive verbs, both indirect objects and direct objects were included in the analysis. Prepositional phrases (e.g., *He gave the baby* <u>*to an old man*</u>.) were also considered as valid indirect objects.
3. All instances of subject positions were identified and examined to determine whether the subject was overt or null.
4. Unintelligible utterances were not included in the analysis.
5. Repetitions on the sentence level were counted as separate utterances, but simple repetitions within a sentence were counted only once.
6. Idiomatic expressions such as "you know" and "I guess" were excluded from analysis.

After coding, the frequencies of null subjects and null objects were calculated, and their patterns were analyzed across the learners' proficiency levels.

3.1.2. First Sketch

Table 3.4 shows the frequencies of null subjects and null objects produced in the story-retelling task.

Table 3.4 Frequencies of Null Subjects and Null Objects in the Story-retelling Task

	Subject Use		Object Use	
Groups	Overt	Null	Overt	Null
Level 3 (10)	83/84(99%)	1/84(1%)	64/66 (97%)	2/66 (3%)
Level 2 (10)	126/128(98%)	2/128(2%)	102/106 (96%)	4/106 (4%)
Level 1(16)	485/488(99%)	3/488(1%)	333/340 (98%)	7/340 (2%)
Native (9)	417/421(99%)	4/421(1%)	295/296 (100%)	1/296 (0%)

number of tokens / number of possible positions

The learners produced null objects more frequently than null subjects although the difference between the two dropping rates was not significant.

As expected, the most proficient group used null objects least frequently. The level 1 group dropped only 2% of the objects. However, the least proficient group (the level 3 group) did not produce null objects most frequently. In fact, their object-drop rate was lower than that of the second-most proficient group: the level 2 group dropped 4% of the objects but the level 3 group dropped 3% of the objects.

Table 3.5 shows how frequently null objects were produced in the two different contexts of the story-retelling task: (1) where the referent of a missing object was

recoverable from the discourse context (recoverable context) and (2) where the referent was not recoverable because it was new in the discourse context (non-recoverable context).

Table 3.5 Frequencies of Null Objects in the Two Contexts of the Story-retelling Task

Groups	Recoverable	Non-recoverable
Level 3(10)	1/21 (5%)	1/45 (2%)
Level 2(10)	4/52 (8%)	0/54 (0%)
Level 1 (16)	7/185 (4%)	0/155 (0%)
Native (9)	1/156 (1%)	0/140 (0%)

number of tokens / number of possible positions

Null objects were produced more frequently in a recoverable context than in a non-recoverable context. In particular, the level 1 and level 2 learners never produced any null objects in a non-recoverable context. Only the least proficient group omitted 2% of the objects in a non-recoverable context.

In summary, the results of the pilot study showed that the learners dropped objects more frequently than subjects in the story-retelling task, which is consistent with previous research findings (Yuan, 1997; Park, 2004; Hwang, 2005).

In addition, the Korean participants, especially the level 2 and level 1 learners, dropped objects in recoverable contexts, wherein the referent of a missing object was recoverable from the discourse context. This supports the view that the production of

null objects by Korean EFL learners is caused by topic-prominent features such as topic chains and the topic NP deletion rule transferred from their L1 Korean.

Another important observation in the pilot study was that the most proficient group (the level 1 group) dropped objects least frequently, which suggests that null objects can be unlearned. According to Yuan (1997), unlearning null objects in EFL learning contexts is very difficult or almost impossible for speakers of a topic-prominent language like Korean because there is no positive evidence in L2 input to help the learners reset the [+topic-drop] setting. In contrast, Hwang (2005) showed that, as the proficiency of Korean EFL learners increased, their knowledge of null objects improved, an observation supported by the results of the pilot study.

One intriguing and notable point in the pilot study was that the least proficient group did not drop objects most frequently, which is inconsistent with the findings in Hwang (2005). This rather unexpected result may be due to the poor discourse proficiency of the level 3 learners. As well illustrated in (1), they seemed to have much difficulty producing connected discourse.

(1) (KSH –level 3) *She is out of hospital. She drop baby. That boy ... in car. Charlie is in baby. Charlie is drop baby.*

Having experienced much difficulty producing connected discourse, the level 3 learners were expected to have the fewest possibilities to use null arguments, which were assumed to be associated with recoverability in a connected discourse.

3.2. Main Study

The pilot study demonstrated that null objects were produced more frequently than null subjects in the story-telling task, and that null object production by Korean high school English learners decreased as their proficiency improved. Another observation was that some English learners, especially the least proficient, had difficulty producing connected speech, which seemed to influence their production of null objects significantly.

Based upon these findings, the main study was designed to investigate on a larger scale the detailed properties of null argument production by Korean EFL learners. After observing that the less proficient Korean EFL learners in the pilot study had difficulty producing connected speech, the main study made two different efforts. One was to design two types of guided writing tasks: a discourse-based and a sentence-based task. The first task focused on the production of null arguments in connected discourse, and the second one on the production of null arguments in non-recoverable contexts. The other effort concerned the proficiency level of the participants. The main study invited participants from colleges, and expected them to have less difficulty producing connected speech than did the high school students.

3.2.1. Participants

The participants in this study were all college students in South Korea, some of whom attended a four-year university while others attended a two-year community college. The participants' majors varied widely, from English language and literature to vocal music, and their English proficiency and motivation to study English were very different from person to person. However, since all of the participants had been learning English for at least nine years through regular English classroom instruction in primary, secondary, and tertiary schools, they were expected to have been exposed to and learned the verbs used in the experiment.

Initially, 191 Korean college students participated in the study. Among them, 24 students were excluded from the final analysis because they failed to complete the tasks. In all, the performances of 167 participants (81 males, 86 females) were analyzed in the two writing tasks.

The Korean participants were divided into three proficiency[11] groups, based on their performance in the sentence-based guided writing task. In this task, each participant was provided with 21 pictures, and requested to write a sentence, using a cue verb, about each picture.

[11] In the present study, 'proficiency' is defined as grammatical competence, which includes argument structure knowledge. Although the term proficiency is commonly used to mean communicative competence and it encompasses both accuracy and fluency, it was assumed in this study that L2 learners with greater grammatical competence also had greater communicative competence.

Table 3.6 Three Proficiency Groups in the Main Study

Group	Number of participants	Number of errors in the use of argument structure[a]	English proficiency
Level 1	47	0 – 4	most proficient
Level 2	77	5 – 8	intermediate
Level 3	43	more than 8	least proficient

[a] The maximum possible number was 21.

The learners who produced up to four erroneous sentences regarding argument structure were assigned to the most advanced group (level 1 group). The learners who made five to eight erroneous sentences were placed in the second-most advanced group (level 2 group). The remainder of the learners were in the least proficient group (level 3 group).

Learner errors included using an unacceptable argument structure (e.g., *Mother suggested Mary to go see a doctor.*), confusing a *to*-infinitive with a bare infinitive (e.g., Mother *told Bella wash her face and hands. / Mother made Ryan to clean his room.*), using a "*to* + NP" phrase instead of an object (e.g., *Mother advise to Liz exercise every day.*), omitting an NP in a *that*-clause (e.g., *Mother told Bella that wash her face and hands.*), using the "*to* Ving" form (e.g., *Nick hope to coming Ann.*) and adding an unnecessary preposition (e.g., *Classmates called Ryan of liar. / Mr. and Mrs. Smith named baby as Rachel.*), to name a few.

In addition to these Korean participants, the nine native English speakers who

participated in the pilot study also participated in the main study, providing target norms against which the learner language of the Korean participants was compared. (See Table 3.3 for their characteristics).

3.2.2. Target structures

This study endeavored to encompass all the major argument structures of verbs which take a direct or indirect NP object. The following lists the complementation types of these verbs.

Table 3.7. Complementation Types of Target Verbs Used in the Task

Complementation type			Verb	Example
non-clausal complement	Monotransitive (type SVO)	1.Verb + object	eat	*Ji-eun wants to eat the snack.*
			hate	*Chris' mother hates his hair style.*
	Complex transitive (Type SVOC/SVOA)	2.Verb + object + noun object complement	call	*Hyun-woo's friends called him a liar.*
			name	*Mr. and Mrs. Smith named their baby Boa.*
		3.Verb + object + adjective object complement	make	*Tom makes Rachael happy.*
			keep	*Mary keeps her test paper hidden under her bed.*
		4.Verb + object + adverbial	put	*Jack put his car key in the trunk of his car.*
			place	*Mary placed her test paper under her bed so*

				that her mother couldn't see it.
	Ditransitive (Type SVOO)	5.Verb + indirect object + direct object	give	*Tom gives Linda a present.*
			bring	*Tom's mother brings him his meal.*
Clausal complement	Monotransitive (type SVO)	6.Verb + object[12] + *to* infinitive (*Verb +finite *that*-clause)	want	*Ann wants John to come to her birthday party.*
		7.Verb + finite *that*-clause / Verb + object + *to* infinitive	think[13]	*Mr. Parker thinks that Mike is a genius. / Mr. Parker thinks Mike (to be) a genius.*
			believe	*John's friends believe that he is innocent. / John's friends believe him (to be) innocent.*
		8.Verb +finite *that*-clause (Verb + *object + *to* infinitive)	hope	*I hope Mary will arrive on time.*
			suggest	*Jason's mother suggests that Jason go to see a doctor.*
	Complex transitive (Type SVOC/SVOA)	9.Verb + object + *to* infinitive (Verb +finite *that*-clause)	allow	*Mike's mother doesn't allow him to watch TV.*
		10.Verb + object + bare infinitive	make	*Mom makes Ryan clean his room.*
			see	*Ann saw Jack walking with another girl on the street.*
	Ditransitive	11.Verb + object	tell	*Bella's mother tells her*

[12] Although the NP after the verb is referred to as an object above, semantically and syntactically it is actually a subject of the *to*-infinitive according to Quirk et al. (1985).

[13] The verbs "think" and "believe" belong to a monotransitive construction when they take a *that*-clause complement, but are categorized as a complex transitive construction when taking a *to*-infinitive complement.

	(Type SVOO)	+*to* infinitive / Verb +(object)[14] + finite *that*-clause		*to brush her teeth every day.*
			advise	*Doctor Anderson advises Liz to exercise every day to lose weight.*
		12.Verb + (indirect object) + *wh*-clause / *if*-clause	ask	*Jack asks an elderly woman where a telephone booth is.*

Of the 12 verb complementation types above, four share a superficially identical structure: "verb + object + *to* infinitive" (constructions 6, 7, 9, and 11). Despite the apparent similarity, these structures are quite distinct syntactically and semantically. First, the verb "want" (construction 6) constitutes a monotransitive construction in the sense that the NP after the verb and the *to*-infinitive behave as one single constituent. On the other hand, constructions 7 and 9 belong to complex transitive constructions, and construction 11 is a ditransitive construction.

For each argument structure, except three constructions (6, 9, and 12), two representative verbs were selected. Although a total of 21 verbs for 12 argument structures were tested in both the sentence-based and discourse-based writing task, the verb "ask" was later eliminated in the final analysis because it turned out that this verb does not necessarily require an overt indirect object[15].

[14]According to Quirk et al. (1985, p.1213), for the verb "tell", the indirect object is obligatory, whereas for the verb "advise" the indirect object is optional when a *that*-clause follows.
[15] Four out of the nine English-speaking participants did not provide an indirect object for the verb "ask".

3.2.3. Instruments and Procedures

Three different instruments were used in the study: a background questionnaire, a discourse-based guided writing task, and a sentence-based guided writing task. The questionnaire and the discourse-based writing task were printed on the same sheet and administered together, while the sentence-based writing task was administered separately on the following class day in order to reduce the task-learning effect.

3.2.3.1. Background Questionnaire

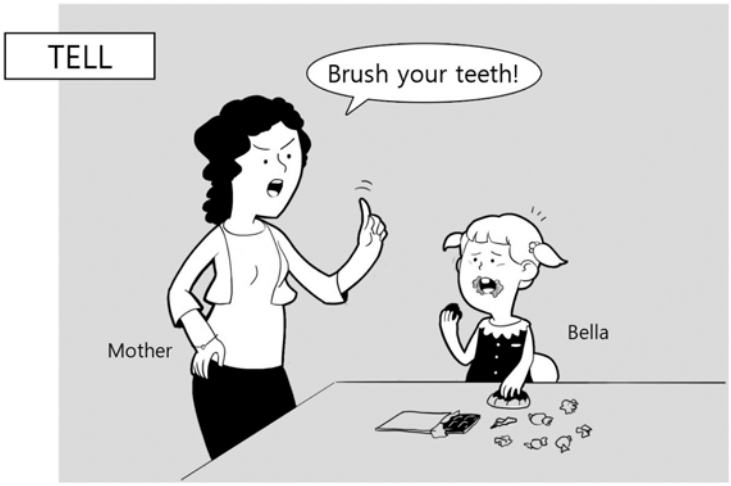
When the main task of discourse-based guided writing was administered, the Korean participants were also asked to fill out a short background questionnaire (see Appendix B). The questionnaire was designed to gather demographic data and English-learning profiles for the participants, such as age, school major, years of English study, and experience of living in an English-speaking country.

As for the English-speaking participants, a short interview was conducted instead of the questionnaire, during which each participant was asked about his or her age, major, nationality, first language, length of stay in Korea, and prior experience of learning Korean.

3.2.3.2. The Discourse-Based Guided Writing Task

In this task, the learners were provided not only with a picture and a cue verb but also with a short passage which showed contextual information about the picture (see Appendix B). They were asked to complete a sentence in the passage about the picture provided, using a given verb (See Figure 3.1.).

Figure 3.1. Example Question in the Discourse-based Guided Writing Task



2. Bella loves sweets like chocolate, candies, and cake. But she hates brushing her teeth. Her mother is worried she may develop a lot of cavities. So _____ (tell)

brush one's teeth 이빨을 닦다, cavity 충치

This task was intended to investigate the learners' use of (non-) null object of different verbs, especially when the referent of the object is fully recoverable from the contextual information provided in the passage.

3.2.3.3. The Sentence-Based Guided Writing Task

In this task, the learners were provided with a picture and a cue verb, but not with contextual information about the picture (see Appendix C). The participants were asked to write a sentence about a picture, using the verb provided (See Figure 3.2.).

Figure 3.2.Example Question in the Sentence-based Guided Writing Task

1. _____ (tell)

This task was intended to investigate not only the learners' knowledge of various argument structures but also their use of (non-) null objects of different verbs, especially when the referent of the object is not recoverable from the context.

All the sentences used in the tasks were prepared by the researcher and proof-read by two native English speakers. Further, the pictures provided were drawn by a professional illustrator. The discourse-based and sentence-based tasks used the same target verbs and similar contexts to keep the task difficulty constant between the two

tasks.

3.2.4. Coding and Analysis

Each sentence produced by the learners was examined in terms of (1) whether it had a correct argument structure, (2) whether it had a null object, and (3) whether it had a null verb or a null subject. After all the participants' responses were examined, the numbers and percentages of null and overt objects were calculated and compared across English proficiency levels, task types (i.e., the discourse-based task and the sentence-based task) and verb complementation types. In addition, the numbers and percentages of null subjects in the two tasks were calculated and compared with those of null objects.

CHAPTER 4. RESULTS AND DISCUSSION

This chapter reports the results of the main study and discusses the research findings. Section 4.1 summarizes the findings from the two guided writing tasks. Next, section 4.2 discusses the research findings by comparison to the research questions of the dissertation.

4.1. Results

4.1.1. Null Objects Across English Proficiency Levels

First, in order to determine how frequently null objects were produced, the frequency of null objects was compared to that of null subjects[16]. As shown in Table 4.1, null objects were produced more frequently than null subjects in both writing tasks.

[16] The two writing tasks in the study were not designed to investigate use of null and overt subjects. Particularly in the discourse-based writing task, the presence of conjunctions such as *and, but, so,* and *because* just before the target sentence, which was presented as a blank to the participants, may have contributed to the overuse of null subjects. Nevertheless, the frequency of null subjects was reported in order to supply a criterion against which the frequency of null objects could be judged.

Table 4.1. Frequencies of Null Subjects and Null Objects in the Two Writing Tasks[17]

	Discourse-based		Sentence-based		Total	
	Null subject	Null object	Null subject	Null object	Null subject	Null object
Level 1	0.5% (5/981)	3.4% (24/705)	0% (0/983)	1.2% (9/737)	0.2% (5/1964)	2.3% (33/1442)
Level 2	0.7% (11/1597)	10.5% (118/1125)	0% (0/1608)	2.1% (25/1163)	0.3% (11/3205)	6.3% (143/2288)
Level 3	1.8% (15/874)	23% (131/582)	0.1% (1/893)	6.4% (40/627)	0.9% (16/1767)	14.1% (171/1209)
Total	0.9% (31/3452)	11.3% (273/2412)	0.03% (1/3484)	2.9% (74/2527)	0.5% (32/6936)	7% (347/4939)
Native Speakers	0% (0/189)	0% (0/127)	N/A[18]	N/A	N/A	N/A

( ) = number of each object type / total number of object positions

In the discourse-based writing task, the learners dropped 11.3% of the objects but only 0.9% of the subjects. Similarly, in the sentence-based writing task, the learners dropped 2.9% of the objects and 0.03% of the subjects. In total, they omitted 7% of the objects and 0.5% of the subjects. Such asymmetry between null subjects and null objects is consistent not only with the results of the pilot study but also with previous findings from other research, which has reported that null objects are more difficult for Korean

[17] For the analysis of null objects, three verbs, "hope", "suggest", and "ask" were excluded because they do not require an NP object in their argument structure (in the case of "hope" and '"suggest") or the NP object of the verb can be omitted (in the case of "ask"). However, as for null subjects, all 21 verbs were included in the analysis.

[18]The native English speakers only participated in the discourse-based writing task.

EFL learners to unlearn than null subjects (Park, 2004; Hwang, 2005).

Turning to the frequencies of null objects across proficiency levels, the following figures show how frequently the three proficiency groups produced null objects. Figure 4.1 shows the frequency of null objects produced in the discourse-based task.

Figure 4.1. Use of Null Objects by the Three Groups in the Discourse-based Task

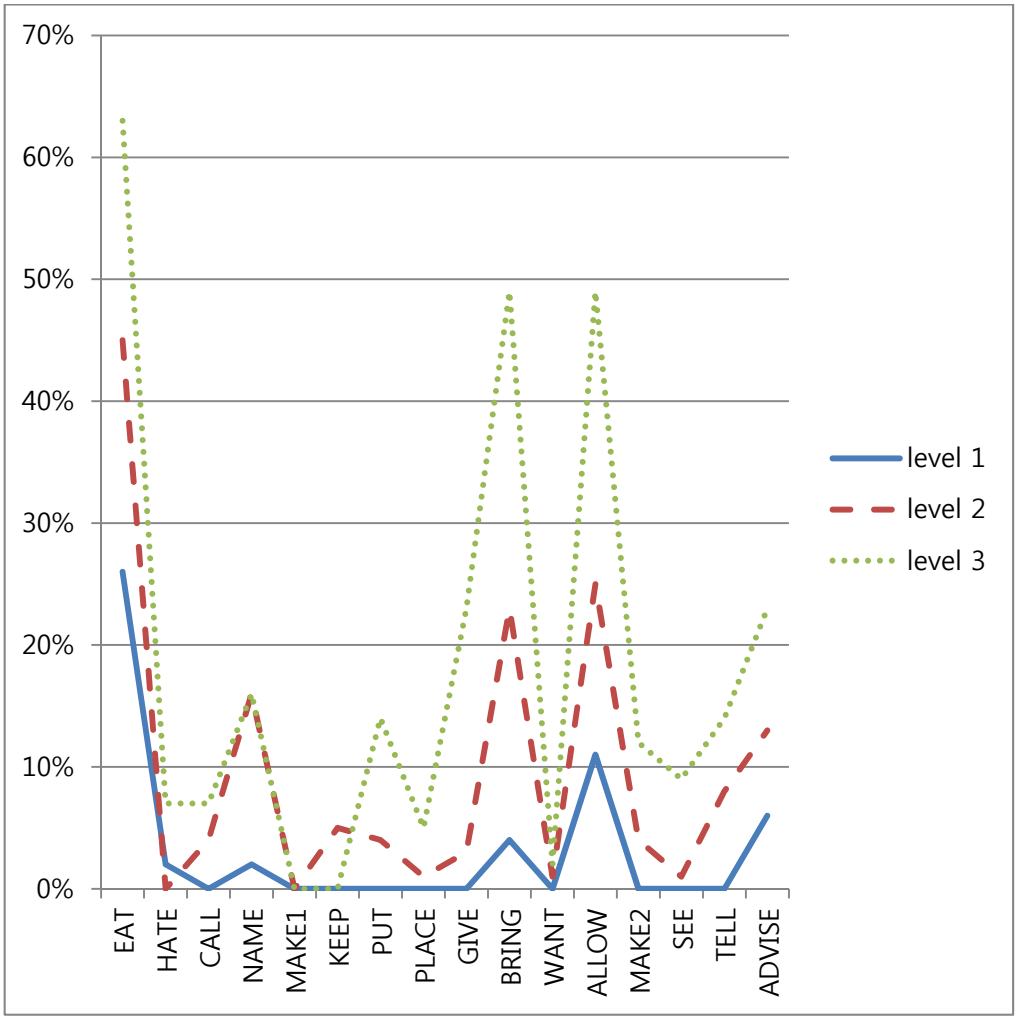
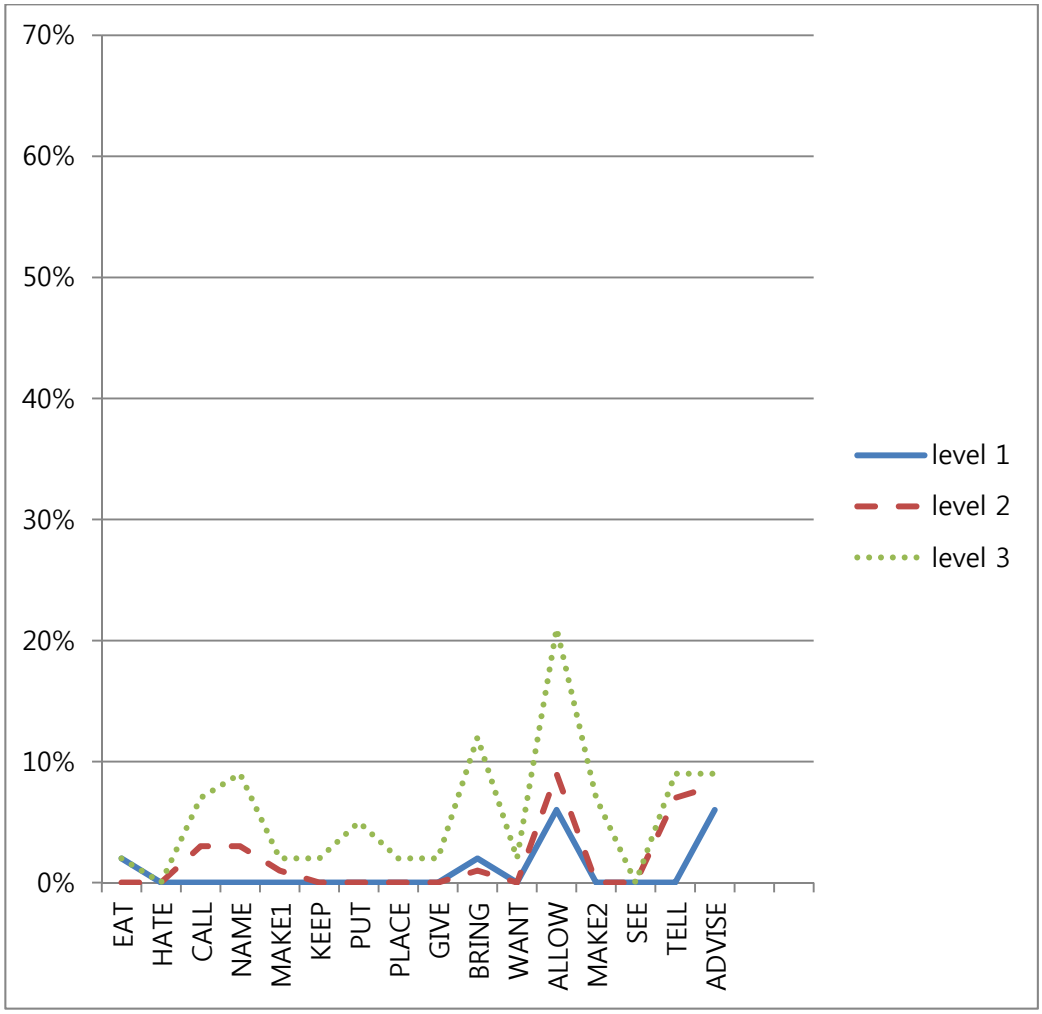


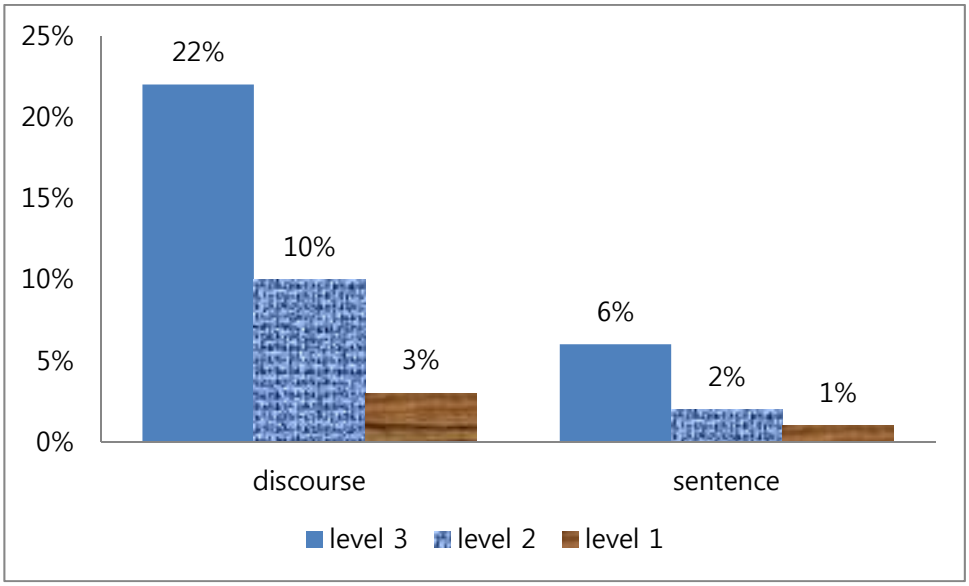
Figure 4.2 shows the frequency of null objects produced in the sentence-based task.

Figure 4.2. Use of Null Objects by the Three Groups in the Sentence-based Task



Overall, the frequencies of null objects decreased as the learners' proficiencies improved. Figure 4.3 summarizes the frequency patterns of null objects in the two writing tasks.

Figure 4.3. Frequencies of Null Objects in the Two Writing Tasks



The figure confirms that more proficient groups produced null objects less frequently in both the discourse-based and the sentence-based writing task. Particularly in the discourse-based task, frequencies of null objects decreased considerably as the learners' English proficiency increased. For example, while the level 3 group omitted 22% of the objects, the level 2 group omitted 10% of the objects and the level 1 group only 3% of the objects.

Table 4.2 presents the results of a repeated measures ANOVA, which indicated that the differences in learners' performances among the three proficiency groups were statistically significant. Moreover, the learners' performances in the two writing tasks were significantly different. The interaction between proficiency groups and tasks was also statistically significant.

Table 4.2 A Repeated Measures Analysis of Variance Performed on Null Object Use in the Two Writing Tasks

	Sum of Squares	df	Mean Square	F	Sig.
Group	119.908	2	59.954	44.967	.000
Task	114.558	1	114.558	157.409	.000
Task * group	36.268	2	18.134	24.917	.000

Table 4.3 shows the results of the following post-hoc test, where the performances of the three groups in the discourse-based task were compared.

Table 4.3.Multiple Comparisons of the Three Groups in the Discourse-based Writing Task

Tamhane

(I) group	(J) group	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
1.00	2.00	-1.0218*	.15967	.000	-1.4085	-.6352
	3.00	-2.5126*	.28021	.000	-3.2040	-1.8212
2.00	1.00	1.0218*	.15967	.000	.6352	1.4085
	3.00	-1.4908*	.29597	.000	-2.2167	-.7648
3.00	1.00	2.5126*	.28021	.000	1.8212	3.2040
	2.00	1.4908*	.29597	.000	.7648	2.2167

* The mean difference is significant at the .05 level.

The results indicated that the performances of the three proficiency groups were statistically different from each other. This means that in the discourse-based task, the three groups performed very differently and more proficient learners produced null

objects less frequently.

Table 4.4 shows the results of a post-hoc test on the learners' performances in the sentence-based task.

Table 4.4.Multiple Comparisons of the Three Groups in the Sentence-based Writing Task

Tamhane

(I) group	(J) group	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
1.00	2.00	-.1462	.08954	.283	-.3630	.0706
	3.00	-.7155*	.18782	.001	-1.1792	-.2518
2.00	1.00	.1462	.08954	.283	-.0706	.3630
	3.00	-.5693*	.19121	.013	-1.0403	-.0983
3.00	1.00	.7155*	.18782	.001	.2518	1.1792
	2.00	.5693*	.19121	.013	.0983	1.0403

* The mean difference is significant at the .05 level.

This table shows that the performances of the level 1 and the level 2 groups were not significantly different, because neither group produced null objects frequently in the sentence-based task. However, there were statistically significant differences between the level 1 and the level 3 groups and also between the level 2 and the level 3 groups.

4.1.2. Null Objects in Two Tasks

Figures 4.4 to 4.6 show how frequently each proficiency group produced null objects in the discourse-based and the sentence-based tasks. Figure 4.4 shows the frequency of null objects produced by the level 1 group.

Figure 4.4.Frequencies of Null Objects Produced by the Level 1 Group in the Two Writing Tasks

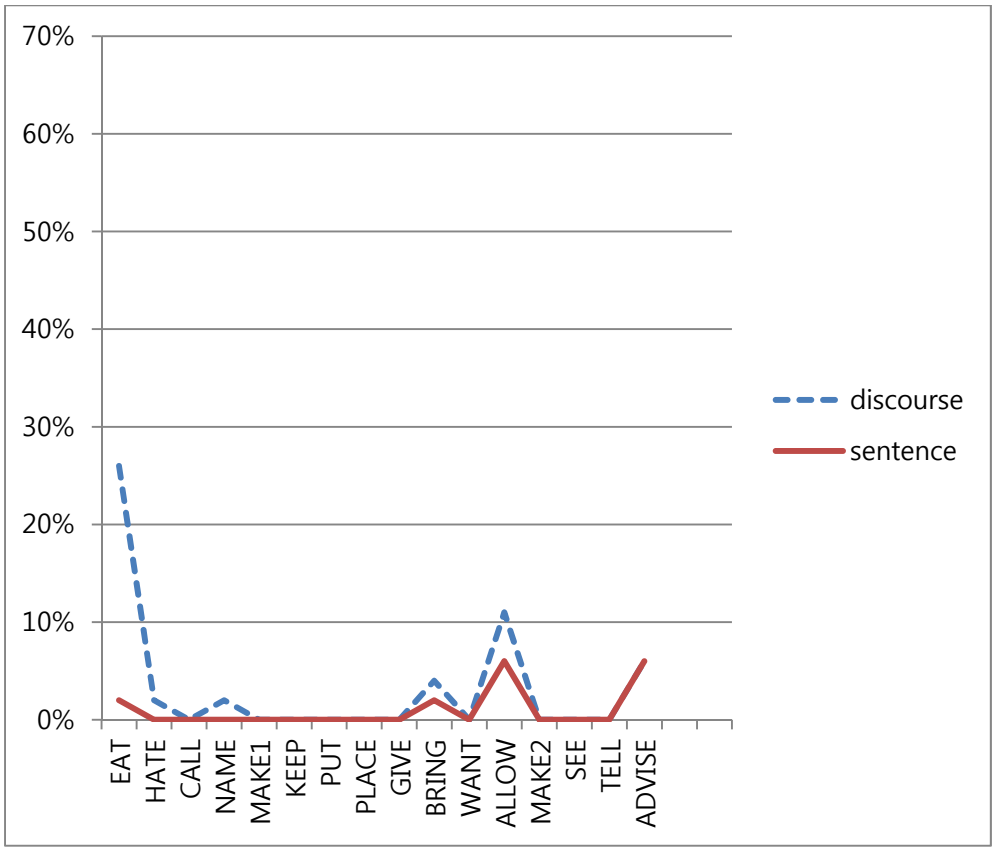


Figure 4.5 shows the frequency of null objects produced by the level 2 group.

Figure 4.5. Frequencies of Null Objects Produced by the Level 2 Group in the Two Writing Tasks

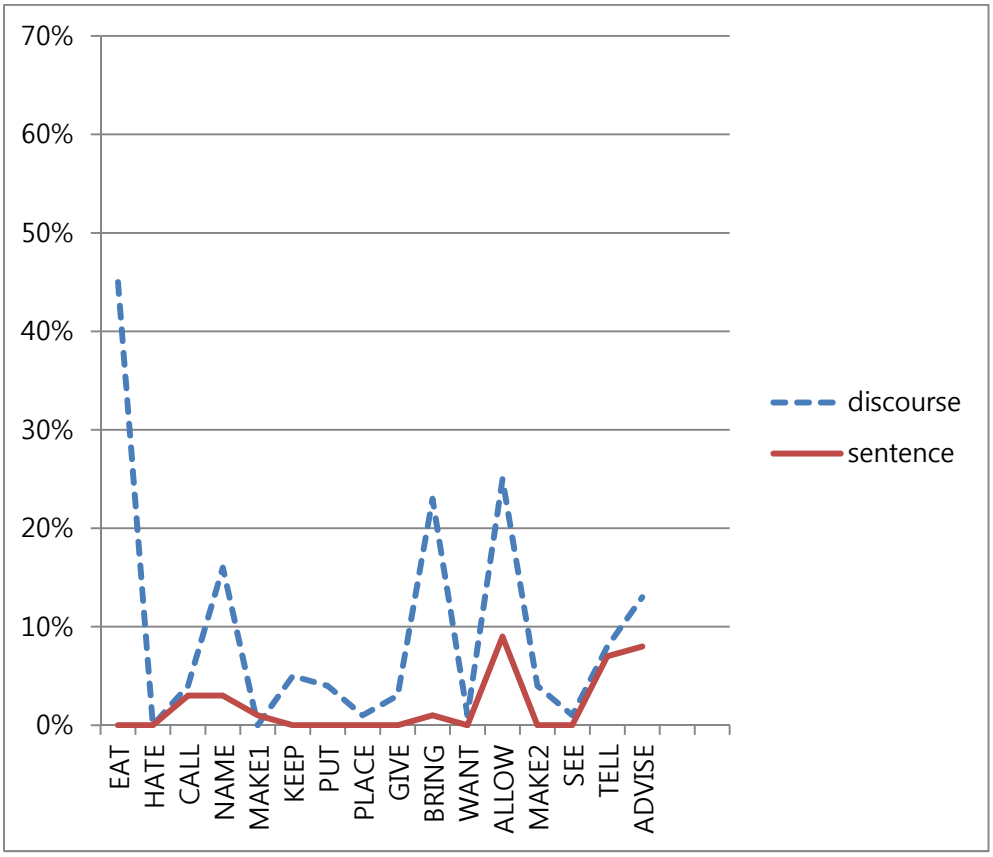
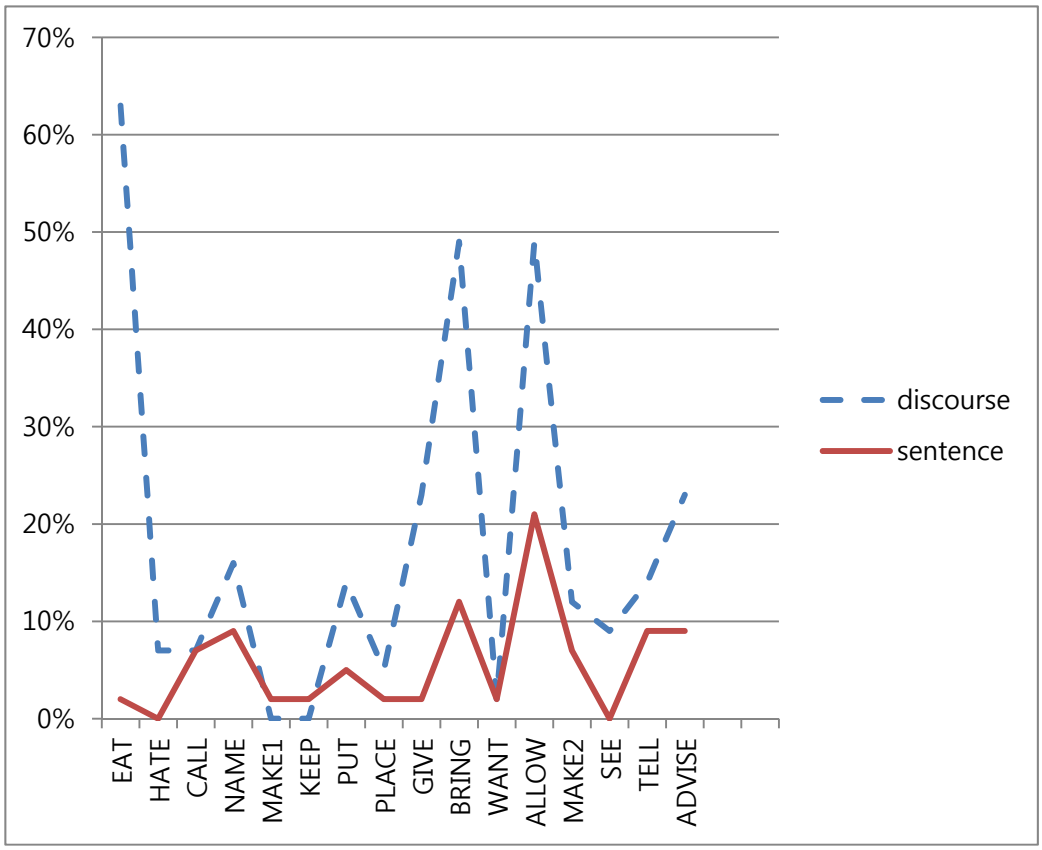


Figure 4.6 shows the frequency of null objects produced by the level 3 group.

Figure 4.6. Frequencies of Null Objects Produced by the Level 3 Group in the Two WritingTasks



Overall, the frequencies of null objects were far higher in the discourse-based task than in the sentence-based task. Table 4.5 summarizes the frequencies of overt and null objects produced in the two tasks.

Table 4.5. Frequencies of Overt and Null Objects in the Two Writing Tasks[19]

	Discourse-based		Sentence-based	
	Overt object	Null object	Overt object	Null object
Level 1	97% (681/705)	**3% (24/705)**	99% (728/737)	**1% (9/737)**
Level 2	90% (1007/1125)	**10% (118/1125)**	98% (1138/1163)	**2% (25/1163)**
Level 3	77% (451/582)	**23% (131/582)**	94% (587/627)	**6% (40/627)**
Total	89% (2139/2412)	**11% (273/2412)**	97% (2453/2527)	**3% (74/2527)**
Native Speakers	100% (127/127)	**0% (0/127)**	N/A[20]	N/A

( ) = number of each object type / total number of object positions

The learners produced null objects more frequently in the discourse-based task than in the sentence-based task across all three proficiency levels. For example, the level 3 learners omitted 23% of the objects in the discourse-based task, but they omitted only 6% of the objects in the sentence-based task. Similarly, the level 2 learners omitted 10% of the objects in the discourse-based task, but only 2% of the objects in the sentence-based task. On average, the learners omitted 11% of the objects in the discourse-based task, and 3% of the objects in the sentence-based task.

The results of a repeated measures ANOVA indicated that the learners'

[19]Among the target verbs, the verbs "hope" and "suggest" were excluded in this analysis because they do not require any NP object in their argument structure. Also, the verb "ask" was eliminated from the final analysis because the NP object of the verb can be omissible.
[20]The English native speakers participated only in the discourse-based writing task.

performances in the two writing tasks were significantly different (p= .000) (see Table 4.2). This suggests that the learners tended to produce null objects more frequently when their referents were recoverable from the discourse context. On the other hand, the English-speaking participants did not produce any null objects in the discourse-based writing task.

In addition, the difference in the frequency of null objects between the two tasks decreased as the learners' English proficiency improved. For example, the level 3 learners produced null objects quite frequently in the discourse-based writing task, but not in the sentence-based writing task: they omitted 22% of the objects in the discourse-based task, but only 6% of the objects in the sentence-based task. However, the level 1 learners rarely produced null objects in either of the two writing tasks: they omitted 3 % of the objects in the discourse-based task and 1% of the objects in the sentence-based task. This suggests that as the learners' English proficiency improved, they were able to unlearn null objects and acquire the obligatoriness of overt objects in English.

4.1.3. Null objects and Complexity of Argument Structures

The complexity of the complement structures of the 16 verbs used in the two writing tasks can be characterized in two ways: (1) whether a verb takes a non-clausal complement or a clausal complement, and (2) whether a verb is monotransitive, complex transitive, or ditransitive.

This section explores whether the frequency of null objects was associated with

the syntactic complexity of verbal complements used in the two writing tasks. Section 4.1.3.1 examines whether the frequency of null objects was affected by the non-clausal or clausal nature of the complements. Section 4.1.3.2 explores whether the frequency was influenced by the transitivity of the verbs.

4.1.3.1. Null Objects in a Non-clausal and a Clausal Complement

The frequency of null objects seemed to be affected by the clausal/non-clausal nature of the complement: that is, whether the complement required was clausal or not. As shown in Table 4.6, in the sentence-based task, objects of verbs requiring a clausal complement were omitted more frequently than those of verbs requiring a non-clausal complement.

Table 4.6.Frequencies of Null Objects of Verbs Taking a Non-clausal/clausal Complement

Sentence-based task	Level 1	Level 2	Level 3	Total
Verbs with a non-clausal complement	1% (3/456)	1% (6/704)	5% (19/377)	2% (28/1537)
Verbs with a clausal complement	2% (6/272)	4% (19/451)	8% (21/249)	5% (46/972)
Discourse-based task	**Level 1**	**Level 2**	**Level 3**	**Total**
Verbs with a non-clausal complement	4% (16/444)	11% (78/703)	23% (79/351)	12% (173/1498)
Verbs with a clausal complement	3% (8/256)	10% (40/416)	21% (47/228)	11% (95/883)

( ) = number of null objects / total number of object positions

For example, on average, the learners dropped 5% of the objects of verbs requiring a clausal complement but they dropped 2% of the objects of verbs requiring a non-clausal complement. However, the results of an ANOVA indicated that the differences in the learners' performances between verbs with a non-clausal complement and those with a clausal complement were not statistically significant ($F = 3.477$, $p = .063$).

In the discourse-based task, a similar pattern was not observed: the average object-drop rate was 11% for verbs requiring a clausal complement but 12% for verbs requiring a non-clausal complement. This rather unexpected high frequency of null objects of verbs requiring a non-clausal complement in the discourse-based task was mainly ascribable to the extremely high frequency of null objects of the verb "eat": see

Section 4.2.6. for a detailed account of this phenomenon associated with the verb “eat”.

Table 4.7.Frequencies of Null Objects of Verbs Taking a Non-clausal/clausal Complement, When the Frequencies of Null Objects of the Verb “Eat” were Excluded

Sentence-based task	Level 1	Level 2	Level 3	Total
Verbs with a non-clausal complement (-"eat")	1% (2/409)	1% (6/627)	5% (18/335)	2% (26/1371)
Verbs with a clausal complement	2% (6/272)	4% (19/451)	8% (21/249)	5% (46/972)
Discourse-based task	Level 1	Level 2	Level 3	Total
Verbs with a non-clausal complement (-"eat")	1% (4/399)	7% (43/627)	17% (52/310)	7% (99/1336)
Verbs with a clausal complement	3% (8/256)	10% (40/416)	21% (47/228)	11% (95/883)

( ) = number of null objects / total number of object positions

Table 4.7 shows that the average frequency of null objects of verbs requiring a non-clausal complement was lower than the frequency of null objects of verbs requiring a clausal complement when the frequency of null objects of the verb “eat” was not included in the calculation. However, the results of an ANOVA indicated that even when the verb “eat” was excluded, the differences in the learners’ performances between verbs with a non-clausal complement and those with a clausal complement were not statistically significant in either the sentence-based task ($F = .000$, $p = 1.000$). or the discourse-based task ($F = .137$, $p = .711$).

4.1.3.2. Null Objects and the Transitivity of Verbs

The frequency of null objects seemed to be affected by the transitivity of verbs, that is, monotransitive, complex transitive, and ditransitive (see Table 4.8).

Table 4.8 Frequencies of Null Objects of Monotransitive, Complex transitive, and Ditransitive verbs

Sentence-based task	Level 1	Level 2	Level 3	Total
Monotransitive	1% (1/141)	0% (0/231)	2% (2/128)	1% (3/500)
Complex transitive	1% (3/402)	2% (12/621)	7% (24/327)	3% (39/1350)
Ditransitive	3% (5/185)	4% (13/303)	8% (14/171)	5% (32/659)
Discourse-based task	**Level 1**	**Level 2**	**Level 3**	**Total**
Monotransitive	9% (13/138)	16% (36/229)	26% (31/120)	16% (80/487)
Complex transitive	2% (6/388)	8% (46/607)	17% (51/293)	8% (103/1271)
Ditransitive	3% (5/174)	13% (36/283)	28% (47/166)	14% (88/623)

( ) = number of null objects / total number of object positions

In particular, the more complex the argument structure of a verb, the more frequently null objects were produced. In the sentence-based task, the average object-drop rate was 5% for ditransitive verbs, 3% for complex transitive verbs, and only 1% for monotranstive verbs.

The results of an ANOVA showed that the learners' performances for the three verb complementation types were statistically significantly different in the sentence-based task (see Table 4.9). Moreover, the learners' performances were statistically significantly different between the three proficiency groups.

Table 4.9 An Analysis of Variance Performed on Null Object Use of the Three Verb Complementation Types in the Sentence-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb Type	4.576	2	2.288	15.658	.000
Group	4.361	2	2.181	14.925	.000
Verb Type * group	2.531	4	.633	4.330	.002
Error	71.886	492	.146		

a. R^2= .235 (modified R^2 = .221)

The following post-hoc test, where the learners' performances for the three verb complementation types were compared, indicated that the difference between monotransitive and complex transitive verbs and that between monotransitive and ditransitive verbs were statistically significant. In other words, complex transitive and ditransitive verbs did not produce statistically significantly different rates of null objects. This means that in the sentence-based task, the learners omitted objects of monotransitive verbs far less frequently than those of complex transitive or ditransitive verbs.

Table 4.10.Multiple Comparisons of the Three Verb Types in the Sentence-based Writing Task

Scheffe

(I) verb type	(J) verb type	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
1.00	2.00	-.2096*	.04183	.000	-.3123	-.1069
	3.00	-.1796*	.04183	.000	-.2823	-.0769
2.00	1.00	.2096*	.04183	.000	.1069	.3123
	3.00	.0299	.04183	.774	-.0728	.1326
3.00	1.00	.1796*	.04183	.000	.0769	.2823
	2.00	-.0299	.04183	.774	-.1326	.0728

Mean[2] (error) = .146
* The mean difference is significant at the .05 level.

However, a similar pattern was not observed in the discourse-based task. In the discourse-based task, the average object-drop rate was 14% for ditransitive verbs, 8% for complex transitive verbs, and 16% for monotranstive verbs (see Table 4.8). That is, objects of monotransitive verbs were dropped more frequently than those of complex transitive or ditransitive verbs. Given that the learners produced null objects of monotransitive verbs least frequently in the sentence-based task, this high frequency of null objects of monotransitive verbs in the discourse-based task was unexpected.

The results of an ANOVA indicated that the learners' performances for the three verb complementation types were not statistically significantly different in the discourse-based task (p=.155). However, the learners' performances were statistically significantly different between the three proficiency groups (p=.000).

Table 4.11 An Analysis of Variance Performed on Null Object Use of the Three Verb Complementation Types in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb Type	1.730	2	.865	1.870	.155
Group	47.697	2	23.849	51.566	.000
Verb Type * group	5.476	4	1.369	2.960	.020
Error	227.545	492	.462		

a. R^2= .471 (modified R^2 = .461)

This rather unexpected result in the discourse-based task was mainly ascribable to the extremely high frequency of null objects of the verb "eat"[21] in the task. Table 4.12 shows that a similar pattern as observed in the sentence-based task was observable in the discourse-based task when the frequency of null objects of the verb "eat" was not included in the calculation: the more complex the complements of a verb, the higher the frequency of null objects of the verb.

[21] The unusually high frequency of null objects of the verb "eat" will be discussed in detail in terms of optionality of objects in English in Section 4.2.6.

Table 4.12 Frequencies of Null Objects of Monotransitive, Complex transitive, and Ditransitive verbs, When the Frequencies of Null Objects of the Verb "Eat" were Excluded

Sentence-based task	Level 1	Level 2	Level 3	Total
Monotransitive (-"eat")	0% (0/94)	0% (0/154)	1% (1/86)	0% (1/334)
Complex transitive	1% (3/402)	2% (12/621)	7% (24/327)	3% (39/1350)
Ditransitive	3% (5/185)	4% (13/303)	8% (14/171)	5% (32/659)
Discourse-based task	**Level 1**	**Level 2**	**Level 3**	**Total**
Monotransitive (-"eat")	1% (1/93)	1% (1/153)	5% (4/79)	2% (6/325)
Complex transitive	2% (6/388)	8% (46/607)	17% (51/293)	8% (103/1271)
Ditransitive	3% (5/174)	13% (36/283)	28% (47/166)	14% (88/623)

( ) = no. of null objects / no. of the total object positions

When the frequency of null objects of the verb "eat" was excluded from analysis, the average object-drop rate of monotranstive verbs was only 2% in the discourse-based task and 0% in the sentence-based task.

The results of an ANOVA indicated that when the verb "eat" was excluded, the learners' performances for the three verb complementation types were statistically significantly different in both the sentence-based and the discourse-based task (see Tables 4.13 and 4.14, respectively). In addition, the learners' performances were statistically significantly different between the three proficiency groups in the two

writing tasks.

Table 4.13 An Analysis of Variance Performed on Null Object Use of the Three Verb Complementation Types (Excluding the Verb "Eat") in the Sentence-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb Type	5.235	2	2.617	18.403	.000
Group	4.227	2	2.113	14.859	.000
Verb Type * group	2.622	4	.656	4.609	.001
Error	69.977	492	.142		

a. R^2= .239 (modified R^2 = .225)

Table 4.14 An Analysis of Variance Performed on Null Object Use of the Three Verb Complementation Types (Excluding the Verb "Eat") in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb Type	32.879	2	16.439	43.042	.000
Group	34.833	2	17.416	45.600	.000
Verb Type * group	14.079	4	3.520	9.216	.000
Error	187.914	492	.382		

a. R^2= .460 (modified R^2 = .450)

The following post-hoc tests showed that when the verb "eat" was not included in the analysis, there were statistically significant differences between monotransitive and complex transitive verbs and also between monotransitive and ditransitive verbs in both the sentence-based and the discourse-based tasks (see Tables 4.15 and 4.16). In other words, complex transitive and ditransitive verbs did not produce statistically significantly different rates of null objects in either of the writing tasks. This means that in the two tasks, the learners produced null objects of monotransitive verbs less frequently than those of complex transitive or ditransitive verbs. That is, the verbs with the least complex argument structure yielded the lowest rates of null objects.

Table 4.15 Multiple Comparisons of the Three Complementation Types (Excluding the Verb "Eat") in the Sentence-Based Task

Scheffe

(I) verb type	(J) verb type	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
1.00	2.00	-.2216*	.04127	.000	-.3229	-.1202
	3.00	-.1916*	.04127	.000	-.2929	-.0903
2.00	1.00	.2216*	.04127	.000	.1202	.3229
	3.00	.0299	.04127	.769	-.0714	.1313
3.00	1.00	.1916*	.04127	.000	.0903	.2929
	2.00	-.0299	.04127	.769	-.1313	.0714

Mean[2] (error) = .142

* The mean difference is significant at the .05 level.

Table 4.16 Multiple Comparisons of the Three Complementation Types (Excluding the Verb "Eat") in the Discourse-Based Task

Scheffe

(I) verb type	(J) verb type	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
1.00	2.00	-.5808*	.06763	.000	-.7469	-.4148
	3.00	-.4970*	.06763	.000	-.6631	-.3310
2.00	1.00	.5808*	.06763	.000	.4148	.7469
	3.00	.0838	.06763	.464	-.0822	.2499
3.00	1.00	.4970*	.06763	.000	.3310	.6631
	2.00	-.0838	.06763	.464	-.2499	.0822

Mean[2] (error) = .382
* The mean difference is significant at the .05 level.

4.2. Discussion

4.2.1. How frequently do Korean EFL learners produce null objects?

The results of the main study showed that the Korean EFL learners produced null objects more frequently than null subjects in both the discourse-based and the sentence-based writing tasks. This pattern was more prominent in the discourse-based writing, where the omission rate of null objects was 11.2% and that of null subjects was only 0.9%. This asymmetry between null subjects and null objects was also observed in the

pilot study and is consistent with previous research findings (Yuan, 1997; Park, 2004; Hwang, 2005).

The reason why null subjects are much easier to unlearn than null objects may be that unlike null subject unlearning, null object unlearning lacks a straightforward trigger which helps reset the existing parameter setting. As for null subjects, Korean EFL learners are provided with a clear trigger to reset the *pro*-drop parameter from [+*pro*-drop] to [-*pro*-drop]: verbal inflections. When the learners notice that semantically empty verbs such as "do" or copular verbs bear Agr(eement) and T(ense) features, they realize that I-features are specified in L2 English as opposed to the underspecified I-features in their L1. At the same time, they also learn that the I-features of English are weak because not every verb is specified in terms of Agr feature and therefore null subjects cannot be licensed in the spec of IP.

On the other hand, unlearning null objects is more complex and takes more time because it involves acquiring the correct argument structures of each verb. Since there is no syntactic trigger to reset the topic-drop parameter from [+topic-drop] to [-topic-drop], the learners have to encounter a great amount of L2 input to recognize the target norm and adopt the new parameter setting. In order for Korean-speaking English learners to unlearn null objects, which are under the influence of topic-prominence of their native language, they need to learn the obligatory nature of objects on a verb-by-verb basis. This is undoubtedly more complicated than the unlearning of null subjects, which is known to be rule-governed.

4.2.2. Is the production of null objects associated with the learners' English proficiency?

There were three different proficiency levels in this study and the results showed that the most advanced group (the level 1 group) produced null objects less frequently than the other groups (the level 2 and the level 3 groups) in both the discourse-based and the sentence-based tasks. Also, the level 2 group produced null objects less frequently than the level 3 group in both tasks. The group differences were statistically significant (p=.000). However, the post-hoc test results showed that, although the three proficiency groups were statistically different from each other in the discourse-based task, the level 1 and the level 2 groups were not statistically different in the sentence-based task. In other words, in the sentence-based task, there were statistically significant differences only between the level 1 and the level 3 group and between the level 2 and the level 3 group.

These results are not consistent with Yuan (1997) but support Hwang's (2005) findings. According to Yuan, there is no positive evidence in L2 English input to unset the [+topic-drop] setting, which is responsible for producing null objects. Therefore, he stated that null objects are extremely difficult or impossible to unlearn. However, by conducting a grammaticality judgment task, Hwang (2005) showed that more advanced Korean EFL learners were better able to detect the ungrammaticality of null objects and of double nominative constructions, which are characteristic of topic-prominent features. The findings of this study support the proposal in Hwang (2005) that Korean EFL learners can actually unlearn the [+topic-drop] setting and null objects.

4.2.3. Is the learners' production of a null object related to the recoverability of its referent in the discourse?

It has been suggested that null objects in Korean are licensed by the topic-prominent feature of the language: namely, topic-chaining and the topic NP deletion rule (Huang, 1984). Discourse-based languages (e.g., Chinese and Korean) share some intriguing inter-clausal discourse properties not observed in sentence-based languages (e.g., English and French), one of which is a topic-chain. A topic-chain rule allows a topic to form a chain with its discourse antecedent beyond the sentence boundary and then the topic is deleted through the topic-NP deletion rule. Huang (1984) proposes that null objects in discourse-based languages result from topicalizing objects into sentence-initial topic positions and then deleting them after forming topic-chains.

However, it should still be attested whether the null objects found in Korean EFL learners' interlanguage have the same characteristics. Thus, by using two different writing tasks (i.e., the discourse-based and the sentence-based tasks), this study explored whether null objects in English are caused by L1 topic-prominent features.

The results of the present study showed that null objects were produced more frequently in the discourse-based writing task than in the sentence-based writing task by all proficiency groups. For example, the level 3 learners omitted 22% of the objects in the discourse-based task, but they omitted only 6% of the objects in the sentence-based task. Similarly, the level 2 learners omitted 10% of the objects in the discourse-based task, but only 2% of the objects in the sentence-based task. On average, the learners omitted 11% of the objects in the discourse-based task, and 3% of the objects in the

sentence-based task.

The difference in the learners' performances in the two tasks was statistically significant (p= .000). In other words, the learners tended to produce null objects more frequently when their referents were recoverable from the discourse context.

Overall, object-drops in L2 interlanguage are sensitive to the referents' recoverability, as they are in L1 Korean. In other words, null objects in the learner language seem to be licensed by topic chains and the topic NP deletion rule, transferred from L1.

4.2.4 Is the learners' production of a null object related to the complexity of argument structure of its verb?

This study explored whether the complexity of a verb's argument structure was related to the production of null objects. In the study, the complexity of the complement structures was characterized in two ways: (1) whether a verb takes a non-clausal complement or a clausal complement and, (2) whether a verb is monotransitive, complex transitive, or ditransitive.

The results showed that when the verb "eat" was excluded from the analysis, objects of verbs requiring a clausal complement were omitted more frequently than those of verbs requiring a non-clausal complement (see Figure 4.6). In addition, the more complex the argument structure of a verb, the more frequently null objects were produced (see Figure 4.10).

When the argument structure of a particular verb is complex, it is less likely that

Korean EFL learners have accurate knowledge of the structure, and their performances are more likely to be influenced by L1-induced pragmatic principles of topic-chains and topic-deletion. However, as learners become more proficient in their L2, they acquire more knowledge about argument structures of different verbs and as a result, rarely produce null objects. In fact, in this study, advanced learners rarely dropped the objects of verbs that take a complex argument structure.

Interestingly, the learners' production of null objects was related to the syntactic properties of NPs after verbs. Of the 12 verbs included in the study, four[22] (i.e., "want", "allow", "tell", "advise") share a superficially identical argument structure: "V + NP + *to* infinitive". However, the NP in the object position of the monotransitive verb "want" is syntactically different from the NPs of the complex transitive verb "allow" or ditransitive verbs "tell" and "advise". The NP after the verb "want" is not an internal argument theta-marked by the verb but it is the subject of the complement IP (i.e., "NP + *to* infinitive"). Although it is case-marked by the verb through exceptional case marking (ECM), it constitutes an inseparable syntactic unit with the *to* infinitive (i.e., want [NP + *to* infinitive]).

On the other hand, the NP after the complex transitive verb "allow" or ditransitive verbs "tell" or "advise" is an internal argument theta-marked by the verb (i.e., allow NP_i [PRO_i *to* infinitive], tell/advise NP_i [PRO_i *to* infinitive]). Therefore, it can be separable from the *to* infinitive when the sentence is passivized (i.e., NP_i is allowed [PRO_i *to* infinitive] / NP_i is told/advised [PRO_i *to* infinitive]).

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[22] Although the verbs "think" and "believe" also allow the "V + NP + *to* infinitive" structure, no participants in the study actually utilized it.

The results of the study showed that the NP after the verb "want" was rarely dropped not only in the sentence-based task but also in the discourse-based task (see Tables 4.17 and 4.18).

Table 4.17 Frequencies of Null Objects in the "V + NP + *to* infinitive" structure in the Discourse-based Task

	Level 1	Level 2	Level 3	Total
Want	**0% (0/47)**	**1% (1/76)**	**3% (1/39)**	**1% (2/162)**
Allow	13% (5/40)	28% (19/67)	64% (21/33)	32% (45/140)
Tell	0% (0/47)	8% (6/77)	15% (6/41)	7% (12/165)
Advise	9% (3/34)	19% (10/54)	24% (10/42)	18% (23/130)

( ) = number of null objects / total number of object positions

Table 4.18 Frequencies of Null Objects in the "V + NP + *to* infinitive" structure in the Sentence-based Task

	Level 1	Level 2	Level 3	Total
Want	**0% (0/47)**	**0% (0/77)**	**2% (1/43)**	**1% (1/167)**
Allow	7% (3/42)	10% (7/72)	23% (9/39)	12% (19/153)
Tell	0% (0/46)	8% (6/77)	9% (4/43)	6% (10/166)
Advise	7% (3/45)	8% (6/74)	9% (4/43)	8% (13/162)

( ) = number of null objects / total number of object positions

On average, the Korean participants dropped only 1% of the objects of the verb "want"

in both the discourse-based and the sentence-based tasks. Even the level 3 learners omitted only 3% of the objects of the verb in the discourse-based task and 2% in the sentence-based task.

As for the other verbs taking the "V + NP + *to* infinitive" structure, however, the NPs were dropped much more frequently. For example, in the discourse-based task, the average object-drop rate was 32% for the complex transitive verb "allow", 7% for the ditransitive verb "tell" and 18% for the ditransitive verb "advise". Also, in the sentence-based task, the average object-drop rate was 12% for the verb "allow", 6% for the verb "tell" and 8% for the verb "advise". The unusually high frequencies of null objects of the verbs "allow" and "advise" will be discussed in Sections 4.4.6 and 4.4.5, respectively.

The particularly low frequencies of null objects of the verb "want" are related to the fact that the NP after the verb is not an internal argument theta-marked by the verb. Since the NP cannot be separated from the *to* infinitive, it cannot be topicalized to the sentence-initial position and deleted after forming a topic chain (*NP_i, S + want + [t_i + *to* infinitive]). On the other hand, the NP after the complex transitive verb "allow" or ditransitive verbs "tell" or "advise" can be separated from the *to* infinitive and thus be topicalized to the sentence-initial position (i.e., NP_i, S + allow + t_i + [PRO_i *to* infinitive] / NP_i, S + tell/advise + t_i + [PRO_i *to* infinitive]). The difference in object-drop rates between the monotransitive verb "want" and the other complex transitive and ditransitive verbs supports the argument that Korean EFL learners' production of null objects results from transferring L1 discourse-based properties such as topic-chains and the topic NP deletion rule into their L2 interlanguage.

4.2.5. Null Objects and the Familiarity of Verbal Complements

Table 4.19 shows the frequencies of null objects across complement types in the discourse-based task.

Table 4.19 Frequencies of Null Objects across Complement Types in the Discourse-based Task

	Level 1	Level 2	Level 3	Total
Eat	27% (12/45)	46% (35/76)	66% (27/41)	46% (74/162)
Hate	2% (1/46)	0% (0/77)	8% (3/40)	2% (4/163)
Call	**0% (0/38)**	**5% (3/65)**	**11% (3/27)**	**5% (6/130)**
Name	**2% (1/46)**	**19% (12/62)**	**29% (7/24)**	**15% (20/132)**
Make1	0% (0/47)	0% (0/76)	7% (3/43)	2% (3/166)
Keep	0% (0/42)	6% (4/69)	0% (0/30)	3% (4/141)
Put	0% (0/40)	5% (3/60)	19% (6/32)	7% (9/132)
Place	0% (0/47)	2% (1/66)	6% (2/31)	2% (3/144)
Give	**0% (0/47)**	**3% (2/76)**	**24% (10/42)**	**7% (12/165)**
Bring	**4% (2/46)**	**24% (18/76)**	**51% (21/41)**	**25% (41/163)**
Want	0% (0/47)	1% (1/76)	3% (1/39)	1% (2/162)
Allow	13% (5/40)	28% (19/67)	64% (21/33)	32% (45/140)
Make2	0% (0/46)	4% (3/75)	14% (5/36)	6% (8/140)

See	0% (0/42)	1% (1/67)	11% (4/37)	3% (5/146)
Tell	**0% (0/47)**	**8% (6/77)**	**15% (6/41)**	**7% (12/165)**
Advise	**9% (3/34)**	**19% (10/54)**	**24% (10/42)**	**18% (23/130)**

( ) = number of null objects / total number of object positions

Table 4.20 shows the frequencies of null objects across complement types in the sentence-based task.

Table 4.20 Frequencies of Null Objects across Complement Types in the Sentence-based Task

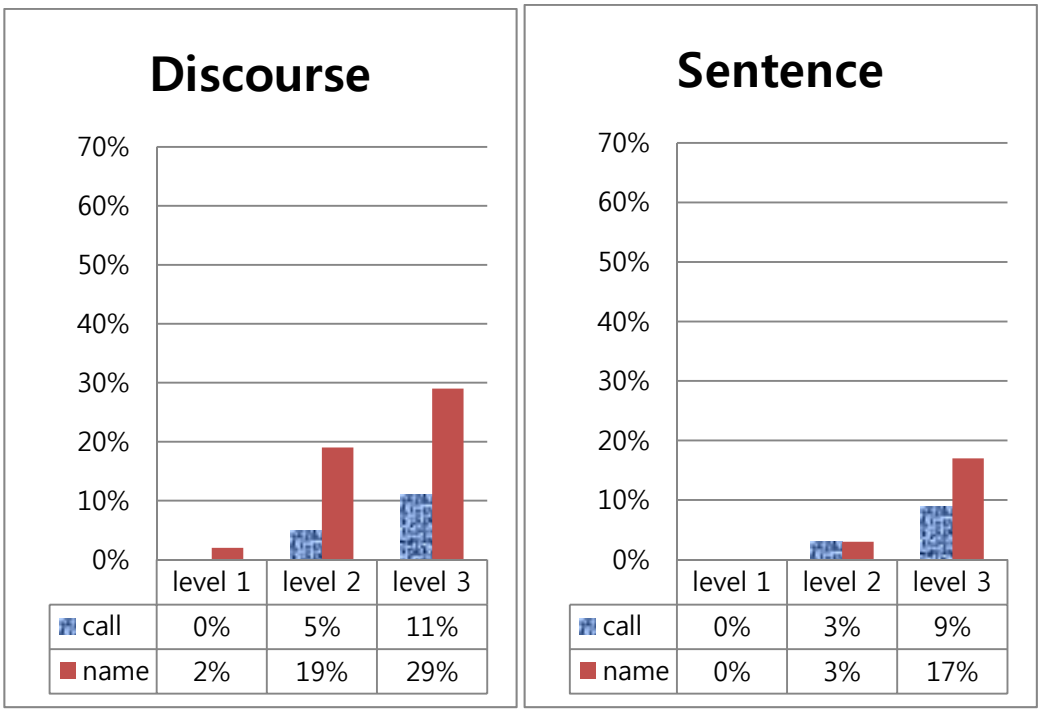
	Level 1	Level 2	Level 3	Total
Eat	2% (1/47)	0% (0/77)	2% (1/42)	1% (2/166)
Hate	0% (0/47)	0% (0/77)	0% (0/43)	0% (0/167)
Call	0% (**0/43**)	**3% (2/67)**	**9% (3/35)**	**3% (5/145)**
Name	0% (**0/46**)	**3% (2/61)**	**17% (4/24)**	**5% (6/131)**
Make1	0% (0/47)	1% (1/74)	3% (1/40)	1% (2/161)
Keep	0% (0/41)	0% (0/60)	3% (1/35)	1% (1/136)
Put	0% (0/46)	0% (0/73)	5% (2/41)	1% (2/160)
Place	0% (0/45)	0% (0/63)	3% (1/32)	1% (1/140)
Give	**0% (0/47)**	**0% (0/76)**	**2% (1/43)**	**1% (1/166)**
Bring	**4% (2/47)**	**1% (1/76)**	**12% (5/42)**	**5% (8/165)**
Want	0% (0/47)	0% (0/77)	2% (1/43)	1% (1/167)

Allow	7% (3/42)	10% (7/72)	23% (9/39)	12% (19/153)
Make2	0% (0/46)	0% (0/76)	8% (3/38)	2% (3/160)
See	0% (0/46)	0% (0/75)	0% (0/43)	0% (0/164)
Tell	**0% (0/46)**	**8% (6/77)**	**9% (4/43)**	**6% (10/166)**
Advise	**7% (3/45)**	**8% (6/74)**	**9% (4/43)**	**8% (13/162)**

( ) = number of null objects / total number of object positions

One intriguing feature noticeable in the two tables is that the frequencies of null objects in the same complement types were not always similar. For instance, the frequency of null objects of the verb “call” was far lower than that of null objects of the verb “name”, while both verbs require the same type of complement (see Figure 4.7).

Figure 4.7 Frequencies of Null Objects of "Call" and "Name" in the Two Tasks



Particularly in the discourse-based task, the learners produced null objects of the verb "name" far more frequently than those of the verb "call". As for the verb "name", 19 % of the level 2 learners and 29% of the level 3 learners dropped the direct object and produced sentences like *"They name Boa"* or *"They named Boa"*. On the other hand, 5% of the level 2 learners and 11% of the level 3 learners produced null objects of the verb "call".

The results of a repeated measures ANOVA showed that the learners' performances were statistically significantly different between the verb "call" and "name" in the discourse-based task (see Table 4.21). Moreover, the learners' performances across the three proficiency groups were also statistically significantly

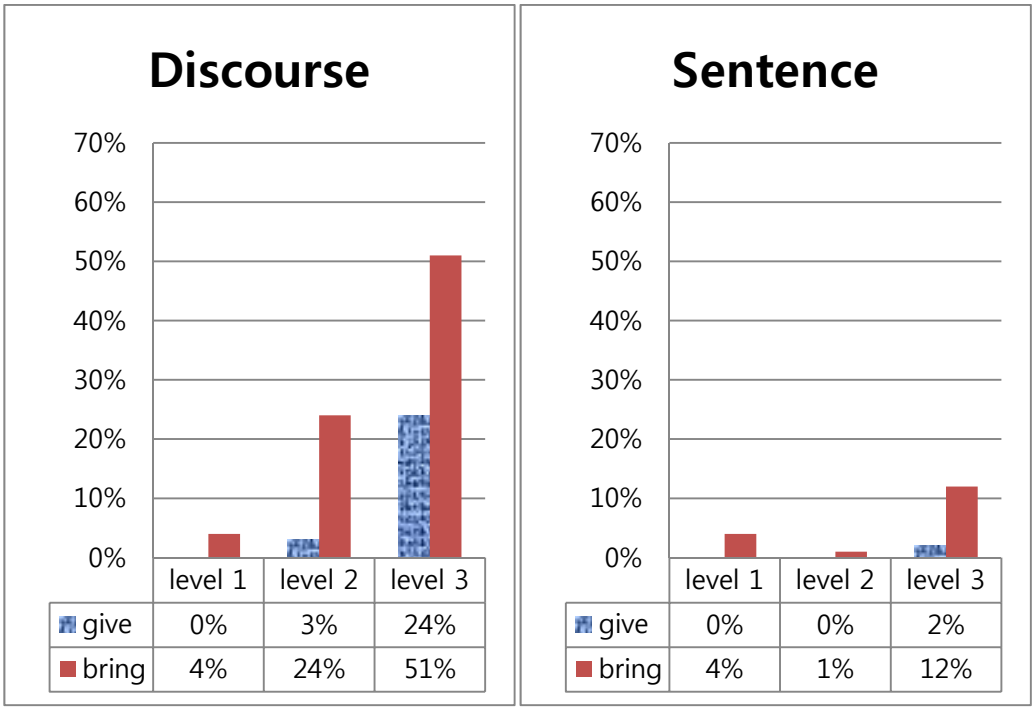
different.

Table 4.21 A Repeated Measures Analysis of Variance Performed on the Null Objects of "Call" and "Name" in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb	.465	1	.465	6.756	.010
Group	.611	2	.305	4.405	.014
Verb * group	.136	2	.068	.988	.375

This pattern was also observable in the frequencies of null objects of the pairs, "give-bring" and "tell-advise". Figure 4.8 shows how frequently the learners produced null objects of the verbs "give" and "bring".

Figure 4.8 Frequencies of Null Objects of "Give" and "Bring" in the Two Tasks



All of the three groups produced null objects of the verb "bring" more frequently than of the verb "give" in the discourse-based and the sentence-based tasks. For example, in the discourse-based task, the level 2 learners dropped 24% of the objects of the verb "bring" but only 3% of the objects of the verb "give". Also, the level 3 learners dropped 51% of the objects of the verb "bring" but dropped only 24% of the objects of the verb "give".

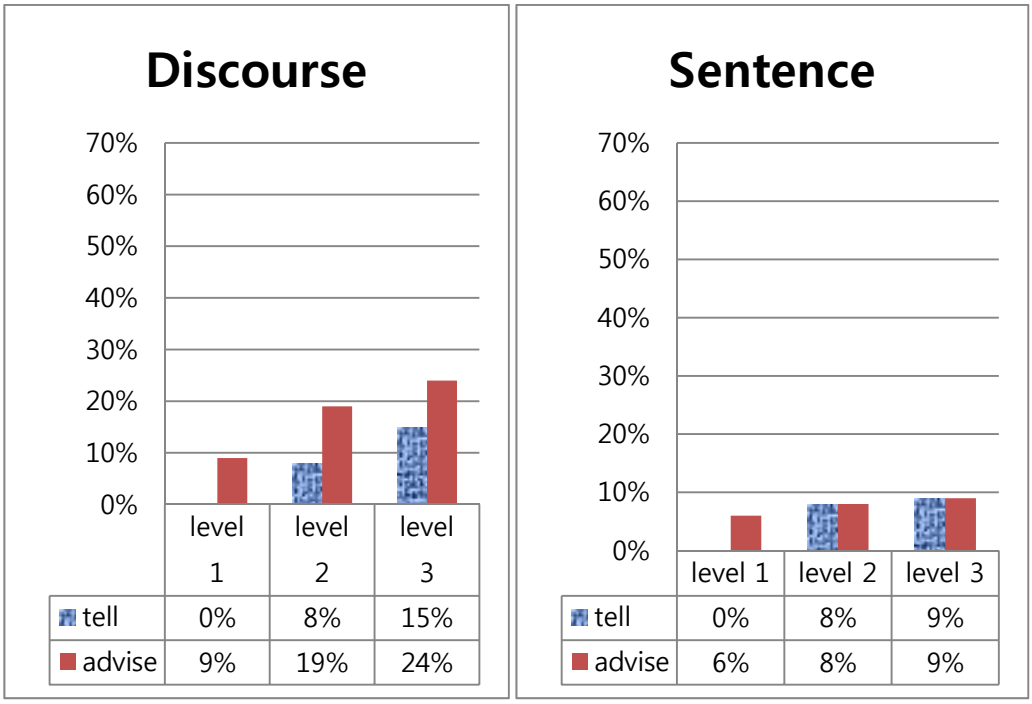
The results of a repeated measures ANOVA showed that the learners' performances were statistically significantly different between the verb "give" and "bring" in the discourse-based task (p=.000). Moreover, the learners' performances across the three proficiency groups are statistically significantly different (p=.000).

Table 4.22 A Repeated Measures Analysis of Variance Performed on the Null Objects of "Give" and "Bring" in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb	2.436	1	2.436	31.660	.000
Group	5.009	2	2.505	17.941	.000
Verb * group	.685	2	.342	4.449	.013

Similarly, as shown in Figure 4.9, the learners produced null objects of the verb "advise" more frequently than those of the verb "tell" in the discourse-based writing task.

Figure 4.9 Frequencies of Null Objects of "Tell" and "Advise" in the Two Tasks



For example, in the discourse-based task, the level 2 learners dropped 8% of the objects of the verb "tell" and 19% of the objects of the verb "advise". Also, the level 3 learners dropped 15% of the objects of the verb "tell" and 24% of the objects of the verb "advise".

The results of a repeated measures ANOVA showed that the learners' performances were statistically significantly different between the verb "tell" and "advise" in the discourse-based task (p=.013). Moreover, the learners' performances acros the three proficiency groups were statistically significantly different (p=.001).

Table 4.23 A Repeated Measures Analysis of Variance Performed on the Null Objects of "Tell" and "Advise" in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb	.567	1	.567	6.244	.013
Group	1.427	2	.713	7.324	.001
Verb * group	.112	2	.056	.619	.540

It is intriguing to note that each pair of the verbs requires the same type of complement and that the frequency of null objects of a more familiar verb[23] in the pair is lower than that of null objects of a less familiar verb. Table 4.24 shows the frequencies of null objects in the complements of familiar verbs.

[23] The verbs "call", "give", and "tell" were assumed to be more familiar to L2 learners of English than the verbs "name", "bring", and "advise" because they appear more frequently in L2 input. According to Goldberg, A., Casenhiser, D., & Sethuramen, N. (2004), "give", "tell" and "call" were the most, the second most , and the fourth most frequent verb in the VOO ("verb+object+object") construction, respectively, in the corpus data produced by the English native speakers (NS). "Give" and "tell" also belonged to the top 10 most frequent verb types in the VOO construction in the corpus data produced by seven ESL learners (NNS).

Interestingly, "bring" was the fifth and the sixth most frequent verb in the VOL ("verb+object+locative") construction in the NS corpus data and in the NNS corpus data, respectively. This shows that the verb appeared more frequently with a prepositional phrase than in a ditransitive construction. Still, the frequency of the verb "bring" in the VOL construction was lower than that of the verb "give" in the VOO construction.

Table 4.24 Frequencies of Null Objects in the Complements of Familiar Verbs

	Level 1		Level 2		Level 3		Total	
	discourse	sentence	discourse	sentence	discourse	sentence	discourse	sentence
Call	0/38 (0%)	0/43 (0%)	3/65 (5%)	2/67 (3%)	3/27 (11%)	3/35 (9%)	6/130 (5%)	5/145 (3%)
Give	0/47 (0%)	0/47 (0%)	2/76 (3%)	0/76 (0%)	10/42 (24%)	1/43 (2%)	12/165 (7%)	1/166 (1%)
Tell	0/47 (0%)	0/46 (0%)	6/77 (8%)	6/77 (8%)	6/41 (15%)	4/43 (9%)	12/165 (7%)	10/166 (6%)
Total	**0/132 (0%)**	**0/136 (0%)**	**11/218 (5%)**	**8/220 (4%)**	**25/110 (23%)**	**10/121 (8%)**	**30/460 (7%)**	**16/477 (3%)**

On average, the learners dropped 7% of the objects of familiar verbs in the discourse-based task and 3% in the sentence-based task..

Table 4.25 shows the frequencies of null objects in the complements of less familiar verbs.

Table 4.25 Frequencies of Null Objects in the Complements of Less Familiar Verbs

	Level 1		Level 2		Level 3		Total	
	discourse	sentence	discourse	sentence	discourse	sentence	discourse	sentence
Name	1/46 (2%)	0/46 (0%)	12/62 (19%)	2/61 (3%)	7/24 (29%)	4/24 (17%)	20/132 (15%)	6/131 (5%)
Bring	2/46 (4%)	2/47 (4%)	18/76 (24%)	1/76 (1%)	21/41 (51%)	5/42 (12%)	41/163 (25%)	8/165 (5%)
Advise	3/34 (9%)	3/45 (7%)	10/54 (19%)	6/74 (8%)	10/42 (24%)	4/43 (9%)	23/130 (18%)	13/162 (8%)
Total	**6/126 (5%)**	**5/138 (4%)**	**40/192 (21%)**	**9/211 (4%)**	**38/107 (36%)**	**13/109 (12%)**	**84/425 (20%)**	**27/458 (6%)**

On average, the learners dropped 20% of the objects of less familiar verbs in the discourse-based task and 6% in the sentence-based task.

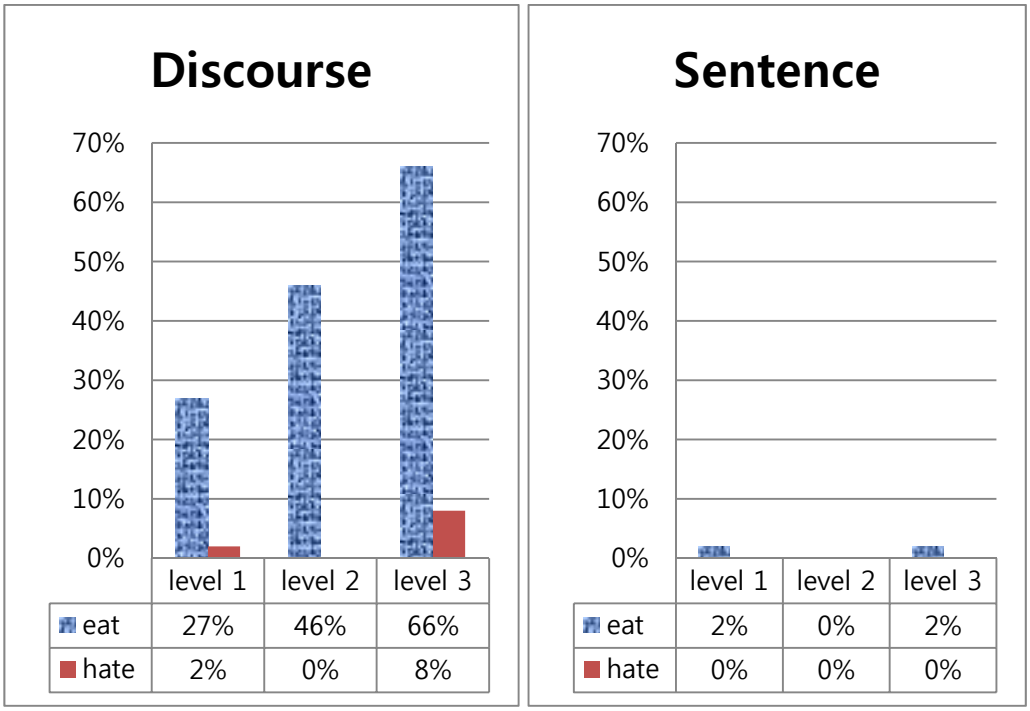
Overall, the learners' familiarity with a verb influenced the frequencies of null objects, while the degree of the influence was far more significant in the discourse-based task than in the sentence-based task.

4.2.6. Null Objects in Interlanguage and Optionality of Objects in English

Among the 20 verbs used in the tasks, the verbs "eat" and "allow" permitted their objects to be null most frequently. This section explores special properties of these two verbs, and shows that the highest frequencies of null objects of these verbs are attributable primarily to the optionality of their objects in the target language.

Figure 4.10 shows how frequently the Korean participants produced null objects of the verbs "eat" and "hate" in the discourse-based and the sentence-based writing tasks.

Figure 4.10 Frequencies of Null Objects of "Eat" and "Hate" in the Two Tasks



Although the two verbs share the same complement structure, the learners dropped the object of the verb "eat" much more frequently than that of the verb "hate" in the discourse-based writing task. For example, the level 3 learners dropped 66 % of the objects of the verb "eat" but only 8 % of the objects of the verb "hate". Also, the level 2 learners dropped 46 % of the objects of the verb "eat" but did not omit any objects of the verb "hate".

The results of a repeated measures ANOVA showed that the learners' performances were statistically significantly different between the verb "eat" and "hate" in the discourse-based task (p=.000; see Table 4.26), but not in the sentence-based task (p=.091; see Table 4.27).

Table 4.26 A Repeated Measures Analysis of Variance Performed on the Null Objects of "Eat" and "Hate" in the Discourse-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb	13.511	1	13.511	116.254	.000
Group	2.002	2	1.001	7.206	.001
Verb * group	1.269	2	.634	5.458	.005

Table 4.27 A Repeated Measures Analysis of Variance Performed on the Null Objects of "Eat" and "Hate" in the Sentence-Based Task

	Sum of Squares	df	Mean Square	F	Sig.
Verb	.017	1	.017	2.892	.091
Group	.010	2	.005	.863	.424
Verb * group	.010	2	.005	.863	.424

This shows that objects of the verb "eat" were dropped much more frequently than those of the verb "hate" in the discourse-based task but that in the sentence-based task, null objects were hardly produced for either of the verbs. Moreover, the learners' performances across the three proficiency groups were statistically significantly different in the discourse-based task (p=.001), but not in the sentence-based task (p=.424). It means that the learners produced significantly fewer null objects as their English proficiency increased.

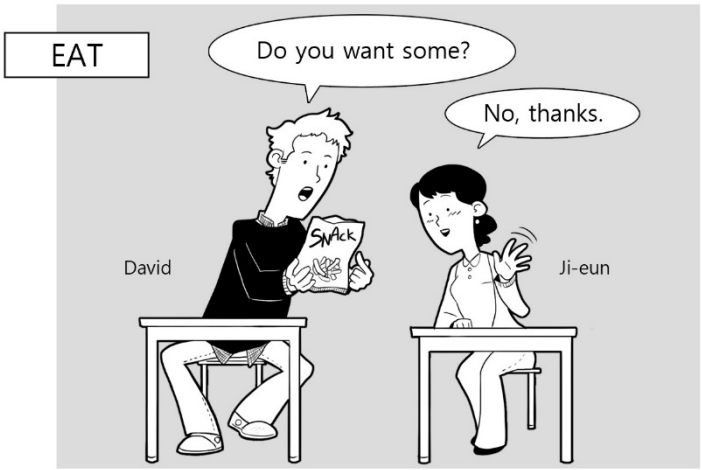
The high frequency of null objects of the verb "eat" is hard to attribute to the fact

that this particular verb sometimes allows its direct object to drop, as illustrated in (1).

(1) *John ate (food).*

As noted by Perez-Leroux (2008), an object can be unrealized in English when it has a context-free non-specific interpretation, as in (1). However, if an object refers to a specific entity, as in the discourse-based writing task (e.g., “the snack” in Figure 4.11), it cannot be omitted. This is consistent with our observation that none of the English-speaking participants produced a null object of the verb “eat” in the discourse-based task (e.g., “She would like to eat **some**.”, “Oh, I would love to eat **some of your snack**. Thank you!”).

Figure 4.11 Discourse-based Task Associated with the Verb “Eat”



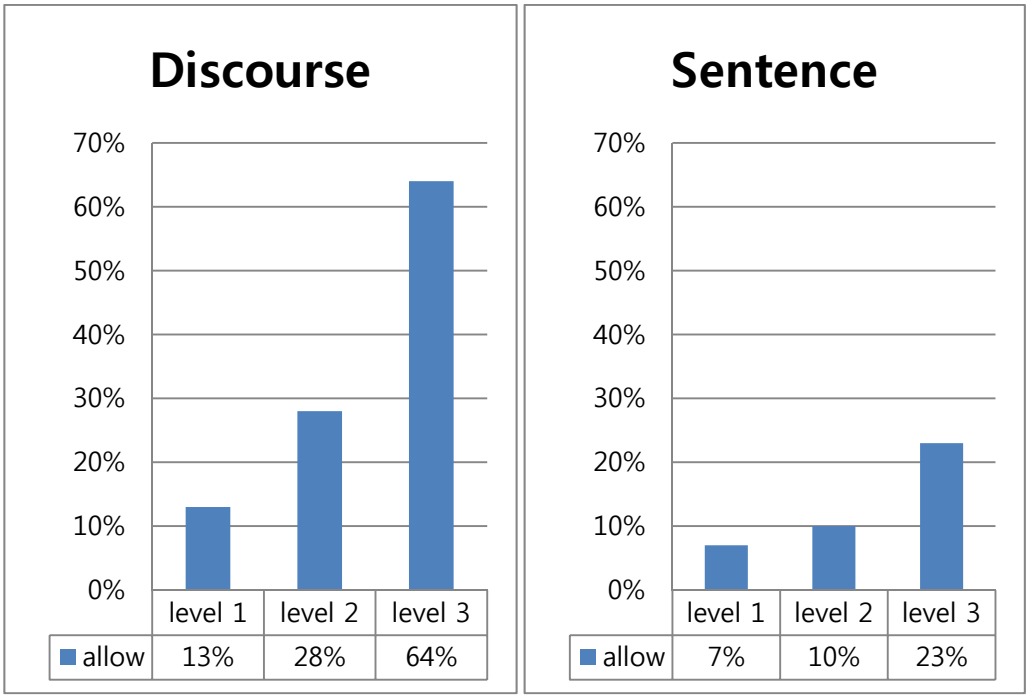
1. Ji-eun is a very shy Korean girl. David, her American classmate, is eating her favorite snack, and says to her, "Do you want some?" _____ (eat), but she can't do so because she's too shy. shy 수줍음이 많은, favorite 가장 좋아하는

Then what made the Korean EFL learners drop the object of the verb “eat” frequently in the discourse-based task? It is interesting to note that they rarely omitted objects of the same verb in the sentence-based writing task. This shows that they already understood that this verb requires an object. Thus, one plausible account for the high rate of null objects in the discourse-based task would be that (1) the referent of the object was recoverable from the context in the discourse-based task, and (2) confusing input containing both overt and null objects of the verb “eat” may have encouraged the learners to produce null objects, transferring L1 topic-chains and the topic NP deletion rule.

As for the verb “hate”, the majority of the participants were able to provide an overt object in not only the sentence-based, but also the discourse-based writing task. Because this verb is not associated with any confusing mixed input in terms of object omissibility, the learners seemed to have little difficulty producing overt objects.

Figure 4.12 shows the frequencies of null objects produced in the complements of the verb “allow”.

Figure 4.12 Frequencies of Null Objects of "Allow" in the Two Tasks



The pattern of the frequency of null objects in the figure does not differ from the overall pattern of the frequency of null objects produced by the learners. That is, the learners produced null objects more frequently in the discourse-based writing task than in the sentence-based task. Also, less proficient learners produced null objects more frequently than more proficient learners.

Table 4.28 shows the learners' error types regarding the argument structure of the verb "allow" in the discourse-based task.

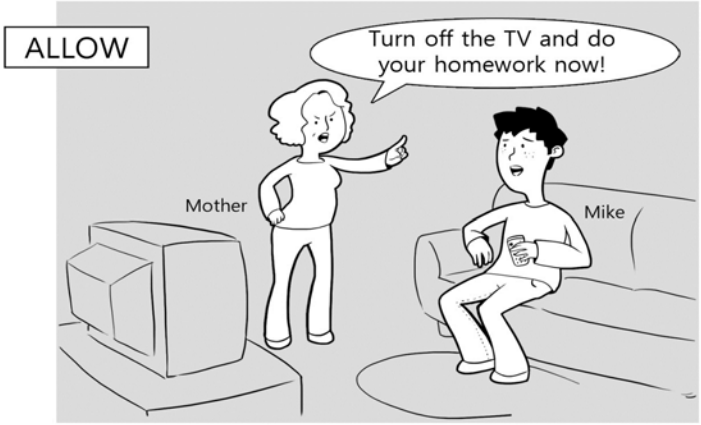
Table 4.28 Types of Errors Regarding Argument Structure of "Allow" in the Discourse-based Task

Group	Error types
Level 1	allow to watch TV (3), allow watching TV (1),
	allow (1)
	allow him watch TV (1)
Level 2	allow to watch TV (13), allow watching TV (3), allow to watching TV (1)
	She is not allow to watch TV (1)
	She isn't allow (1)
	allow him (3), allow his mother's (1)
	allow he watch TV (2), allow that he watch TV (1),
	allow him watch TV (2), allow him watching TV (4)
	He doesn't allow to watch TV (1), etc. (3)
Level 3	allow to watch TV (9), allow watching TV (2), allow watch TV (4),
	allow him watch TV (1), allow to him watch TV (1),
	allow him that watch TV (1), etc. (13)

( ) = number of participants

The most frequent error type was the omission of the noun object (i.e., "him") in front of object complements (i.e., a *to*-infinitive, a gerund, or a bare-infinitive) (see Figure 4.13).

Figure 4.13 Discourse-based Task Associated with the Verb "Allow"



14. Mike wants to watch his favorite TV show. But his mother says to him, "Turn off the TV, and do your homework now!" _____ (allow) when he hasn't finished his homework.

For example, 18 out of the 36 errors made by the level 2 group involved omission of the object 'him'. As for the level 3 group, 15 out of the 31 errors involved omission of the object 'him'.

The high frequency of null objects produced in the complements of "allow" seemed to be associated with the fact that the verb takes a gerund as its complement and does not require a noun object when its gerundive complement has a context-free non-specific (or generic) interpretation (e.g., "This building doesn't allow smoking."). In particular it is highly likely that the learners had been exposed to a significant number of gerundive complements and this led them not to use an overt object even when it is required by a verb, as in the discourse-based task illustrated in Figure 4.13.

In summary, the highest frequencies of null objects of the verb "allow" as well as

those of the verb “eat” were attributable primarily to the optionality of their objects in the target language English.

CHAPTER 5 CONCLUSION

5.1. Major Findings and Pedagogical Implications

The present study has investigated how frequently Korean EFL learners produce null objects, and whether null objects can be unlearned. In addressing these issues, the main focus was on how the learners' null objects were related to English proficiency, the recoverability of their referents in the discourse context, and the complexity of the argument structure of their verbs.

The dissertation consisted of a pilot study and a main study. Using a story-retelling task, the pilot study explored how frequently null objects were produced, and how the production of null objects by Korean high school students was related to their English proficiency. The pilot study showed that null objects were produced more frequently than null subjects and that the more proficient learners tended to use null objects less frequently. Moreover, null objects were produced more frequently in recoverable contexts than in non-recoverable contexts.

The main study involved two writing tasks: a discourse-based task and a sentence-based task. This study explored how frequently Korean college English learners produced null objects, focusing on possible variations in the null object production across English proficiency levels, task types, and verb complementation types.

The results showed first that null objects were produced more frequently than null subjects. This was consistent with the findings in the pilot study and in previous research

(Yuan, 1997; Park, 2004; Hwang, 2005).

Second, as the learners' English proficiency improved, their production of null objects decreased. This result is not consistent with Yuan (1997), but supports Hwang's (2005) findings. This suggests that the learners were able to unlearn topic-prominent properties responsible for object-drop (i.e., topic-chains and the topic-NP deletion rule) and acquire the obligatory nature of overt objects in English.

Third, null objects were used more frequently in the discourse-based task than in the sentence-based task. This indicates that object-drop in L2 English is closely related to the referent's recoverability in the discourse context.

Finally, the learners' production of null objects was affected by the linguistic characteristics of verbal complements. In particular, their production was influenced by the complexity of complement structures, the learners' familiarity with verbal complements, and the optionality of objects in English.

The findings of this study have pedagogical implications concerning how to help Korean EFL learners unlearn null objects. It is generally assumed that when learning a linguistic feature of L2 that is in a subset of some linguistic feature of their L1, positive evidence of L2 input alone is not sufficient and learners must also be exposed to negative evidence. Because Korean allows both overt and null objects, but English permits only overt objects, the set of the objects produced in Korean constitutes a superset and the set in English a subset. Therefore, in order to learn that null objects are not permitted in L2 English, Korean learners should be provided with a sufficient amount of instruction to demonstrate this fact.

Second, instruction on English verb complementation will help Korean EFL

learners suppress their use of null objects. A good aid can be obtained from construction grammar based instruction. Since constructions focus on the meaning as well as the form of complementation, construction grammar based instruction would help L2 learners naturally acquire the important properties of verb argument structures.

Finally, discourse-based grammar teaching will be valuable and effective in helping learners unlearn null objects. In particular, comparing reference systems of L1 and L2 on a discourse level will help learners understand the different uses of null objects in the target language. In addition, a closer look at the referential patterns of NPs in connected discourse will provide positive input for the learners to unlearn null objects.

5.2. Limitations of the Study and Suggestions for Future Research

This study provides baseline data on how Korean EFL learners produce null objects, and the main research issues of the study await further investigation and exploration. In particular, further elaboration on the issues is required based on spontaneous production data in a real-life dialogue situation.

In addition, further research with real beginners or using longitudinal data will provide valuable insights on the issues. Although this study limited its scope to the omission of overt objects, an investigation of how the L2 reference system develops in terms of marking old or new information in the discourse is another interesting research

domain.

Despite the meaningful research findings, this study also has a number of limitations. First, because the participants in the pilot study and the main study differed, it was impossible to compare learners' performances in the speaking and the writing tasks. Although this study was not designed to investigate the performance variations in the two different modes (i.e., speaking and writing), if the same learners had participated in both experiments, more valuable data could have been obtained.

Second, the study did not compare the syntactic or semantic properties of the verbs used in the main study with those of the equivalent Korean verbs. It is possible that some English verbs and their Korean equivalents do not adopt the same argument structure, which may have influenced the production of null objects by the Korean participants. As there can be an L1 transfer effect on the lexical level, when discussing object-drop, future research should take into consideration important properties of each verb in both languages.

Finally, when the Korean participants were divided into three proficiency levels in the study, no objective criteria were used. If the proficiency levels of the participants had been characterized by objective criteria such as standardized test scores, then the results of the main study could have been compared with those of the pilot study and of other related studies.

Future research considering and overcoming these limitations will shed light on the process by which Korean EFL learners' unlearn null objects and topic-prominence.

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APPENDICES

Appendix A

Example Transcripts of Learner performances in the Pilot Study

Following are the transcripts of the entire discourses that learners from the least advanced (level 3) and the most advanced group (level 1) produced.

1. (KSH- level 3) *She is out of hospital. She drop baby. That boy ....in car. Charlie is in baby. Charlie is drop baby.*

2. (KJH- level 3) *The boy hurt her mind. Other people get him. He is so sad. People is run away. Charlie Chaplin looks the boy. Charlie Chaplin take care of the him.*

3. (SYS-level 1) *This movie starts with the scene that says charity hospital. This woman comes out bringing a baby and she's alone and I think her husband abandoned her. So she doesn't know what to do with the baby. She doesn't know how to care ..for the baby, so she abandons the baby in a car and just walks away. And there's this two men who just gets on the car and drives away not knowing that the baby's there. When this two men finds this baby later and drop- drops the baby off in an alley, this funny looking character comes along and finds the baby while smoking a cigarette. And he doesn't know what to do with the baby, either. So ..after an woman with a .. wheel bearer I think goes past him. And he tries to give it to the woman saying pardon me, dropped*

something. But she insisted that it's not hers and gives it back to him. And ..he gives it to an old man. And the old man doesn't know what to do with it, either, so..he gives it to the woman that . that were given to her before. She recognizes the baby's funny character and cop, I think, comes in and tries to settle the matter. This funny looking character holding the baby, she doesn't want- don't want to kill this poor looking baby and find some note that .that says please love and care for the baby. So he takes it home and tries to feed it in his house. And I don't know what happens in the last scene, but the woman I think she trying to look for baby and she wants to go back to the ..original state.

4. (OYH-level 1) *The original mother of the child decides to abandon her baby because she does not have the ability to raise her child. So she decides to abandon her baby inside a car. Actually the owner of the car but (?) some kind of gangsters, so when the gangsters finds the baby, they decides to abandon their child on the street. Charlie Chaplin who was walking nearby find found out that the child is crying nearby and so decides to find the owner .the real owner of the child. So the Charlie Chaplin brings the baby to a nearby woman who has a child. So. But the woman was frustrated that .that the baby was not hers. So the Charlie Chaplin actually brings the baby to some kind of elderly. But the elderly understood that the baby was actually the child of the nearby woman, So the elderly decides to give the baby to the woman. Again, the woman who has really angry about Charlie Chaplin actually decides to hit Charlie Chaplin. Also, when the police was walking nearby, the woman*

tells ..the woman tells him that Charlie Chaplin is actually tormenting her. Charlie Chaplin who does not know what to say decides to dump the baby into the manhole. However, Charlie Chaplin decides to raise this child after seeing the letter attached to the baby. Charlie Chaplin brings the baby inside the house and decides to raise this child. The woman who was deeply regretting her actions of abandoning her child ask the police to find her real baby.

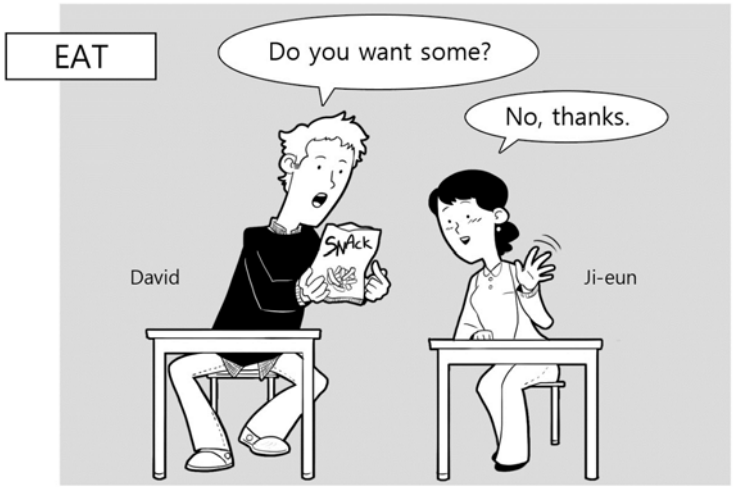
Appendix B

Discourse-Based Guided Writing Task

이름 : _____ 생년 월 일 : _____

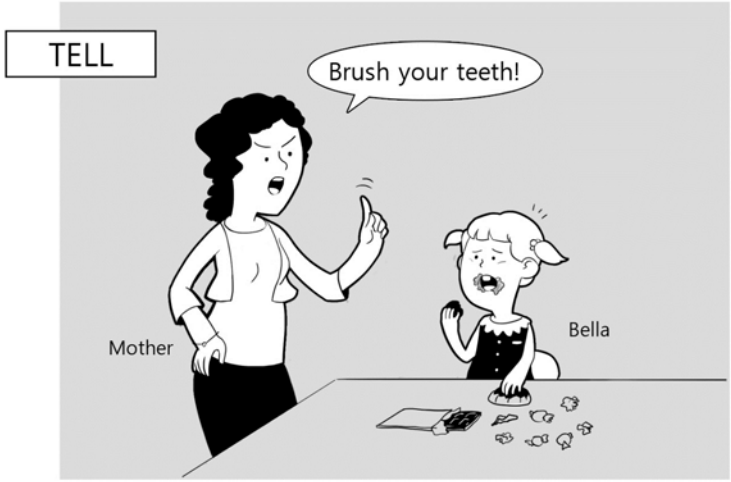
전공(학과): _____

※ 괄호 안에 주어진 동사를 반드시 사용하여 빈 칸에 들어갈 한 문장을 작문 하세요.



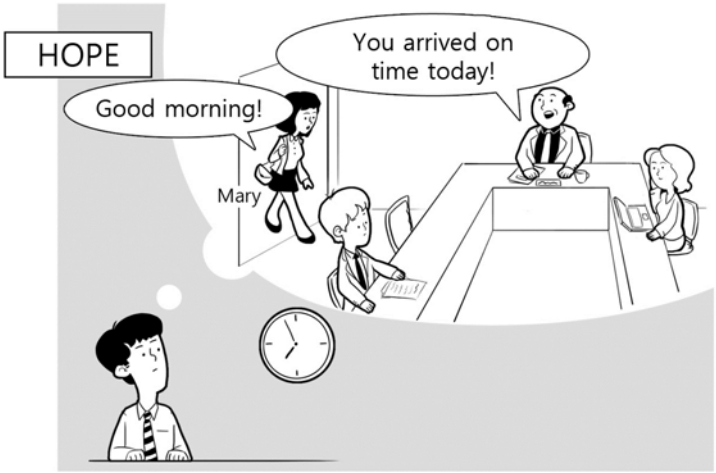
1. Ji-eun is a very shy Korean girl. David, her American classmate, is eating her favorite snack, and says to her, "Do you want some?" _____ _____ (eat), but she can't do so because she's too shy.

shy 수줍음이 많은, favorite 가장 좋아하는



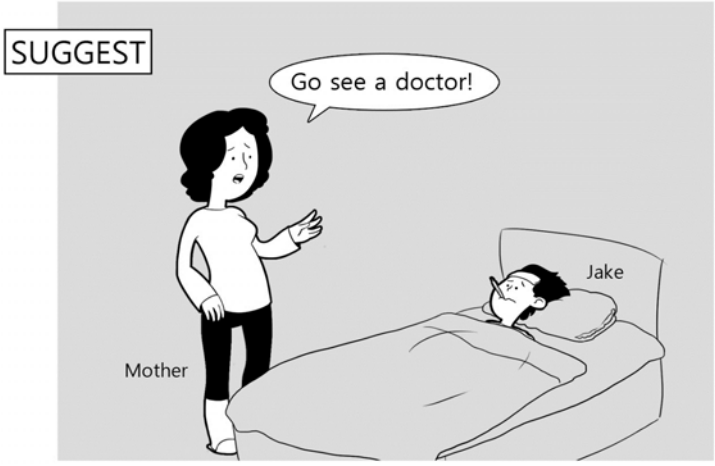
2. Bella loves sweets like chocolate, candies, and cake. But she hates brushing her teeth. Her mother is worried she may develop a lot of cavities. So _____ (tell)

brush one's teeth 이빨을 닦다, cavity 충치

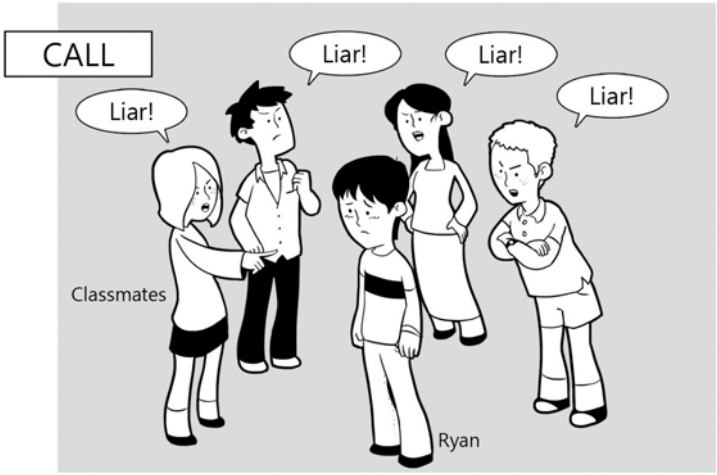


3. Mary has an important meeting with her boss today. She is often late for meetings, so I'm afraid she will be late again today. _____ (hope).

afraid 두려운, arrive 도착하다, on time 정각에

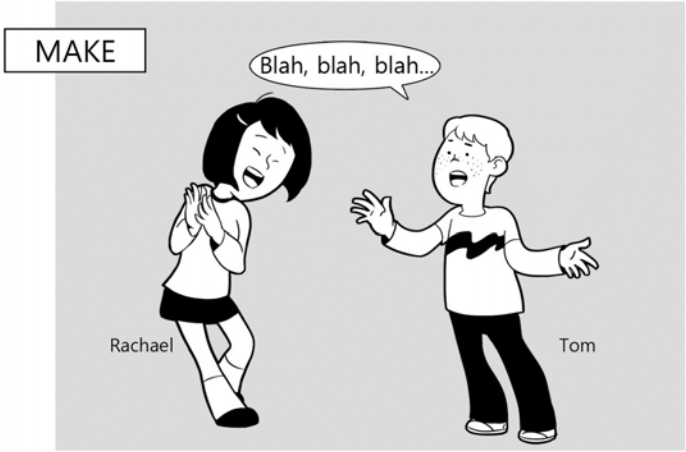


4. Jake has been sick for two weeks. However, he doesn't even know why he is so sick. So _____ (suggest).



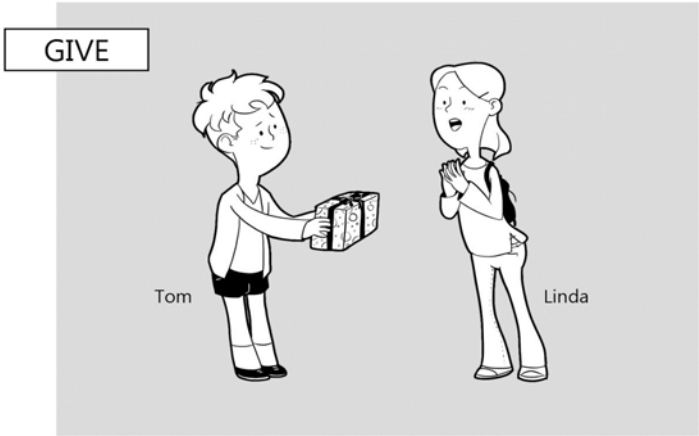
5. Hyun-woo told his friends that his uncle is the world famous singer Rain. He said so because he wanted to be popular with his friends. But later his friends found out that Hyun-woo had lied. So _____ (call).

lie 거짓말하다, liar 거짓말쟁이



6. Rachael likes Tom very much. Tom isn't good-looking or rich. He isn't even kind to her. Nevertheless, she likes him because he is so humorous. He knows many funny stories, and he's very good at telling stories. When she is with him, she always laughs and feels good. She thinks _____ _____ (make, happy).

nevertheless 그럼에도 불구하고



7. Tom broke Linda's favorite cup by mistake. She said it was okay, but he is so sorry for his mistake. So _____ (give).

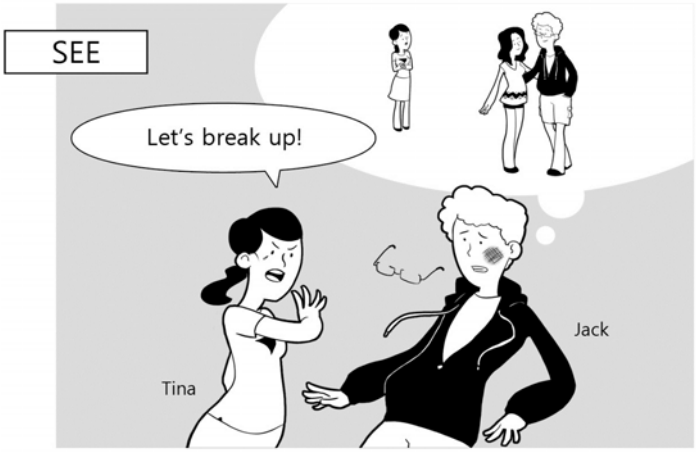
mistake 실수, present 선물

8. Mary did very badly on her math test. If her mother sees her test paper, she will be very upset. So _____ (place) so that her mother couldn't see it.

math 수학, upset 화난

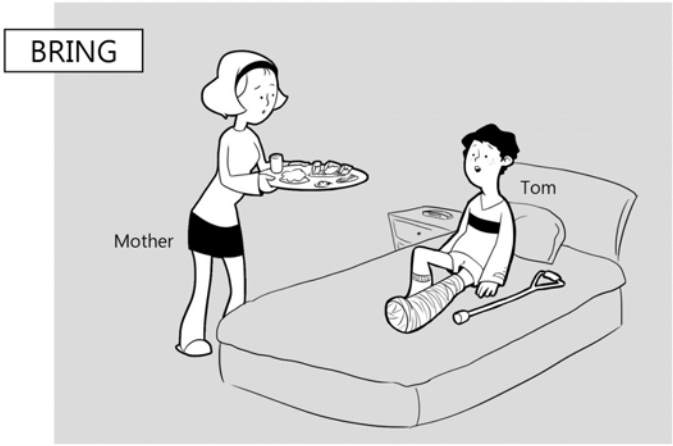
9. Liz has been under a lot of stress and gained over 10 kilograms in just one month. Now she feels some pain in her back and legs because of the sudden weight gain. She goes to see her doctor, Dr. Anderson, and _____ _____ (advise)

pain 고통, 아픔, back 등, sudden 갑작스러운, weight gain 체중 증가



10. Jack is Tina's boyfriend. They have been together for 5 years since high school. Today, Tina slapped Jack's face and said, "Let's break up!" He wasn't surprised because Ann, Tina's best friend, _____ (see).

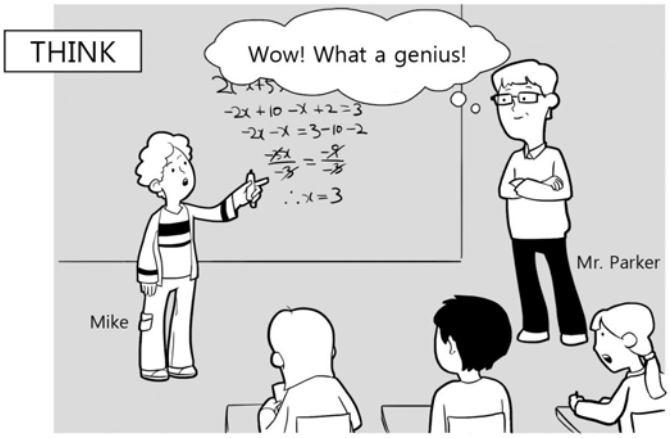
slap 손바닥으로 (뺨을) 치다, break up 헤어지다



11. Tom broke his leg when he was playing soccer with his friends. He can't move without crutches. He spends all day in bed. So _____ (bring)

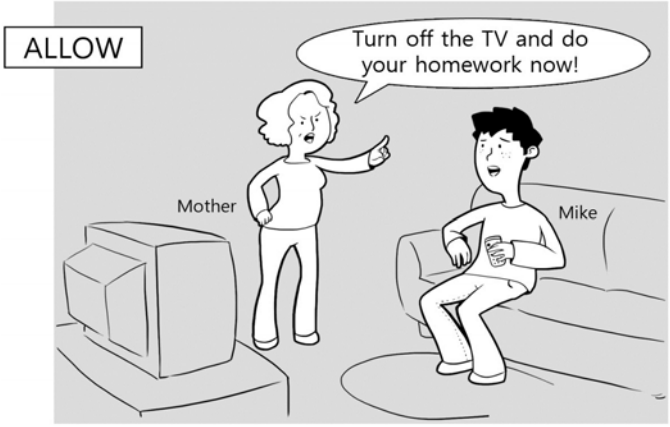
crutches 목발, meal 식사

12. Jack is looking for a public phone to make an urgent call. However, he can't find one. Then an elderly woman passes by him. He asks her where a telephone booth is. She says there's no telephone booth nearby. So _____ (ask). public phone 공중전화, urgent 긴급한, nearby 근처에, cell phone 휴대폰



13. Mr. Parker is Mike's math teacher. Mike is very good at mathematics. He can solve very difficult questions in a very short time. His classmates say that he is a genius. And Mr. Parker also _ _____ (think).

mathematics 수학, genius 천재



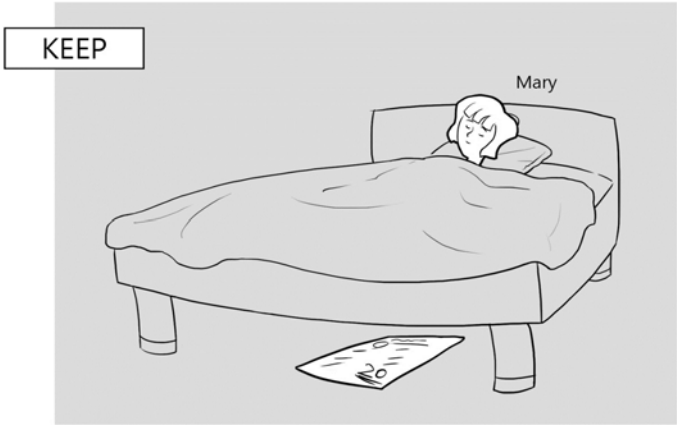
14. Mike wants to watch his favorite TV show. But his mother says to him, "Turn off the TV, and do your homework now!" _____ _____ (allow) when he hasn't finished his homework.

15. Jack is very forgetful. Today he went to the market and shopped for groceries. He loaded the groceries into the trunk of his car. When he was about to open the door to get in, he realized that he didn't have his car key. He looked everywhere for the key, but he couldn't find it. Later, it turned out that _____ (put).

forgetful 잘 잊는, groceries 식료품, load 짐을 싣다

16. Both Mr. and Mrs. Smith are big fans of the singer Boa. They first met each other in Boa's fan club. Ever since they got married, they have wanted to have a baby girl who would grow up to be like Boa. And finally this month, Mrs. Smith gave birth to a baby girl, and _____ (name).

give birth to ~을 낳다



17. Mary did very badly on her math test. If her mother sees her test paper, she will be very upset. So _____ (keep, hidden) so that her mother won't see it.

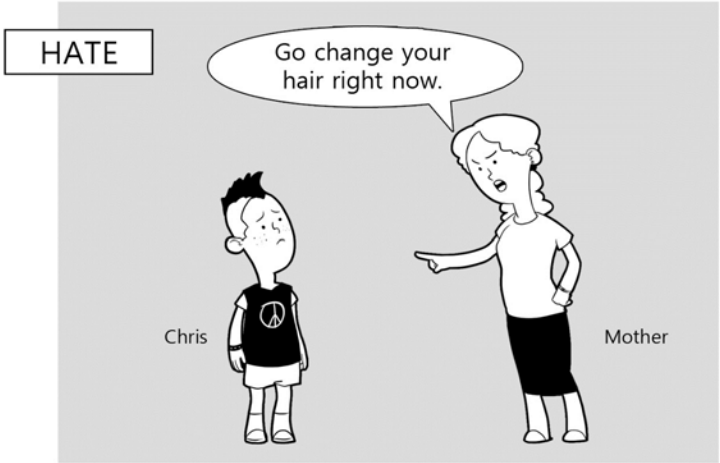
math 수학, upset 화난, hidden 숨겨진

18. John is a very honest young man. For some reason he has been accused of a murder. All his friends _____ (believe).

honest 정직한, accused of ~으로 고소된, murder 살인, innocent 무죄인

19. Ann likes her classmate John very much. This Friday is her birthday, and she will have a birthday party at her house. She gives John an invitation because_____ (want)

invitation 초대장



20. Chris tried a very unique hair style. All his friends say that it is cool, but _____ (hate). So his mother says to him, "Go get your hair changed right now!"

junique 독특한, cool 멋진

21. Ryan never cleans his room, so his room is always messy. Today Ryan's mother is very angry, and _____ (make).

messy 지저분한, clean 청소하다

1. 당신은 언제 처음으로 영어를 배우기 시작하였습니까? 학년 또는 나이를 적어 주십시오.

(a) 학교 _____

학년/나이 _____

(b) 사설 영어 교육 (예: 학원, 학습지) _____

학년/나이 _____

2. 영어를 모국어로 사용하는 나라에서 거주하신 적이 있으십니까? 그렇다면 얼마나 오랫동안 거주하셨습니까?

있다: ( ) 없다: ( )

국가: _____ 기간: _____

3. 혹은 영어를 제 2 국어나 외국어로 사용하는 나라에서 거주하신 적이 있으십니까? 그렇다면 얼마나 오랫동안 거주하셨습니까?

있다: ( ) 없다: ( )

국가: _____ 기간: _____

*** 감사합니다 ***

Appendix C

Sentence-Based Guided Writing Task

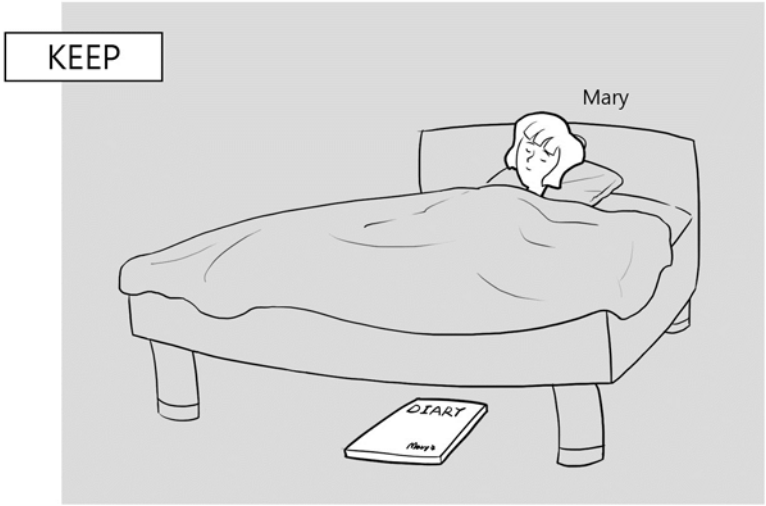
이름 :_____ 생년월일 :_____ 전공(학과): _____

※ 괄호 안에 주어진 동사를 반드시 사용하여 그림 상황을 나타내는 문장을 하나 작문 하세요.

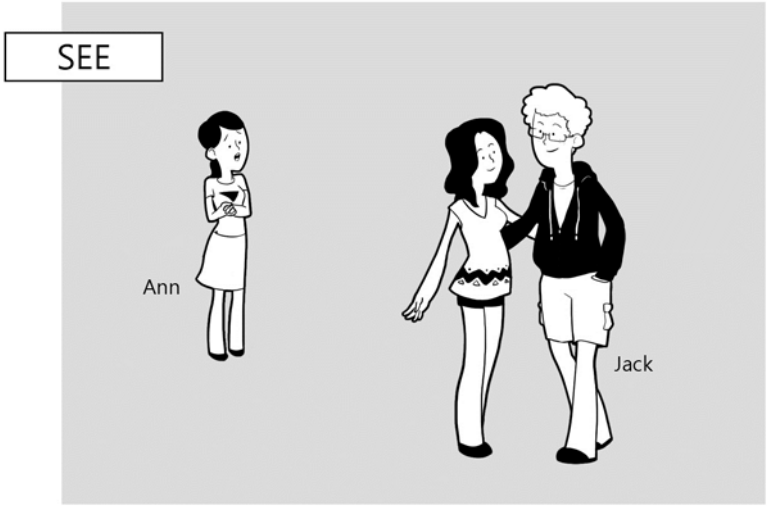
1. _____ (tell)

2. _____ (hope)

3. _____ (make)



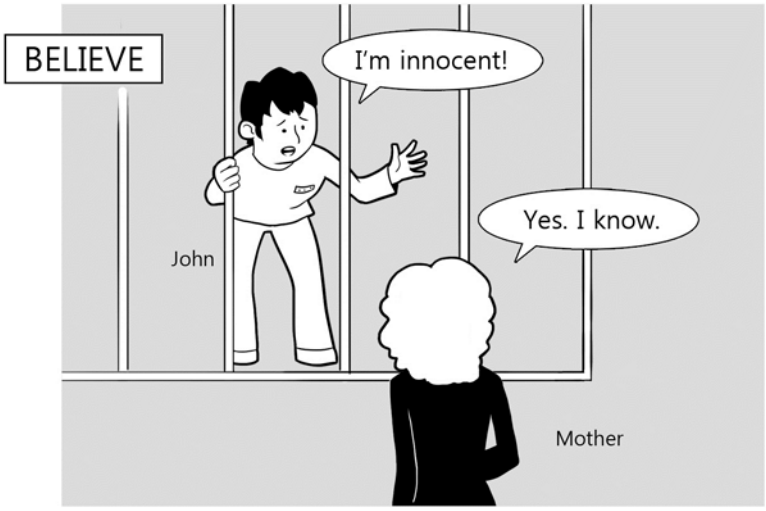
4. _____ (keep)



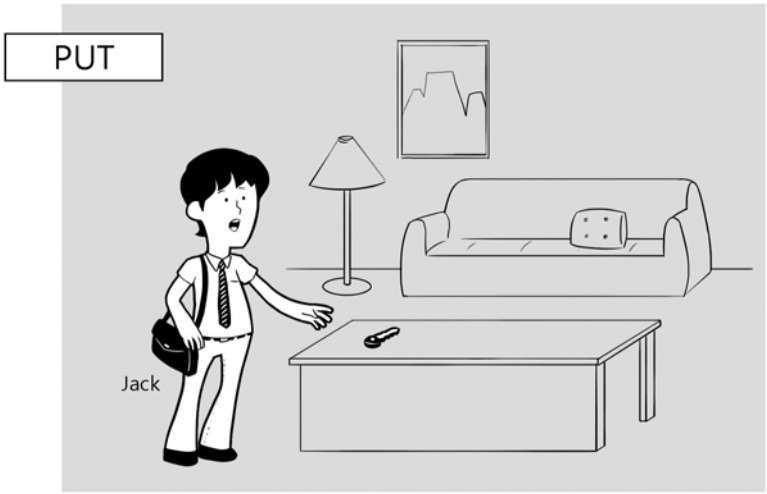
5. _____ (see)

6. _____ (hate)

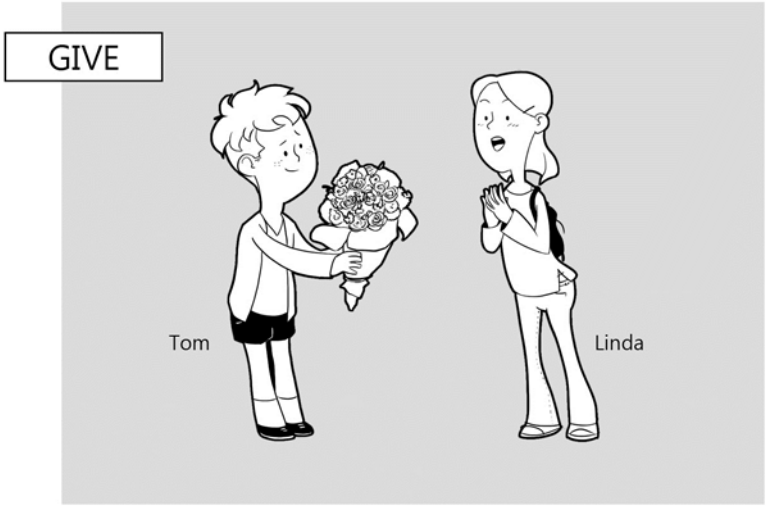
7. _____ (advise)



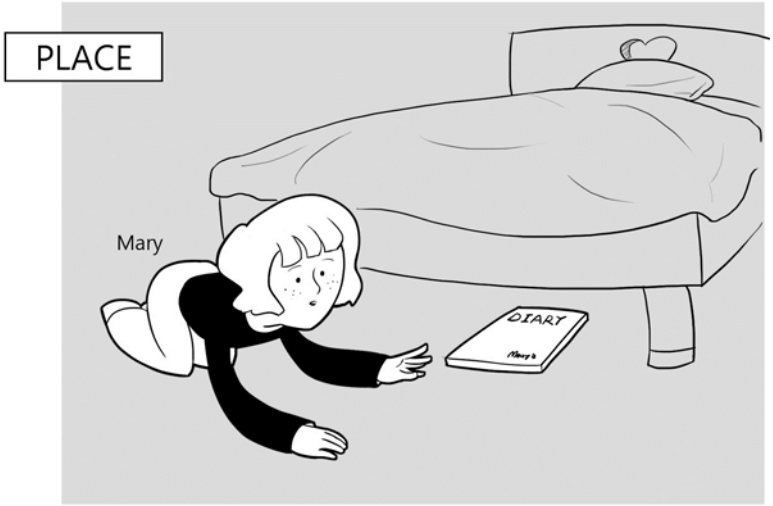
8. _____ (believe)



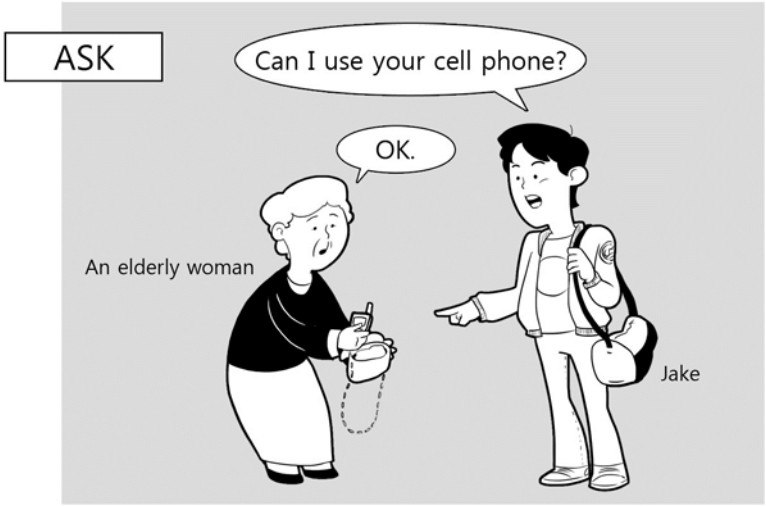
9. _____ (put)



10. _____ (give)

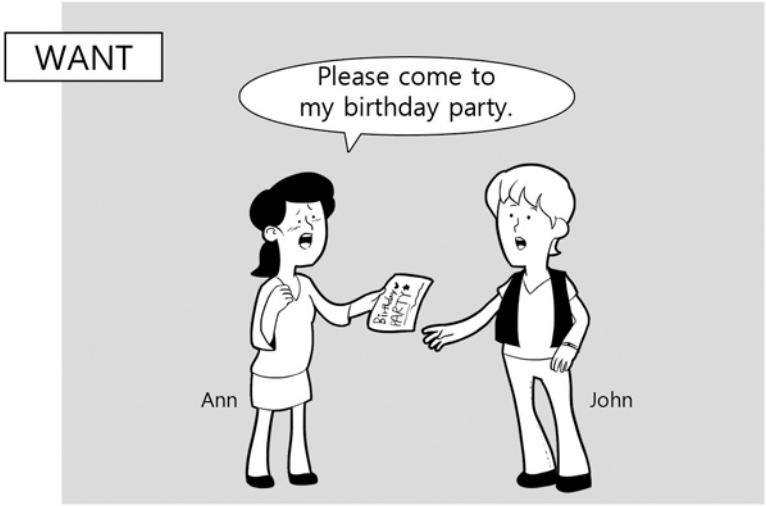


11. _____ (place)

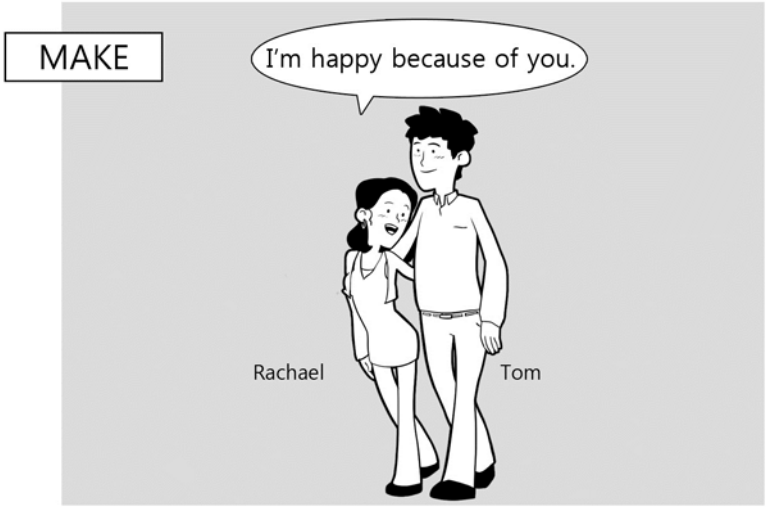


12. _____ (ask)

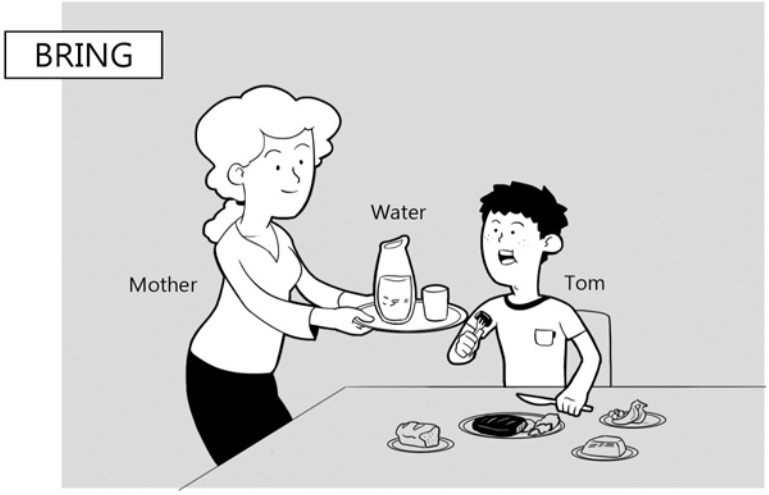
13. _____ (name)



14. _____ (want)



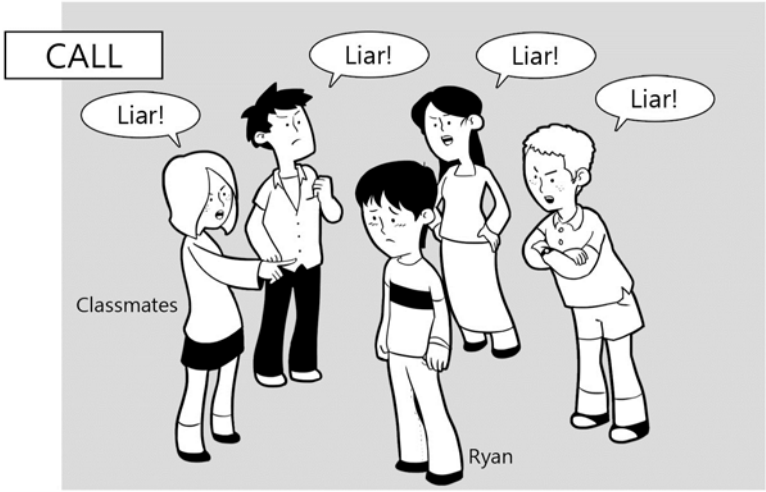
15. _____ (make)



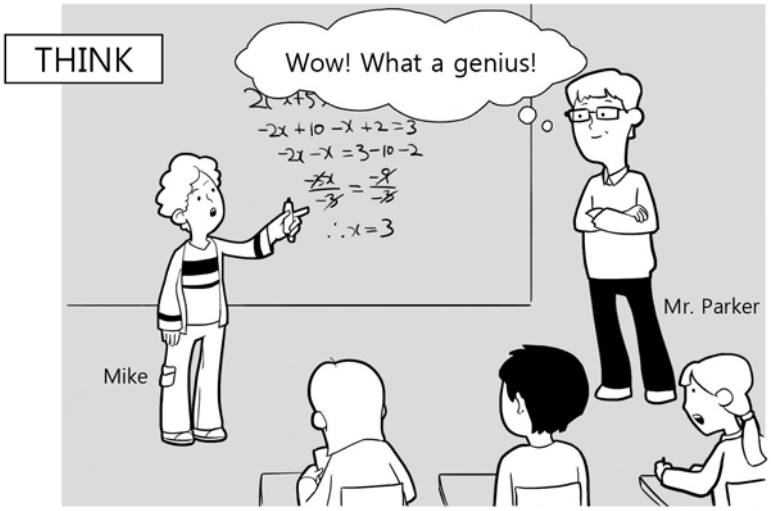
16. _____ (bring)

17. _____ (eat)

18. _____ (suggest)



19. _____ (call)



20. _____ (think)

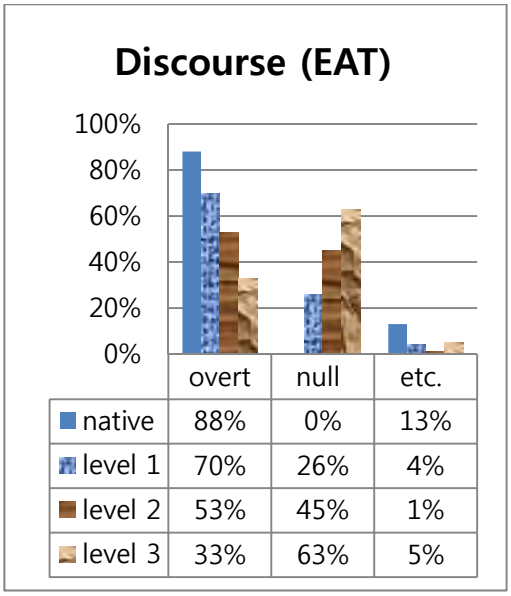
21. _____ (allow)

Appendix D

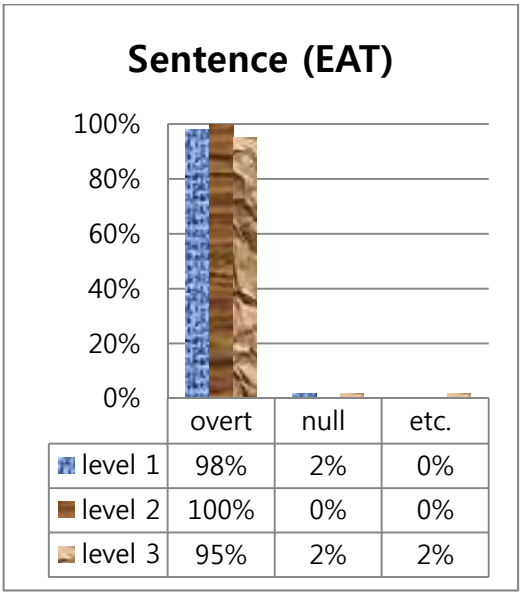
Frequencies of Overt and Null Objects of Each Complement Type

I. monotransitive construction (Type SVO) with a non-clausal complement

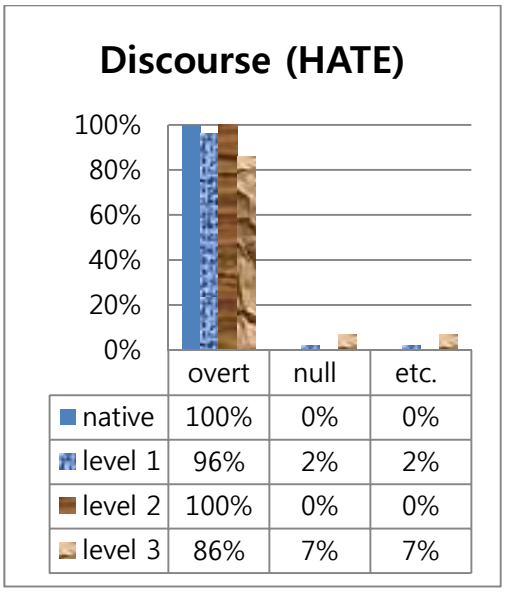
1. **Verb + noun object (*eat, hate*)**



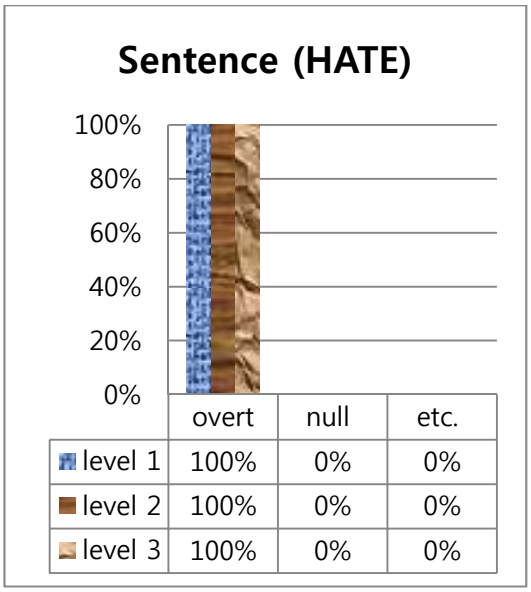
	overt	null	etc.
native	88%	0%	13%
level 1	70%	26%	4%
level 2	53%	45%	1%
level 3	33%	63%	5%



	overt	null	etc.
level 1	98%	2%	0%
level 2	100%	0%	0%
level 3	95%	2%	2%



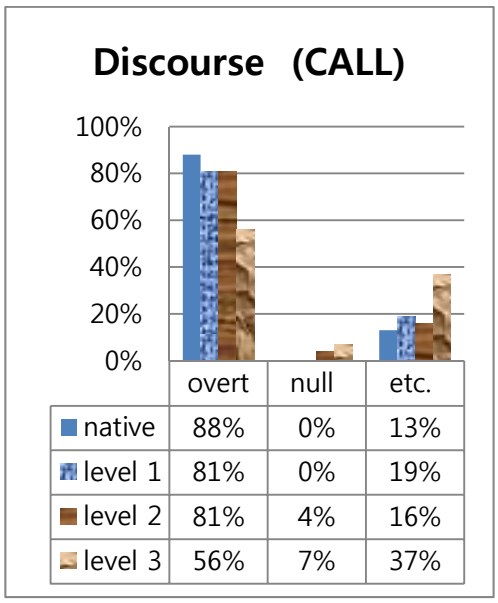
	overt	null	etc.
native	100%	0%	0%
level 1	96%	2%	2%
level 2	100%	0%	0%
level 3	86%	7%	7%



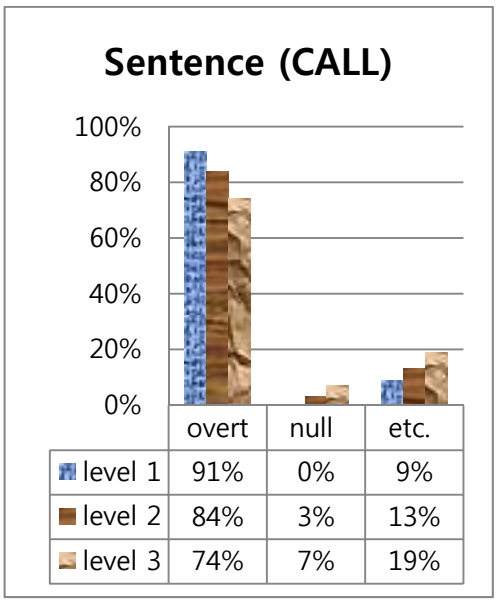
	overt	null	etc.
level 1	100%	0%	0%
level 2	100%	0%	0%
level 3	100%	0%	0%

II. complex transitive construction (Type SVOC/SVOA) with a non-clausal complement

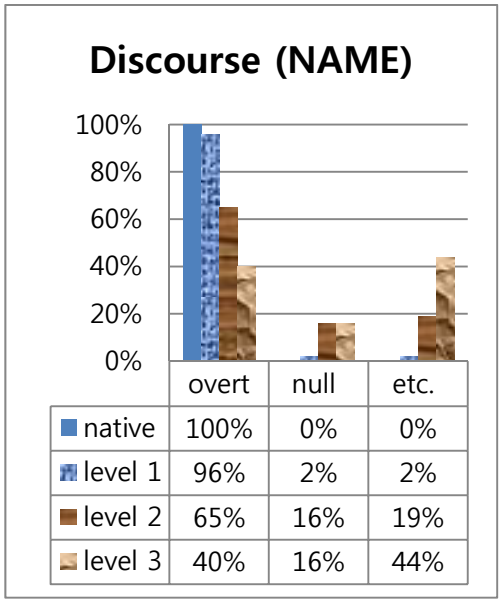
<u>2.Verb + object + noun object complement</u>*(call, name)*



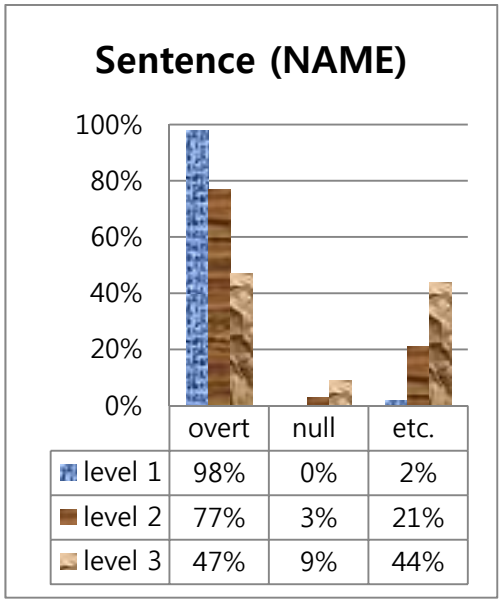
	overt	null	etc.
native	88%	0%	13%
level 1	81%	0%	19%
level 2	81%	4%	16%
level 3	56%	7%	37%



	overt	null	etc.
level 1	91%	0%	9%
level 2	84%	3%	13%
level 3	74%	7%	19%

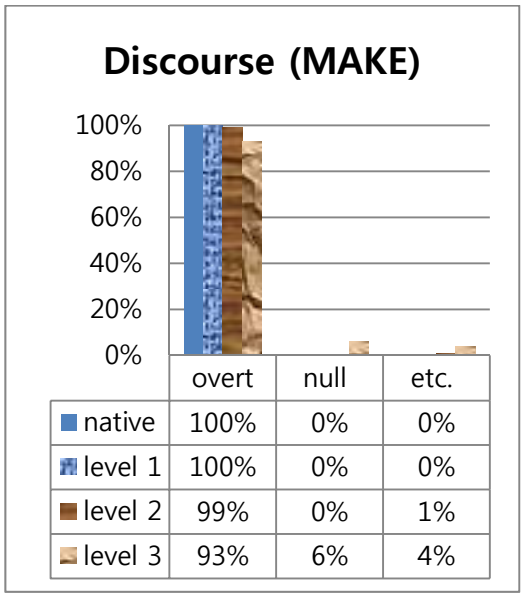


	overt	null	etc.
native	100%	0%	0%
level 1	96%	2%	2%
level 2	65%	16%	19%
level 3	40%	16%	44%

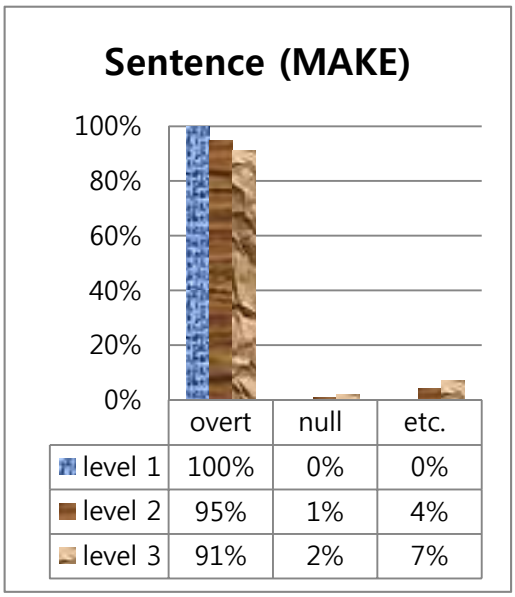


	overt	null	etc.
level 1	98%	0%	2%
level 2	77%	3%	21%
level 3	47%	9%	44%

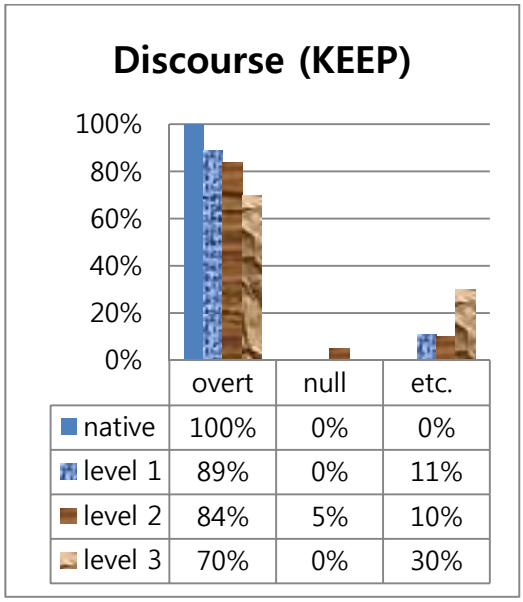
3) **<u>Verb + object + adjective object complement</u>** (*make, keep*)



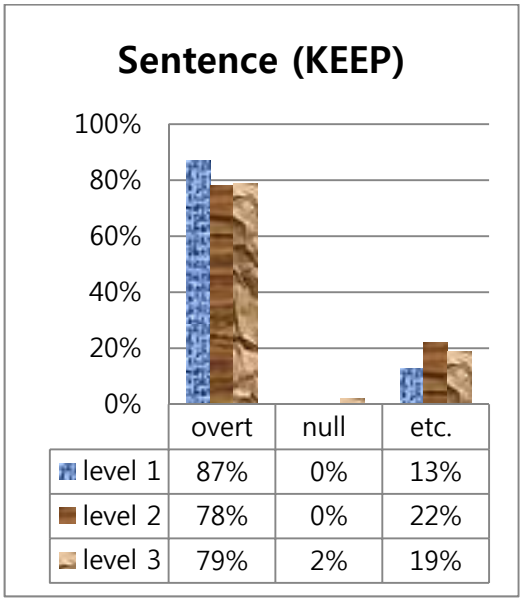
	overt	null	etc.
native	100%	0%	0%
level 1	100%	0%	0%
level 2	99%	0%	1%
level 3	93%	6%	4%



	overt	null	etc.
level 1	100%	0%	0%
level 2	95%	1%	4%
level 3	91%	2%	7%

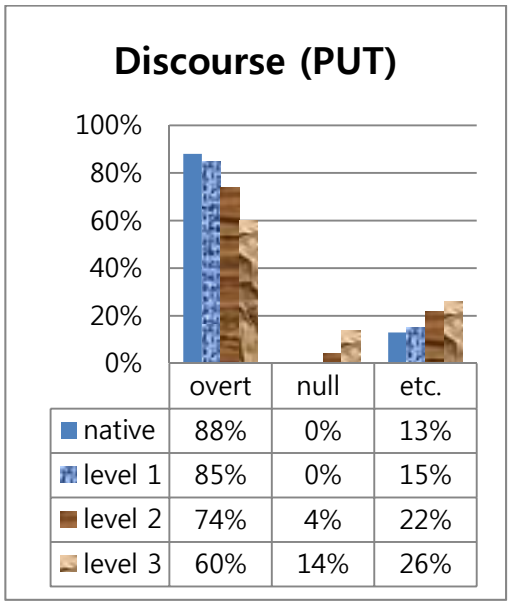


	overt	null	etc.
native	100%	0%	0%
level 1	89%	0%	11%
level 2	84%	5%	10%
level 3	70%	0%	30%

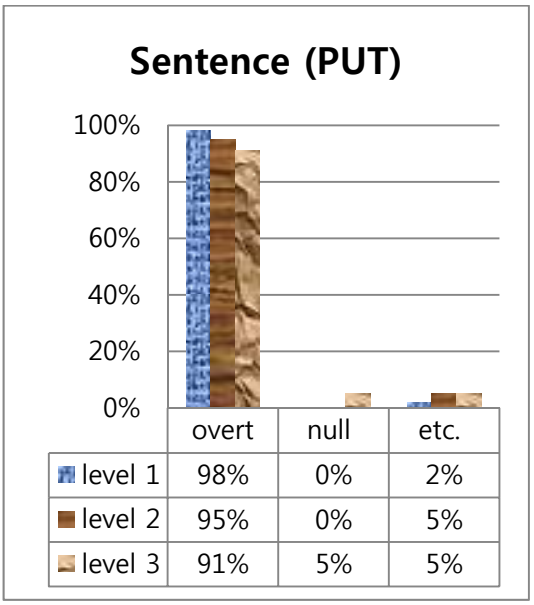


	overt	null	etc.
level 1	87%	0%	13%
level 2	78%	0%	22%
level 3	79%	2%	19%

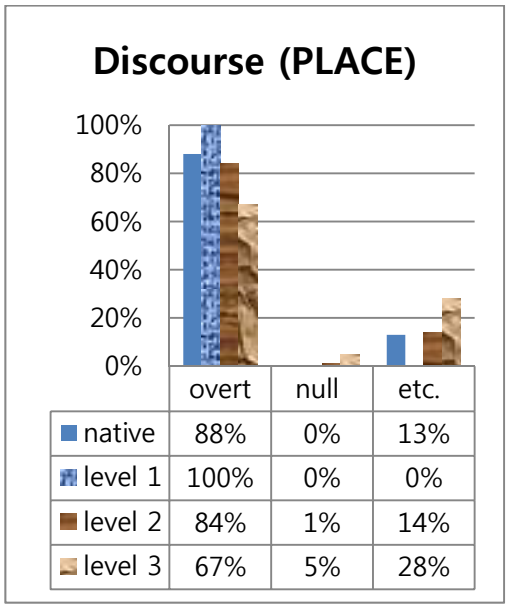
4) **<u>Verb + object + adverbial</u>** (*put*, *place*)



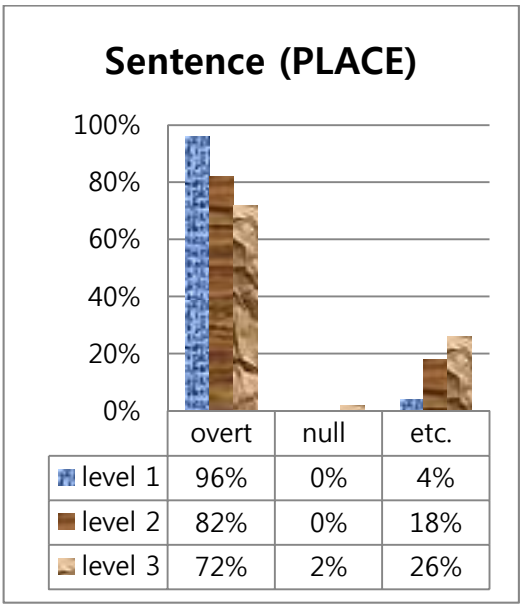
	overt	null	etc.
native	88%	0%	13%
level 1	85%	0%	15%
level 2	74%	4%	22%
level 3	60%	14%	26%



	overt	null	etc.
level 1	98%	0%	2%
level 2	95%	0%	5%
level 3	91%	5%	5%



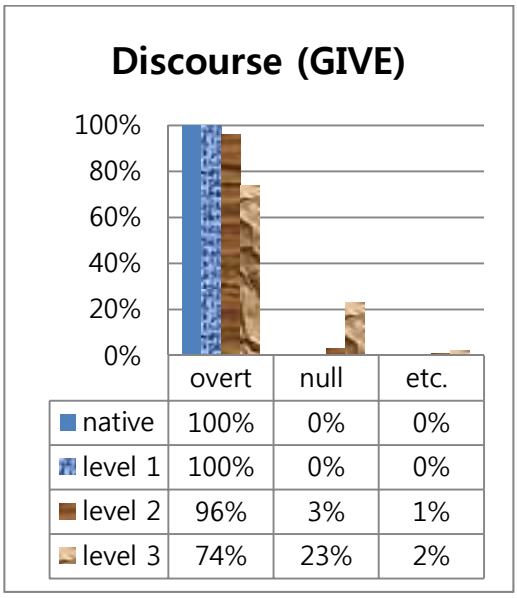
	overt	null	etc.
native	88%	0%	13%
level 1	100%	0%	0%
level 2	84%	1%	14%
level 3	67%	5%	28%



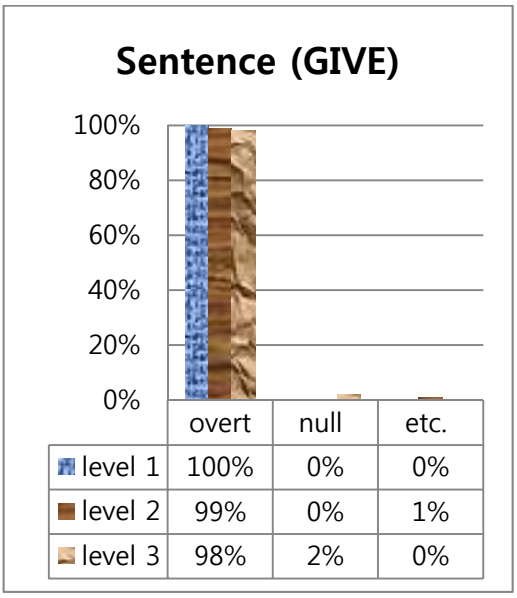
	overt	null	etc.
level 1	96%	0%	4%
level 2	82%	0%	18%
level 3	72%	2%	26%

III. ditransitive construction (Type SVOO) with a non-clausal complement

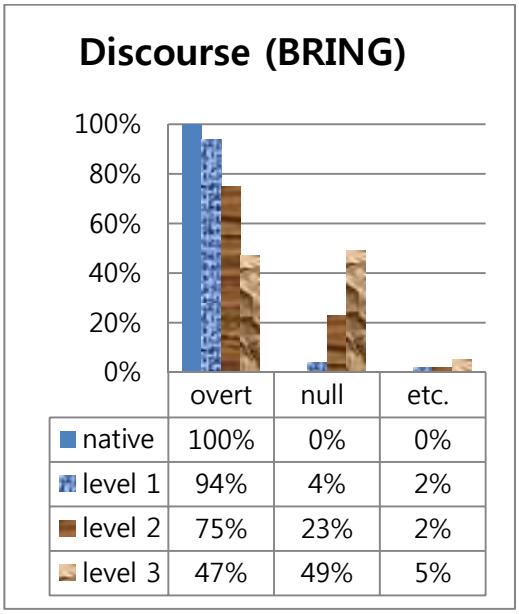
5) **<u>Verb + indirect object + direct object (</u>***give, bring*)



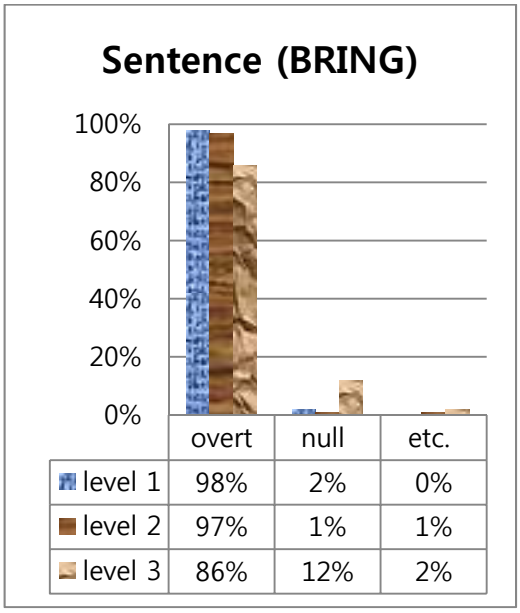
	overt	null	etc.
native	100%	0%	0%
level 1	100%	0%	0%
level 2	96%	3%	1%
level 3	74%	23%	2%



	overt	null	etc.
level 1	100%	0%	0%
level 2	99%	0%	1%
level 3	98%	2%	0%



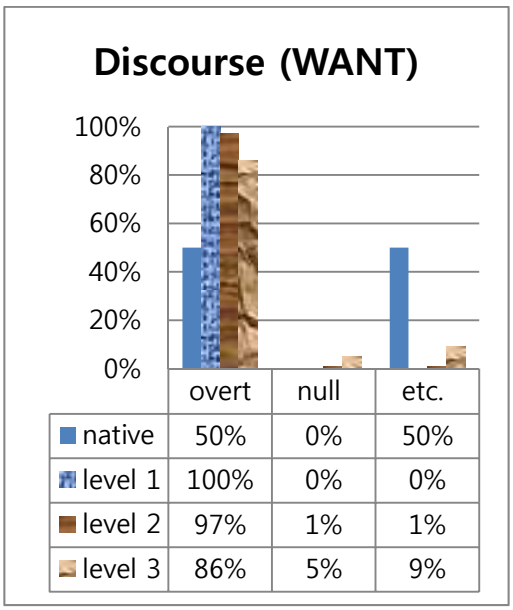
	overt	null	etc.
native	100%	0%	0%
level 1	94%	4%	2%
level 2	75%	23%	2%
level 3	47%	49%	5%



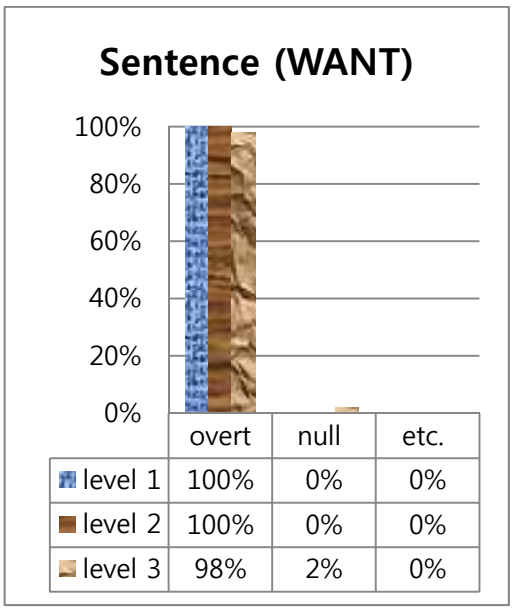
	overt	null	etc.
level 1	98%	2%	0%
level 2	97%	1%	1%
level 3	86%	12%	2%

IV. monotransitive construction (Type SVO) with a clausal complement

6)**<u>Verb + object + *to* infinitive</u> (*Verb +finite *that*-clause)** (*want*)

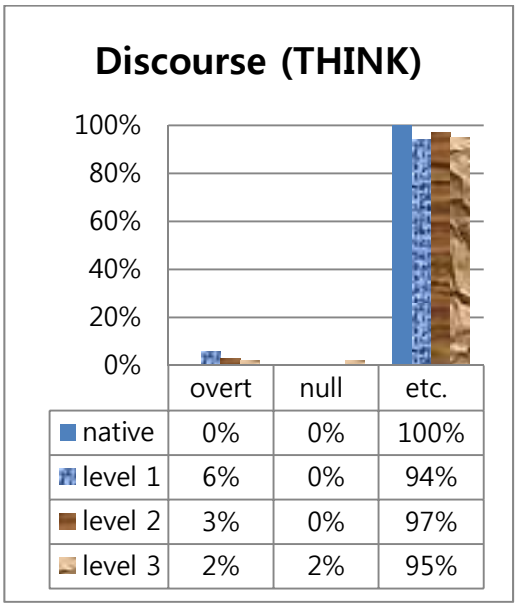


	overt	null	etc.
native	50%	0%	50%
level 1	100%	0%	0%
level 2	97%	1%	1%
level 3	86%	5%	9%

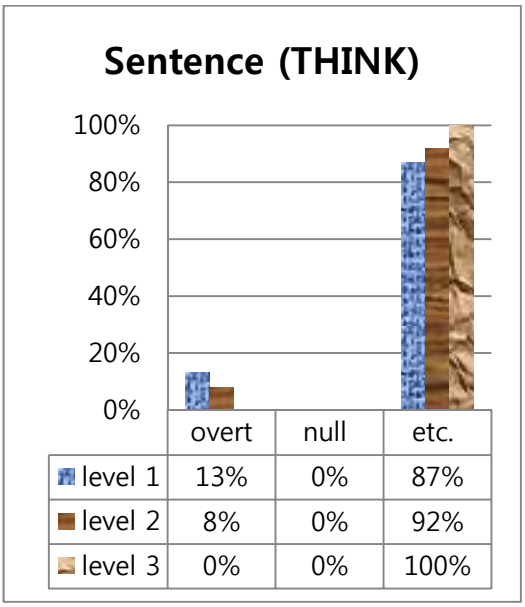


	overt	null	etc.
level 1	100%	0%	0%
level 2	100%	0%	0%
level 3	98%	2%	0%

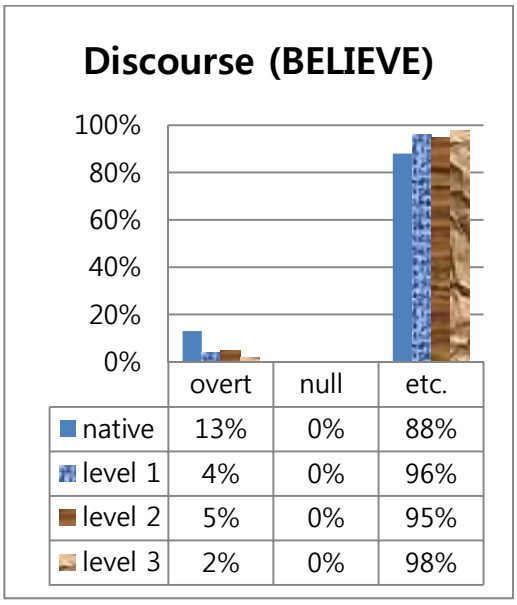
7) **Verb +finite *that*-clause / <u>Verb + object + *to* infinitive</u>** (*think, believe*)



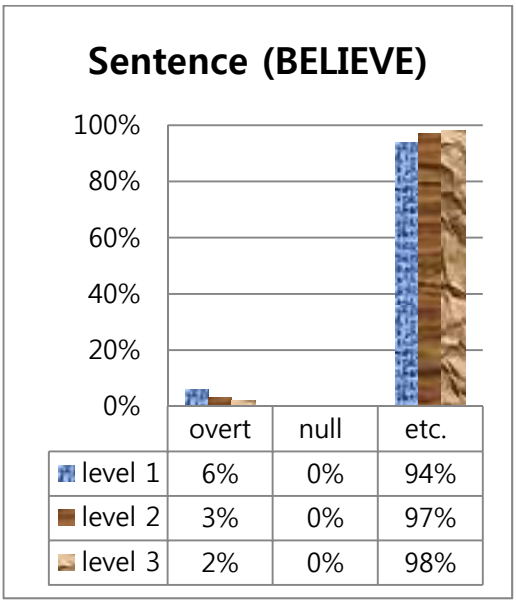
	overt	null	etc.
native	0%	0%	100%
level 1	6%	0%	94%
level 2	3%	0%	97%
level 3	2%	2%	95%



	overt	null	etc.
level 1	13%	0%	87%
level 2	8%	0%	92%
level 3	0%	0%	100%



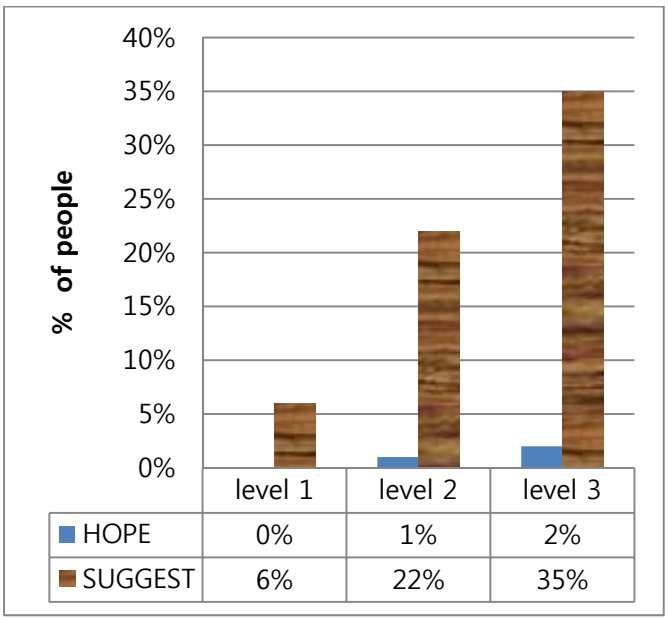
	overt	null	etc.
native	13%	0%	88%
level 1	4%	0%	96%
level 2	5%	0%	95%
level 3	2%	0%	98%



	overt	null	etc.
level 1	6%	0%	94%
level 2	3%	0%	97%
level 3	2%	0%	98%

8) Verb +finite *that*-clause (Verb + *object + *to* infinitive)(*hope, suggest*[24])

Figure 1. Percentages of people using null argument for the verbs "hope" and "suggest" in the discourse-based task



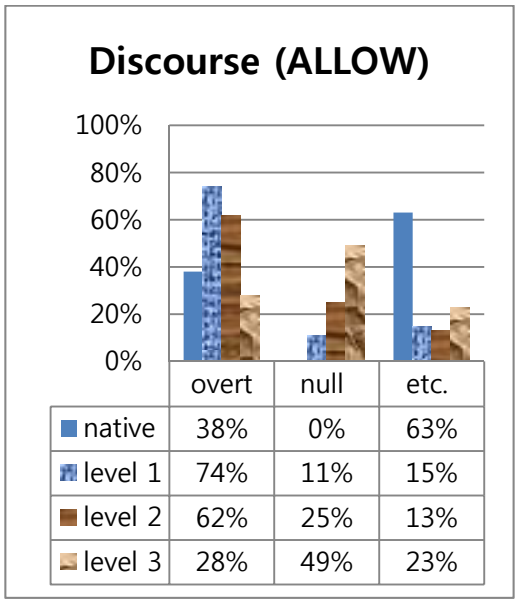
[24] Although the verbs *hope* and *suggest* disallow the sequence of a NP object and a *to*-infinitive in their argument structure, the verbs were still included in the study to see how incorrect or unstable knowledge about verb complementation would influence argument-drop.

As for the verb "suggest", 17 level 2 learners and 15 level 3 learners omitted the subject of the complement clause in the discourse-based task and produced sentences like (1). However, the same pattern was hardly observed with the verb "hope" and most of the learners provided a *that*-clause complement for the verb (see figure 1).

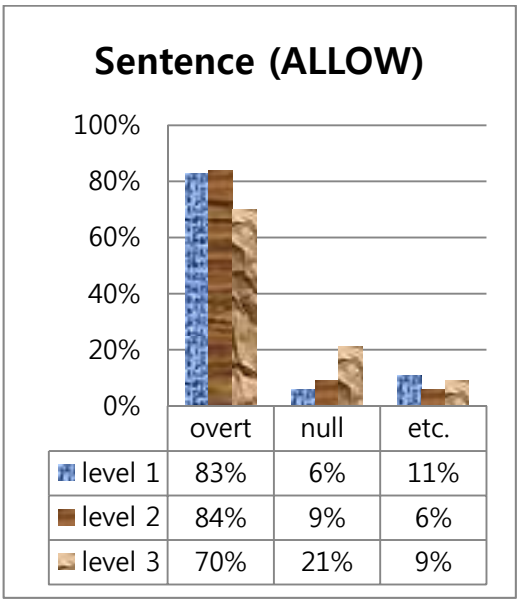
(1)a. *Mother suggests Mary to go see a doctor.* (in the sentence-based task)
b. *Mother suggests to go see a doctor*. (in the discourse-based task)

V. complex transitive construction (Type SVOC/SVOA) with a clausal complement

9)Verb + object + *to* infinitive (Verb +finite *that*-clause) (*allow*)

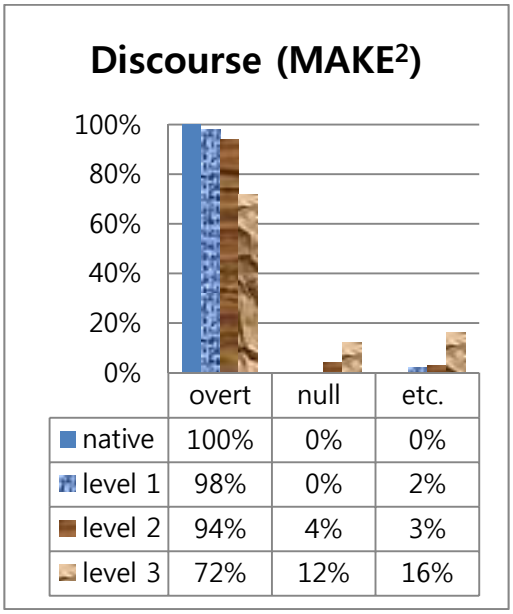


	overt	null	etc.
native	38%	0%	63%
level 1	74%	11%	15%
level 2	62%	25%	13%
level 3	28%	49%	23%

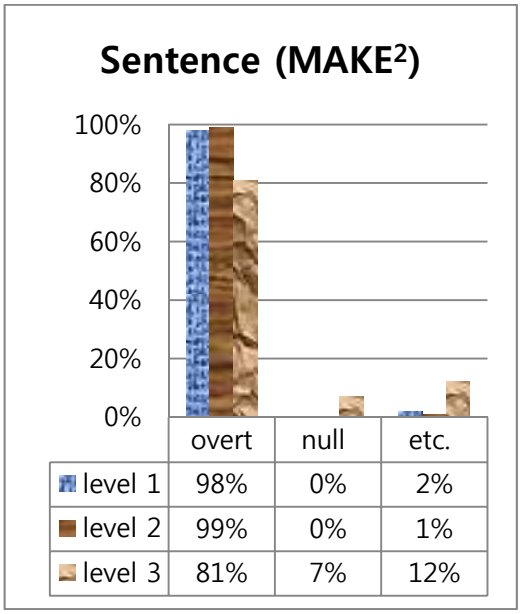


	overt	null	etc.
level 1	83%	6%	11%
level 2	84%	9%	6%
level 3	70%	21%	9%

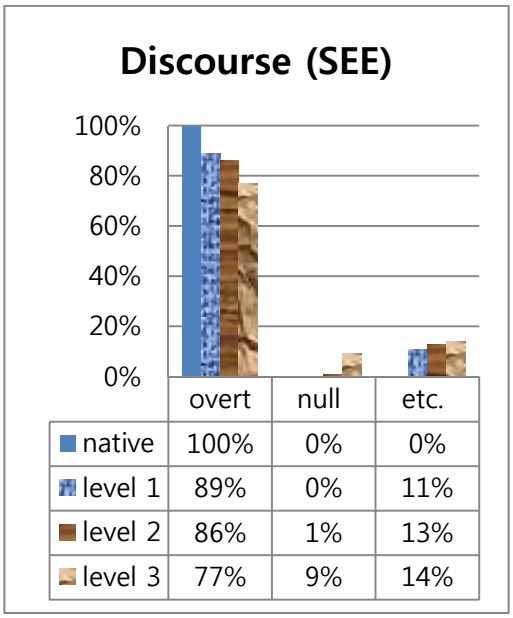
10) Verb + object + bare infinitive(*make, see*)



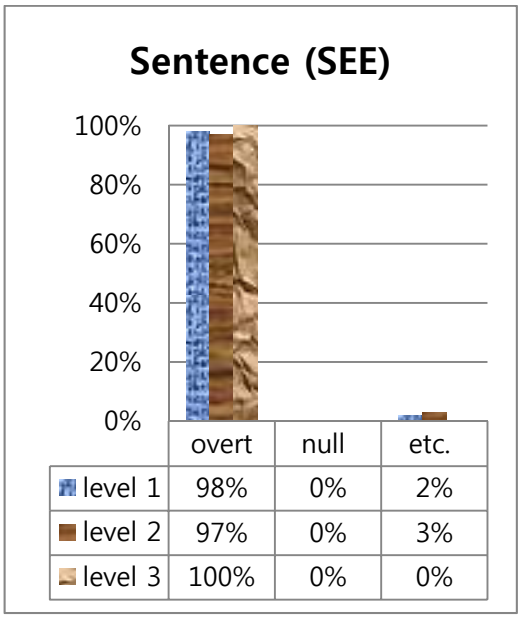
	overt	null	etc.
native	100%	0%	0%
level 1	98%	0%	2%
level 2	94%	4%	3%
level 3	72%	12%	16%



	overt	null	etc.
level 1	98%	0%	2%
level 2	99%	0%	1%
level 3	81%	7%	12%



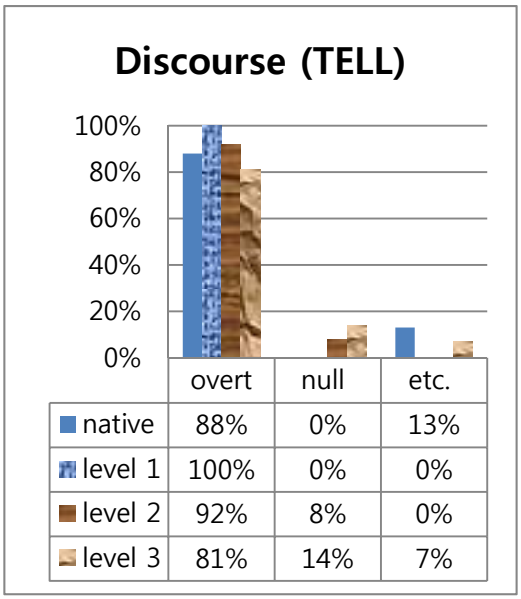
	overt	null	etc.
native	100%	0%	0%
level 1	89%	0%	11%
level 2	86%	1%	13%
level 3	77%	9%	14%



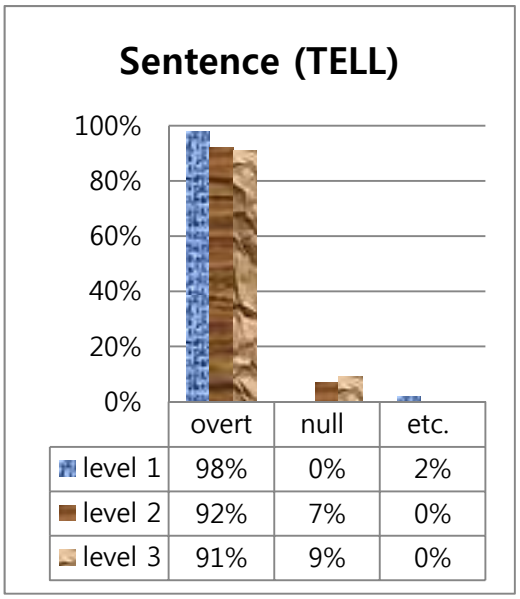
	overt	null	etc.
level 1	98%	0%	2%
level 2	97%	0%	3%
level 3	100%	0%	0%

VI. ditransitive construction (Type SVOO) with a clausal complement

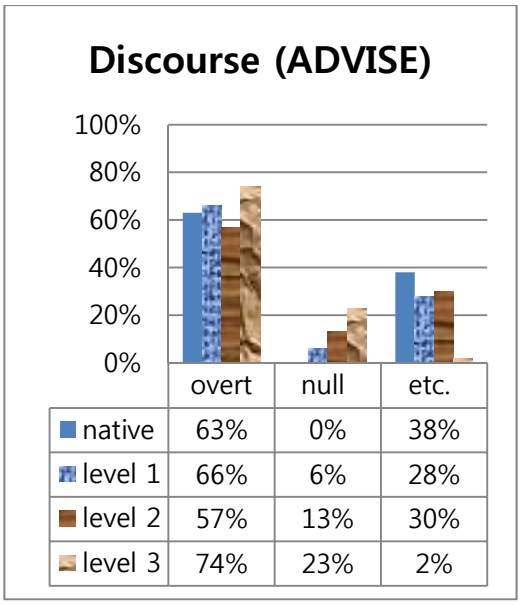
11) Verb + object +*to* infinitive / Verb +(object) + finite *that*-clause (*tell*, *advise*)



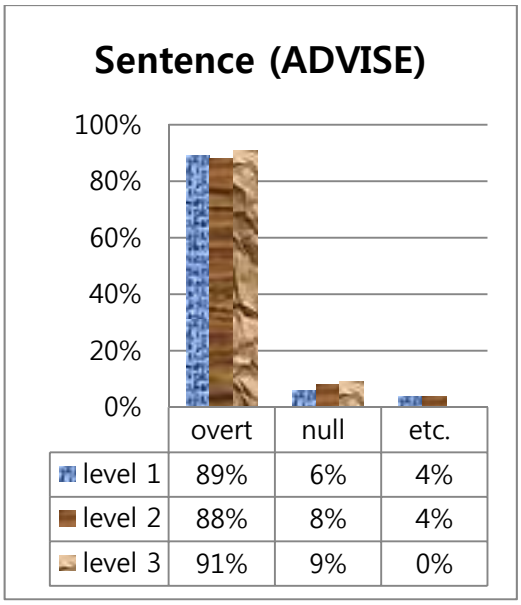
	overt	null	etc.
native	88%	0%	13%
level 1	100%	0%	0%
level 2	92%	8%	0%
level 3	81%	14%	7%



	overt	null	etc.
level 1	98%	0%	2%
level 2	92%	7%	0%
level 3	91%	9%	0%



	overt	null	etc.
native	63%	0%	38%
level 1	66%	6%	28%
level 2	57%	13%	30%
level 3	74%	23%	2%



	overt	null	etc.
level 1	89%	6%	4%
level 2	88%	8%	4%
level 3	91%	9%	0%

국 문 초 록

한국어에서는 화제-연쇄(topic-chaining)와 화제 탈락(topic NP deletion rule)이라는 화제-중심적 특성(topic-prominent feature)으로 인해 목적어가 탈락될 수 있는 반면에, 영어에서는 공목적어(null objects)가 허용되지 않는다. 이러한 두 언어간 통사적, 화용론적 차이 때문에 한국인 영어 학습자들은 종종 제2언어에서 목적어를 탈락하게 된다.

본 연구는 (1) 한국인 영어 학습자들이 과연 얼마나 자주 공목적어를 사용하며, (2) 이러한 목적어 탈락 현상의 원인은 무엇인지, 그리고 (3) 공목적어를 폐기학습(unlearning)하는 것이 가능한지를 알아보았다.

예비 연구(pilot study)에서, 36명의 한국인 고등학생과 9명의 영어 원어민 화자가 이야기 다시 말하기 과업(story-retelling task)에 참여하였다. 연구 결과, 공목적어가 공주어(null subjects)보다 더 빈번하게 사용되었으며, 영어 능숙도가 높은 학습자들이 목적어를 덜 탈락시키는 경향을 보였다. 또한, 공목적어는 그것의 지시대상(referent)이 회복될 수 있는 맥락(recoverable contexts)에서 더 빈번하게 탈락되었다.

주요 연구(main study)에서는 한국인 학습자의 목적어 탈락이 영어 능숙도, 담화 속에서 지시대상의 회복가능성, 또는 동사 보문 구조의 복잡성과 연관되는지가 조사되었다. 총 167명의 한국인 대학생과 9명의 영어 원어민 화자가 이 연구에 참가하여 두 가지 종류의 쓰기 과업을 수행하였다.

연구 결과, 한국인 학습자들은 두 가지 쓰기 과업 모두에서 공주어보

다 공목적어를 빈번하게 사용하였다. 이러한 비대칭은 예비 연구와 선행 연구에서도 관찰되었다 (Yuan, 1997; Park, 2004; Hwang, 2005). 공목적어 사용을 중지하는 것은 각 동사의 정확한 보문 구조를 습득하는 것을 전제하기 때문에 공주어 사용을 중지하는 것보다 더 복잡하고 시간이 많이 걸리는 과정이다.

두번째로, 학습자의 영어 능숙도가 향상될수록, 공목적어의 사용은 줄어들었다. 이러한 결과는 Yuan (1997) 연구 결과와 상치되며, Hwang (2005)의 연구 결과를 지지하는 것이다. 학습자들은 목적어-탈락을 일으키는 화제-중심적 특성들을 폐기학습하고, 영어에서 목적어 사용의 의무성을 습득할 수 있는 것으로 보인다.

세번째로, 공목적어는 문장-단위 과업(sentence-based task)에서보다 담화-단위 과업(discourse-based task)에서 더 빈번하게 사용되었다. 이것은 학습자의 목적어 탈락이 모국어인 한국어에서처럼 담화 맥락에서의 지시 대상의 회복가능성에 긴밀하게 연관되어 있음을 보여준다. 다시 말해, 학습자 언어에서 발견되는 공목적어는 모국어에서 전이된 화제-연쇄와 화제 탈락에 의해 유발되는 것으로 보인다.

마지막으로, 학습자의 공목적어 사용은 동사 보문 구조의 언어적 특성에 의해 영향을 받았다. 동사의 보문 구조가 복잡할수록, 공목적어는 더 빈번하게 사용되었다. 게다가, 학습자들은 더 친숙한 동사의 목적어를 더 자주 탈락시키는 경향을 보였다. 더욱이, 영어에서 목적어 탈락이 가능한 동사의 경우에는 매우 빈번하게 공목적어를 사용하였다.

본 연구의 교육적 함의는 다음과 같다. 영어 보문 구조에 대한 교수, 특히 구문 문법 기반 교수(construction grammar-based instruction)는 한국인 영어 학습자들이 목적어 탈락을 피하도록 도와줄 것이다. 또한, 목적어 탈락이 담화상 명사구의 지칭적 패턴과 긴밀히 연관되어 있기 때문에, 담화-수준 문법 교수가 효과적일 것이다.

핵심어: 공목적어, 화제-중심, 담화-중심 언어, 화제-연쇄, 화제 탈락, 영어 보문 구조

학번: 2005-31127