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Effects of Construction-Grammar-Based Instruction on the Learning of English Verb-Particle Constructions by Korean Middle School Students

한국인 중학생의 영어 동사-첨사 구문 학습에서의 구문문법 기반 교수의 효과

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by
Min-Chang Sung

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

Effects of Construction-Grammar-Based Instruction on the Learning of English Verb-Particle Constructions by Korean Middle School Students

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In construction grammar, English verb-particle constructions (VPCs) are form-meaning pairings and inherit their formal and functional properties from major English argument structure constructions (ASCs) such as caused-motion and transitive resultative (Goldberg, 2015). The present study explored construction-based instruction of VPCs to Korean middle school students, and assessed its educational effectiveness.

The effectiveness of construction-based instruction was compared with that of particle-centered and lexical instruction. Students were divided into three instruction groups: a construction-based instruction group (CG), a particle-centered instruction group (PG), and a lexical instruction group (LG). All the groups participated in twelve lessons and three testing sessions, i.e., a pretest, an immediate posttest, and a delayed posttest. Each test session administered four tasks: sentence completion, scene description, grammaticality judgment, and sentence sorting. The former two tested the production of VPCs, while the latter two examined the knowledge of ASCs.

Results of the tasks revealed that the construction-based instruction was more effective in improving the correct production of VPCs than the other

two types of instruction. More specifically, the learners in CG showed significant improvements in their use of figurative VPCs, which are known to be more difficult than literal VPCs. Moreover, the learners in CG showed greater mean increases for uninstructed VPCs than those in PG and LG.

Another significant finding of the present study is that the construction-based instruction improved the learners' knowledge of ASCs, especially marked ones such as transitive resultative and caused-motion. After the construction-based instruction, the learners in CG became better at identifying ASC-related errors. Moreover, their interpretation of English sentences improved as they became less dependent on matrix verbs and more dependent on constructional knowledge in sentence comprehension tasks.

These findings show that construction-based instruction can help Korean middle school students learn complex structures such as figurative VPCs and marked ASCs, suggesting important pedagogical implications for principled and effective foreign language learning and teaching.

Key Words: construction grammar, foreign language instruction, English verb-particle constructions, English argument structure constructions

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CHAPTER 1. INTRODUCTION

The present study investigates the effects of construction-based instruction on the learning of verb-particle constructions by Korean middle school students. The first section introduces the problems and objectives that this dissertation addresses. The second section states the research questions, and the last section outlines the organization of the dissertation.

1.1 Statement of Problems and Objectives

The importance of English verb-particle constructions (hereafter, VPCs) — also known as *phrasal verbs* (e.g., *write up*) — has been widely acknowledged in the research of English language learning and use. As a peculiarity of the Germanic languages (Dagut & Laufer, 1985), the VPC plays a pivotal role in L1 acquisition of English (Choi & Bowerman, 1991; Tomasello, 1987). English-speaking children learn a variety of VPCs in the early stages of language acquisition and rely on them to deal with diverse communicative needs. The early acquisition of VPCs facilitates successful L1 acquisition of English since the use of VPCs is closely related with fundamental concepts in human languages such as motion, direction, and spatial configuration (Bowerman, León, & Choi, 1995; Tomasello, 1987, 1992).

The VPC is also frequently used by English-speaking adults in both spoken and written contexts (Biber, Johansson, Leech, Conrad, & Finegan,

1999; Gardner & Davies, 2007; Gilquin, 2011; Quirk, Greenbaum, Leech, & Svartvik, 1985). Its usage has been expanding (Leone, 2016; Pelli, 1976), even to academic discourses (Trebits, 2009), and novel VPCs such as *chest the ball down* [in a soccer game] are invented every day (Cappelle, 2006).

Despite its significance in the English language, the VPC still remains notoriously difficult to second- or foreign-language learners of English (Neagu, 2007; Side, 1990). The difficulty has been ascribed to a variety of factors such as figurative (e.g., *camp out*) or idiomatic meanings (e.g., *chew out*), polysemy (e.g., *bring up [=carry] the tools; bring up [= nurse] children*), particle placement (e.g., *turn on the TV* vs. *turn the TV on*), and the quantity or quality of L2 input (Sjöholm, 1995).

To solve these difficulties, many pedagogical approaches have been proposed. One of them is the particle-centered approach. Developed to be a better alternative to lexical instruction, which presents non-literal meanings of VPCs as inexplicable wholes that should be memorized, particle-centered instruction accounts for the meanings of VPCs based on the semantic categories of the particle (Condon, 2008; Nhu & Huyen, 2009; Yasuda, 2010). For example, Nhu and Huyen (2009) proposed that the concept of CONTAINER, which represents the prototypical ground of the particles *in* and *out*, is expanded to other conceptual domains, such as PROBLEMS AS CONTAINER (e.g., *work out the answer* and *figure out a puzzle*). Although particle-centered instruction has yielded fruitful outcomes, it has limitations in that individual VPCs are treated as separate lexical items, with little effort

made to provide a generalized account of structural patterns of VPCs or associate the structural patterns with the semantic properties of VPCs.

Recently, a more systematic approach to the teaching of VPCs has been proposed in the framework of construction grammar (Cappelle, 2006; Gilquin, 2015; Goldberg, 2015). In this linguistic theory, VPCs are analyzed as form-meaning parings that inherit linguistic properties from major English argument structure constructions (hereafter, ASCs) such as caused-motion, e.g., *Sally put the bag on the table*, and resultative, e.g., *Ken broke the vase into pieces* (Goldberg, 2015; Gorlach, 2004). One of the underlying ideas is that the ASCs may provide a fundamental framework for generalizing forms and meanings of VPCs. In particular, hierarchical networks of inheritance links between ASCs (Goldberg, 1995) can be employed to address varying syntactic and semantic patterns of VPCs in a more organized way. For example, the form and meaning of the caused-motion construction (Sub V Obj Obl; *X causes Y to move Z*) are observed in the VPC sentence, *we let the bucket down*. Likewise, the metaphorical extension from the caused-motion to the transitive resultative construction is found in the VPC sentence, *she let us down*: the motional meaning of *down* is metaphorically extended to the stative meaning of *down* (i.e., *disappointed*).

Noting the emerging potential that construction grammar has for the teaching of VPCs, a few attempts have been made to design construction-based instruction of VPCs (Torres-Martínez, 2015, 2016, forthcoming; Park,

forthcoming). For example, Torres-Martínez (2015) proposed a constructional learning activity in which L2 learners of English match examples of VPCs with ASCs such as caused-motion and transitive constructions.

These construction-based approaches have opened up new ways to teach VPCs in L2 settings, but the research in this area is still in a very early phase, with important issues not fully addressed.

First, the previous studies focused on a limited number of VPCs, so it is still uncertain whether construction-based instruction is effective in teaching figurative VPCs, which are difficult for L2 learners to acquire (Dagut & Laufer, 1985), and in facilitating linguistic generalizations that help L2 learners use their knowledge of instructed VPCs to tackle uninstructed ones (Kovecses & Szabo, 1996; Yasuda, 2010). Second, the systematic relationships between VPCs and other constructions have not been given due attention despite the previous finding that the knowledge of a construction facilitates L2 learners to acquire other related constructions (Rah, 2013). Given that VPCs inherit many structural and semantic properties from ASCs such as caused-motion (e.g., *put it down* vs. *put it on the floor*), construction-based instruction of VPCs may contribute to the learning of related ASCs, but this intriguing possibility has not been explored.

The present study aims to shed further light on the potential efficacy of construction-based instruction of VPCs, and is expected to make significant

contributions to applied research in construction grammar. As noted in De Knop & Gilquin (2016), construction grammar is now well-accepted as “a powerful descriptive and processing model” (p. 3) and adopted by many researchers to investigate interesting linguistic phenomena in English, as well as other languages. However, its pedagogical application has been relatively neglected, with many of the meaningful findings in construction grammar unattested in language classes. The present study addresses this issue, applying the recent findings in construction grammar to the development of VPC instruction and proving its effectiveness in comparison with other common pedagogical practices.

Another noteworthy aspect of the present study is that VPCs, which have been considered as exceptional peculiarities of English, are accounted for with reference to a core system of English grammar, namely ASCs. This approach will provide important evidence for the constructionist notion that, being interconnected and sharing linguistic properties, different types of constructions constitute a comprehensive system of English grammar.

1.2 Research Questions

The present study is guided by the following research questions:

1) Is construction-based instruction of VPCs more effective than particle-centered and lexical instruction in improving Korean middle school English learners' production of VPCs?
   (1a) Is construction-based instruction of VPCs more effective than particle-centered and lexical instruction in improving Korean middle school students' production of *figurative* VPCs?
   (1b) Is construction-based instruction of VPCs more effective than particle-centered and lexical instruction in improving Korean middle school students' production of *uninstructed* VPCs?
2) Does construction-based instruction of VPCs improve Korean middle school students' knowledge of ASCs?
   (2a) Does construction-based instruction of VPCs improve Korean middle school students' ability to judge grammaticality of English sentences?
   (2b) Does construction-based instruction of VPCs improve Korean middle school students' ability to interpret English sentences?

1.3 Organization of the Dissertation

This dissertation is organized into five chapters. Chapter 1 introduces the motivation and research questions of the present study. Chapter 2 reviews the theoretical framework of construction grammar and examines theoretical and experimental issues surrounding the target construction, i.e., the VPC. Chapter 3 reports the results of three pilot studies and describes the research method of the main experiment, including participants, target structures, instruction, tests, and data analysis. Chapter 4 reports the quantitative and qualitative results of the study, highlighting significant between-group differences. Chapter 5 discusses interesting findings and crucial issues in the learning of VPCs, which provide answers to the research questions of the study. Chapter 6 summarizes the major findings and concludes the study with pedagogical implications, limitations, and suggestions for future research.

CHAPTER 2. LITERATURE REVIEW

This research aims to examine the efficacy of construction-based instruction in teaching VPCs to EFL learners. Accordingly, the first section of this chapter reviews the theoretical framework of the present study, i.e., construction grammar (Goldberg, 1995), and introduces the major findings of construction grammar-based research in first and second language acquisition. The second section presents different approaches to the analysis of VPC, and discusses important findings in acquisition and instruction of VPCs.

2.1 Construction Grammar

This section examines construction grammar as the linguistic theory of the present study and introduces significant findings in its application to language learning and teaching.

2.1.1 Theoretical framework

Construction grammar is a linguistic approach to grammar and language acquisition which adopts fundamental concepts of cognitive linguistics (Hoffmann & Trousdale, 2013). In this discipline, human language is understood as a part of the spectrum of general cognitive capacities.

Therefore, any attempt to account for languages as “an autonomous cognitive faculty, detached from non-linguistic cognitive capacities” (Rah, 2014, p. 15) is rejected. Instead, the structure of language (i.e., grammar) is analyzed as comparable to other systems in human cognition such as vision and memory, and language acquisition is accounted for by *domain-general* cognitive mechanisms such as comparison, categorization, and inference. In addition, the way a particular language is used by a particular group of speakers is also ascribed to cognitive regularities that have been conventionalized to analyze linguistic experiences and perform communicative functions (Goldberg, 2006).

The significance of *domain-general* cognitive capacities in construction grammar shows a sharp contrast with generative approaches to language. Generative grammarians focus on *domain-specific* mechanisms (e.g., universal grammar) to account for the formal features of human languages. This fundamental difference has led the two disciplines, constructionism and generativism, to posit different degrees of significance that language input has for language acquisition.

According to generative grammar (Chomsky, 1966), language input alone cannot account for the complicated linguistic systems that children develop in first language acquisition; therefore, the role of input has been restricted to setting certain innate parameters that contain a variety of formal features. In contrast, construction grammar contends that language input shapes the formal and functional structures of one’s language, as evidenced in the

notable similarity between a child's language and that of his/her caretaker (Goldberg, 1999). In this theoretical framework, language learning is viewed as gradual convergence of the learner's language toward the target language system. Even when a speaker's linguistic knowledge is far from mastery, that knowledge is used for communicative purposes, and this usage experience enhances the complexity and variety of the speaker's linguistic system (Goldberg, 2006).

Accordingly, construction grammar posits that language learning is primarily motivated and guided by communication. Noting that the necessary range of communicative purposes cannot be achieved by the knowledge of linguistic forms alone, construction grammar does not restrict language acquisition to the capacity to determine which sentence is grammatical, nor to the ability to produce a grammatical sentence that one has never heard before. Given that both forms and meanings are needed for a speaker of a language to communicate with other speakers of the language, construction grammarians have endeavored to find systematic relations between forms and meanings.

The relationship between form and meaning has been extensively investigated in cognitive linguistics (e.g., Bolinger, 1968; Saussure, 1916). The underlying notion that "a difference in syntactic form always spells a difference in meaning" (Bolinger, 1968, p. 127) indicates that different forms in a language are associated with different meanings. Even when two different forms seemingly indicate the same meaning (e.g., *she gave the man*

the book; *she gave the book to the man*), there always exists certain semantic variation. In construction grammar, these associations (*or* pairings) between form and meaning are called constructions and considered as the basic unit for linguistic analysis. Constructions are defined as follows:

> Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency.
>
> (Goldberg, 2006, p. 5)

This definition presents two important conditions for a form-meaning pairing to be a construction: non-predictability and high frequency. The former condition means that particular grammatical forms correspond to particular meanings in a symbolic manner that cannot be predicted from any other constructions (cf. Saussure's [1916] notion of *signifier* and *signified*). For example, possessive -*s* is inherently symbolic because some aspects of the association between its form and meaning are not predictable from other constructions with formal similarities (e.g., plural -*s*) or semantic similarities (e.g., possessive *of*). The other condition, high frequency, is based on a core principle in cognitive psychology: an element under a more general concept can emerge as an independent unit when it is frequently

activated and thus strongly entrenched into the cognitive system. For example, the form and meaning of *I love you* is predictable from other constructions such as the subject-predicate construction and the lexical construction *love*. However, English speakers do not rely on these relevant constructions when producing and comprehending *I love you*, because this high-frequency expression is entrenched as an independent construction and its syntactic form and propositional meaning are retrieved comprehensively and instantaneously.

These examples, ranging from a possessive marker *-s* to a sentential expression *I love you*, point to another important theoretical aspect of construction grammar: constructions refer to any types of form-meaning pairings (Goldberg, 2006). In other words, construction grammar presumes a unitary representation of the speaker's linguistic knowledge that embraces a variety of forms and meanings, ranging from morphemes to sentence structures. This representation does not put any principled separation or strict disassociation between the lexicon and the syntax. Instead, all different facets of language, which were traditionally treated as different grammatical components, are accounted for in terms of constructions (see Table 2.1): "the network of constructions captures our grammatical knowledge *in toto*, that is, it is constructions all the way down" (Goldberg, 2006, p. 18).

This network of constructions includes linguistic units with varying degrees of formal and functional complexity, from lexical and idiomatic ones (e.g., *bird*; *kick the bucket*) to partially lexically filled and fully general

Table 2.1
Network of Constructions

Word	e.g., *tentacle, gangster, the*
Word (partially filled)	e.g., *post-N, V-ing*
Complex word	e.g., *textbook, drive-in*
Idiom (filled)	e.g., *like a bat out of hell*
Idiom (partially filled)	e.g., *believe* <one's> *ears/eyes*
Covariational conditional	The Xer the Yer
	(e.g., *The more you watch, the less you know*.)
Ditransitive	Subj V Obj_1 Obj_2
	(e.g., *She gave him a kiss*.)
Passive	Subj Aux VPpp (PP_{by})
	(e.g., *The cell phone tower was struck by lightening*.)

(Adapted from Goldberg, 2009, p. 94)

phrasal patterns (e.g., *do* SUB's *best*; SUB VERB OBJ). Therefore, a single utterance (e.g., *she spilled the beans*) can be analyzed as containing a variety of constructions (cf. Torres-Martínez, 2016, p. 5):

e.g., *she spilled the beans.*

[subject-predicate], [V OBJ], [*spill* OBJ], [*spill the beans*],

[V-*ed*], [*she*], [*spill*], [-*ed*], [*the*], [*beans*]

Construction grammar adopts usage-based models to account for these form-meaning pairings exhibiting different levels of complexity. The primary notion is that language input is sufficient enough for learners to acquire a variety of form-meaning pairings. This entails that language learning consists of data-driven processes through which the linguistic knowledge of a speaker gradually converges toward the target language

system. When learners are exposed to language input, the statistical properties of constructions in the input underlies the acquisition of the constructions, so high-frequency constructions are learned early and easily.

In this statistical model, there are two types of frequency: token frequency and type frequency. Token frequency refers to the number of occurrences of a particular form-meaning pairing in the input. When a form-meaning pairing has a high token frequency (e.g., *I love you*), the pairing is likely to become entrenched as a construction or a prototype of a dominating construction (i.e., SVO). Type frequency, on the other hand, counts the number of distinct lexical realizations of a construction that has lexically unspecified slots (e.g., Verb-*ed*). A high type frequency means that the construction is expressed with a variety of lexical items (e.g., *invited*, *filled*, and *called*), and this lexical diversity in the usage pattern allows language learners to notice common properties among the instances of the construction and reach the generalization or abstraction of the construction. Empirical studies have provided meaningful evidence that this usage-based generalization accounts for L1 and L2 acquisition of English constructions, especially argument structure constructions (Ellis & Ferreira-Junior, 2009; Goldberg, 2006).

2.1.2 English argument structure constructions

English sentences are composed of argument structures such as [SUB V

OBJ] and [SUB V OBJ_1 OBJ_2]. Traditional views claimed that the argument structures are determined by the semantics of matrix verbs (Chomsky, 1981). For example, the verb *give* projects one subject (i.e., *giver*) and two objects (i.e., *givee* and *given*), selecting structures with three arguments, i.e., [SUB *give* OBJ_1 OBJ_2] or [SUB *give* OBJ_2 to OBJ_1]. In this verb-based view, argument structure alternations were analyzed as derivational phenomena. For example, the two sentences in (1) were depicted as having the same propositional meaning, while one was presented as derived from the other by syntactic rules.

(1) a. He gave the lady the flower.

b. He gave the flower to the lady.

However, there are many cases where specifications of the matrix verb are not reliable determinants of the overall forms and meanings of sentences. For example, it makes little sense that the verb *sneeze* assigns thematic roles to three arguments, and yet it can appear with three arguments as in (2). Similar problems are attested with the verb *laugh* in (3) and *drink* in (4)

(2) Tom sneezed the tissue off the table.

(3) The audience laughed him off the stage.

(4) They drank the pub dry.

Another piece of counter-evidence to the verb-based view is that a verb can appear in multiple argument structures.

(5) a. Barbara sliced the bread.

b. Jennifer sliced Terry an apple

c. Meg sliced the ham onto the plate.

d. Nancy sliced the tire open.

(Goldberg & Bencini, 2005, p.9).

In order to analyze the sentences in (5), the verb-based view has to assume that there are different structural and semantic specifications of the verb *slice* for each sentence pattern. This account seems quite implausible if we then attempt to apply it by extension to the full range of verbs in the lexicon.

Noting that argument structures of many English sentences cannot be attributed to intrinsic properties of their matrix verbs, construction grammarians contend that argument structures represent "form-meaning correspondences that exist independently of particular verbs" (Goldberg 1995, p. 1). In contrast with the subordinate status of argument structures in the verb-based view, construction grammar understands argument structures as "a special subclass of constructions that provides the basic means of clausal expression in a language" (Goldberg, 1995, p. 3). In this framework, different argument structures are associated with different semantic or functional properties, arguing against derivational relationships between two

seemingly similar argument structures. For example, the two sentences in (6) are analyzed as having two different argument structure constructions: specifically, caused-motion for (6a) and ditransitive for (6b).

(6) a. Jack sent the letter to Mary (but she hasn't got it).

b. Jack sent Mary the letter (??but she hasn't got it).

The caused-motion construction associates the form [SUB VERB OBJ OBL] with the meaning 'X causes Y to move Z,' while the ditransitive associates the form [SUB VERB OBJ_1 OBJ_2] with the meaning 'X causes Y to receive Z.' These semantic specifications of each construction have important implications for the interpretation of the sentences. Sentence (6a) simply entails movement of *the letter* to a certain location (i.e., *Mary*), which does not guarantee a successful transfer. However, sentence (6b) implies the notion of transfer and thus necessitates the recipient (i.e., *Mary*) coming to possess the transferred object (i.e., *the letter*). These semantic specifications appear to be relevant in the following examples: the location to which the object is sent does not have to be animate, as shown in (7a), but the recipient has to be an animate being, as shown in (7b).

(7) a. Liza sent a book to storage.

b. ??Liza sent storage a book. (Goldberg, 2003, p. 221)

According to Goldberg (1995, p. 39), these different meanings of argument structure constructions (ASCs) represent "event types that are basic to human experience," such as someone moving somewhere, something undergoing a change of state, someone causing something else to move, or someone causing something to change state. Table 2.2 presents the ASCs that entail these basic event types.

Table 2.2
English Argument Structure Constructions

Construction	Form	Meaning
Intransitive motion	Sub V $Obl_{path/location}$	X moves $Y_{path/location}$
	e.g., *The fly buzzed into the room.*	
Intransitive resultative	Sub V RP	X becomes Y_{state}
	e.g., *The bottle broke open.*	
Transitive	Sub V Obj	X acts on Y
	e.g., *The man read the book.*	
Caused motion	Sub V Obj $Obl_{path/location}$	X causes Y to move $Z_{path/location}$
	e.g., *Pat sneezed the foam off the cappuccino.*	
Transitive resultative	Sub V Obj RP	X causes Y to become Z_{state}
	e.g., *She kissed him unconscious.*	
Ditransitive	Sub V Obj_1 Obj_2	X causes Y to receive Z
	e.g., *She faxed him a letter.*	

The examples in Table 2.2 clearly show that the ASCs determine the general structure and interpretation of the sentences. For instance, the verb *buzz* in the first example sentence describes a long and continuous sound that a bee makes and thus has little implication for movement. However, the intransitive motion construction makes an independent contribution to the structure (i.e., Sub V Obl) and interpretation (i.e., *movement of the fly into the room*) of the sentence *the fly buzzed into the room*.

The structural and semantic specifications of ASCs may adhere to Occam's razor in that such information does not have to be stored as lexical properties of individual verbs. Instead, representative features of a verb are integrated into more general formal and functional schemata of ASCs: action and argument(s) of the verb are reinterpreted by the constructional frame (cf. Fillmore's [1977] Frame Semantics). For example, the transitive resultative sentence in Table 2.2, *she kissed him unconscious*, means that she caused him to be unconscious by kissing him. In this sentence, the action and arguments of the verb *kiss* are interpreted in the frame of the transitive resultative construction. The action of kissing is understood as the means of changing the object's state, the kisser as the causer of the change, and the kissed as the undergoer of the change. Figure 2.1 depicts this integration process of the verb into the ASC.

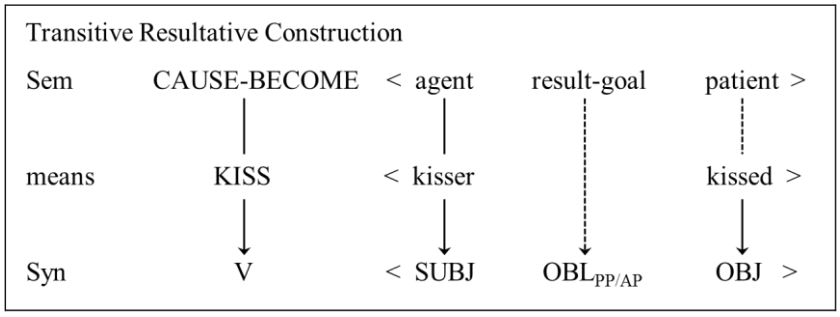


Figure 2.1
Integration of Verb and Construction

Like all the other constructions in constructions grammar, the ASCs are "not merely an unstructured list" (Croft & Cruse, 2004, p. 262). Instead, formal and functional generalizations of ASCs have been captured in terms

of inheritance hierarchies, which constitute "an integrated and motivated network" (Goldberg, 2009, p. 98). In the network, one ASC is dominated by others which transmit their formal and functional properties to the ASC (Goldberg, 1995). Figure 2.2 illustrates hierarchical networks of major ASCs (Sung & Yang, 2016, p. 92).

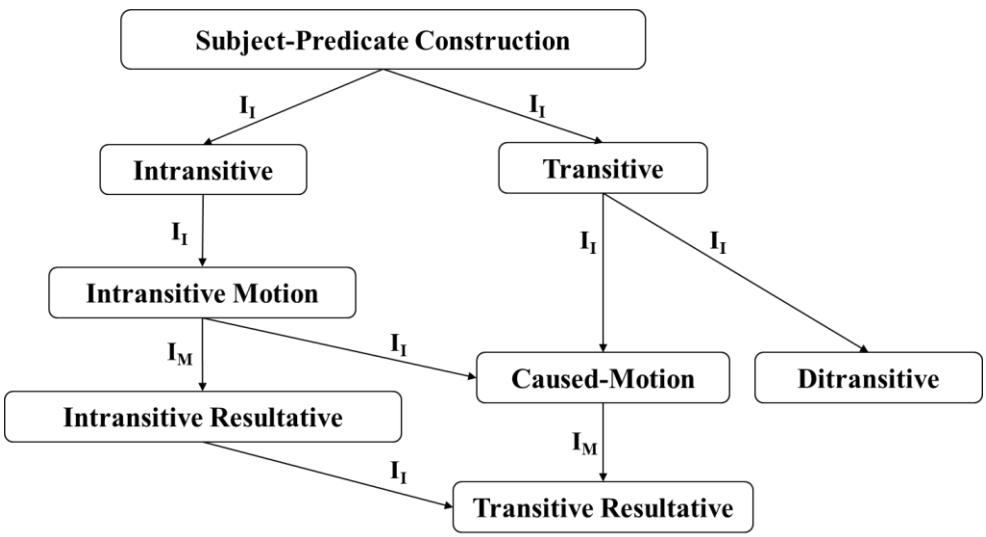


Figure 2.2
Hierarchical Network of Argument Structure Constructions

In Figure 2.2, arrows indicate two types of inheritance links between ASCs: I_I stands for *instance links* and I_M for *metaphorical extension links*[1]. Instance links are posited when "one construction is a more fully specified version of the other construction" (Goldberg, 1995, p. 79). For example, the transitive

[1] According to Goldberg (1995), there are two other types of inheritance links: *polysemy links* and *subpart links*. Polysemy links show how the prototypical meaning of an ASC is associated with extended senses of the ASC (e.g., Joe gave Sally an apple [X causes Y to receive Z]; Joe permitted Sally an apple [X enables Y to receive Z]). These links are not included in Figure 2.2, because they are not about relations between ASCs but about those among semantic variations within a particular ASC (e.g., ditransitive). Also excluded are subpart links, because "an instance link always entails an inverse subpart link" (Goldberg 1995: 81) That is, if Cx A is an instance of Cx B, Cx B is a subpart of Cx A.

resultative construction, as more fully specified, is an instance of the intransitive resultative construction: the former has three argument roles (AGENT, PATIENT, and RESULT-GOAL) and means "X causes Y to become Z", while the latter has two argument roles (THEME and RESULT-GOAL) and means "X becomes Y". The other type of inheritance link, i.e., metaphorical extension link, is posited when "[t]he way the dominating construction's semantics is mapped to the dominated construction's semantics is specified by the metaphor" (Goldberg, 1995, p. 81). For example, the intransitive resultative construction is a metaphorical extension of the intransitive motion construction because the semantics of the latter is mapped to that of the former via a metaphor, namely "Change of State as Change of Location" (Goldberg, 1995, p. 88), as in the following motion and resultative sentences, *he fell in the pit* and *he fell in love*.

2.1.3 ASCs in L1 acquisition

Construction grammar accounts for the learning of ASCs (and other constructions) based on usage-based models, which state that language learners record and analyze individual usage-patterns using general cognitive strategies (Goldberg, 2006; Hoffmann & Trousdale, 2013). According to usage-based models, children's early language use is item-based and yet, as more generalizations are acquired, their usage pattern becomes more rule-based. For example, first sentences produced by young

children are lexically-specific constructions: they rely on a few memorized combinations of verbs and arguments (e.g., *gimme that*). Later, a low scope pattern appears, where argument slots of high-frequency verbs are filled by high-frequency lexical items (e.g., <agent> *put* <theme> <location>: *mommy put it down*). Finally, children consistently associate constructional meanings with surface sentence structures, employing a variety of verbs and arguments, e.g., *He done boots on*. (28 months old: Bates et al., 1988).

This gradual development of ASCs in L1 acquisition is facilitated by meaningful patterns of English sentences that children can easily notice, analyze, and schematize with their cognitive capacities. One such pattern is so-called light verbs such as *give, make,* and *put.* These verbs are called *light* since they are phonologically simple (i.e., one syllable) and semantically generic. The generic meanings of light verbs often correspond to or represent the meanings of ASCs (e.g., *go* for intransitive motion). For example, the meaning of the ditransitive construction is "X causes Y to receive Z", and this meaning is shared by the light verb for the ditransitive construction, i.e., *give.* This type of semantic parallel between light verbs and ASCs makes it easy for children to learn the semantic properties of ASCs (Goldberg, Casenhiser, & Sethuraman, 2004). Moreover, light verbs are very frequent in language input (Ellis & Ferreira-Junior, 2009; Goldberg et al., 2004) and thus learned at earlier stages of language acquisition (Goldberg, 1999). With these cognitive advantages, light verbs play a pathbreaking role in the learning of ASCs (Ninio, 1999; Goldberg, 1999).

Another facilitative pattern for the learning of ASCs is provided by particles such as *up* and *down.* Similar to light verbs, the particles have great developmental advantages. Their simple forms and generic meanings facilitate form-meaning mappings of ASCs. Moreover, particles are prototypical features of English as a satellite-framed language (Choi & Bowerman, 1991), developing in line with core cognitive capacities in non-linguistic domains such as space, movement, and time (Tomasello, 1987). Furthermore, particles are frequently used (Biber et al., 1999), so L1 English-speaking children start to use particles as early as 16 to 18 months. A noteworthy pattern in particle-driven development of ASCs is that children's early use of particles is not restricted to referring to spatial or directional backgrounds of an event. In children's utterances, particles express space-related events, even when a single particle is spoken with no accompanying linguistic components. For example, a child of 17 months said "*down"* to adults who were holding their arms as a request to put her down. In this utterance, the particle *down* expresses the propositional meaning of the caused-motion construction, i.e., X causes Y to move Z. This type of single-word utterance is gradually schematized into ASCs, as follows:

[Stage 1] single-word stage (e.g., *down*)

[Stage 2] nouns before or after particles (e.g., *light on, off TV*)

[Stage 3] matrix verbs used (e.g., *turn the light off*)

Another type of contribution to the learning of ASCs is made by pronouns that fill the argument slots of ASCs (e.g., *He gave her a flower*). In construction grammar, pronouns are independent constructions as form-meaning pairings. The formal patterns of pronouns are linked to a variety of semantic features with one feature being particularly relevant to the learning of ASCs — namely, thematic roles such as AGENT and PATIENT. The nominative forms (e.g., *he* and *she*) are linked to the thematic roles of AGENT and CAUSER, while the accusative forms (e.g., *him* and *her*) are linked to those of PATIENT and THEME.[2] These thematic roles are in good harmony with the constructional roles of arguments that are determined by the semantic frame of ASCs (Hwang, 2013; Laakso & Smith, 2004). For example, the sentence *she kissed him unconscious* is composed by the transitive resultative construction, which assigns the subject *she* the role of CAUSER, and the object *him* the role of PATIENT. Since these constructional roles share the same direction of causality with the thematic roles of the pronouns, speakers' knowledge of the pronouns helps process the construction. Research on the interaction between young children and care-takers also found that L1 English-speaking children are repeatedly exposed to sentences where pronouns are used in argument slots (Chafe, 1994) and start to use pronouns in early stages of language development, e.g., *Mummy do it* and *I want X* (Lieven & Tomasello, 2008).

[2] It should be noted that the role of AGENT can be assigned to non-nominative pronouns such as accusatives (e.g., *John considered him to be a fool*) and possessives (e.g., *there was no objection to my going*).

2.1.4 ASCs in L2 learning and teaching

The significance of ASCs in English-mediated communication has led L2 researchers to conduct a variety of experiments to demonstrate the ontological status of ASCs in L2 grammar. In particular, Ellis and Ferreira-Junior's (2009) seminal study confirmed that fundamental concepts of usage-based generalization, such as type-token frequency, frequent item-based learning and gradual entrenchment, apply to L2 learning of ASCs. The authors investigated ESL learners' chronological development of three ASCs — ditransitive, intransitive motion, and caused-motion — by analyzing a number of interviews that were conducted between ESL learners and native speakers with three-month intervals. A major finding about usage-based generalization was that L2 learning of an ASC is facilitated by its corresponding light verb, i.e., that which is highly frequent in, and semantically coherent with the ASC (e.g., *give* for ditransitive, *go* for intransitive motion, and *put* for caused-motion).

A similar investigation was carried out by Choi (2015), who investigated EFL learners' oral production to examine their knowledge of ASCs. In contrast to the ESL learners in Ellis and Ferreira-Junior (2009), who were learning English in a natural context and through everyday interaction, the participants in Choi (2015) were Korean middle school students whose learning of English was restricted to instructional settings. Choi recorded the students' interaction in group tasks and analyzed ASCs in their utterances.

An interesting finding was that knowledge of ASCs played a critical role in clause-level production; learners who lacked knowledge of ASCs often failed to produce English sentences, relying on fragmented utterances (e.g., *No spelling* instead of *I don't know how to spell it*; *No understanding* instead of *I don't understand it*). It was also found that the simple transitive construction (e.g., *I like it*) was used by many students, but the complex ASCs having two post-verbal components (e.g., *transitive resultative*: Sub-V-Obj-RP) appeared only in the production data by advanced-level students.

The notion that EFL learners also have knowledge of ASCs was further supported by a series of experiments replicating Bencini and Goldberg's (2000) sentence sorting test (e.g., Gries & Wulff, 2005; Kim, Choi, & Yang, 2013). In the sorting test, learners were asked to read 16 sentences combining four ASCs with four lexical verbs and group the sentences into four semantic clusters. The sorting results were examined to determine whether the grouping of the sentences was based on the ASCs or the lexical verbs.

All in all, the sorting tests found that L2 learners use knowledge of ASCs when interpreting English sentences. In addition, it was also found that EFL learners' knowledge of ASCs develops in line with their general English proficiency: high-proficiency learners are more likely to sort the sentences based on the ASCs than low-proficiency learners (Kim et al, 2013). A similar finding was reported in a translation test by Lee and Kim (2011), who provided EFL learners with a translation test which had 40 English

sentences composed by eight ASCs. The authors found that knowledge of ASCs positively correlated with L2 proficiency, identifying certain ASCs — e.g., transitive resultative and caused-motion — that are difficult to master for EFL learners.

The finding that L2 learners of English acquire and use ASCs has resulted in concerted efforts to develop various types of construction-based instruction, which can be categorized into three types according to major characteristics: input-based, rule-based, and task-based instruction.

The input-based instruction of ASCs has been motivated by the finding that native speakers of English learn a novel ASC better when the frequency distribution of verbs is skewed for a single verb to be in the majority of input sentences (Casenhiser & Goldberg, 2005; Goldberg et al., 2004). L2 researchers have examined whether this finding applies to the L2 learning of major ASCs. For example, Year and Gordon (2009) provided two groups of EFL learners with different types of input where five verbs were used in the ditransitive construction (i.e., S-V-Obj_1-Obj_2: X causes Y to receive Z, e.g., *she sent me a card*). One group was provided with a set of 40 ditransitive sentences where the frequency of the prototypical verb (i.e., *give*) was 24, six times higher than that of any other verb, i.e., [24-4-4-4-4]. The other group was presented another set of sentences where the frequency of each verb was the same, i.e., [8-8-8-8-8]. The results were in contrast with those of L1 studies: both the skewed and the balanced input were found to be effective, with no significant gaps observed between the input conditions.

A similar research design was adopted by Hyemin Kim (2012) to identify the best frequency distribution of four verbs — *make, beat, drink,* and *blow* — for the L2 learning of the transitive resultative construction (i.e., S-V-Obj-$RP_{AP/PP}$: X causes Y to become Z, e.g., *she kissed me unconscious*). In addition to the two input conditions in Year and Gordon's (2009) experiment (i.e., skewed [5-1-1-1] and balanced [2-2-2-2]), Kim designed another input condition, namely reversely-skewed input, where a non-prototypical verb *blow,* which seldom appears in the target construction, is used in the majority of the sentences, i.e., [1-1-1-5]. The author found that among the three patterns of verb distribution, the balanced input was the most effective in teaching the transitive resultative construction, which differs from the findings in Goldberg and Casenhiser (2005) or Year and Gordon (2009).

This type of input-based instruction of ASCs has been conducted with L2 learners of different L1s and ages (Lee, 2008; McDonough & Nekrasova-Becker, 2014; Nakamura, 2012; Sung & Lee, 2013), and yet the most effective frequency distribution of verbs appears to vary according to types of ASCs and characteristics of EFL/ESL learners, raising the doubt that the frequency distribution of verbs may not be a major factor in the learning of ASCs. Moreover, the instructional design itself, in which an individual sentence of a particular ASC was presented with a relevant scene, was criticized for being less communicative and far from everyday language use (S. Kim, 2017).

These limitations were addressed in a recent input-based instruction study

by S. Kim (2017). The method of the study was providing Korean EFL high school students with paragraph-level text input of major ASCs with input enhancement, highlighting target sentences in bold to help the learners to notice the ASCs. This input-based approach was found to be effective in teaching particular ASCs that Korean EFL learners have difficulties in learning.

The second type of instruction that has been developed for teaching ASCs is rule-based, explicit instruction. This type of instruction is usually adopted for adult learners of English (e.g., college students) who are cognitively mature enough to understand explicit instruction on the formal and functional properties of ASCs. The focal characteristics of instruction have varied according to the researcher's evaluation of facilitating or intervening factors in the L2 learning of ASCs. For example, crosslinguistic similarities and differences can be explicitly accounted for to teach the form and meaning of an ASC, as in Ruiz de Mendoza and Agustín (2016), in which the authors introduced an interesting explicit instruction of the caused-motion construction for Spanish-speaking learners of English. They suggested that explicit comparison between English caused-motion sentences and their Spanish equivalents can help learners to find formal and functional relationships between the two languages and to understand the crosslinguistic differences as "[representing] different ways of visualizing the same event" (p. 176).

The instructional focus can also be placed on the use of light verbs (e.g.,

make and *give*). In Shin (2012), light verbs were used to teach the meanings of ASCs (e.g., *give* for ditransitive) to Korean EFL learners and thereby reduce their cognitive burdens when producing sentences. A slightly different approach was taken in R. Kim (2012). He used the light verb *get* in teaching multiple ASCs (e.g., *I got him the letter; She got me out of the car*) to draw learners' attention to the meanings of ASCs, rather than to the meanings of verbs. Both types of light-verb-centered instruction were found effective in improving the correct production of the target constructions (R. Kim, 2012; Shin, 2012).

There is another type of explicit instruction, which focuses on the links between ASCs (Rah, 2014). This instructional approach is based on the linguistic finding that ASCs are linked to one another in a hierarchical network, sharing much of their conceptual and formal schemata (Goldberg, 1995; Ruiz de Mendoza & Agustín, 2016). For example, the caused-motion construction passes on its formal and functional features to the transitive resultative constructions via a metaphorical extension link (e.g., *she cut it into the bag; she cut it into many pieces*). Therefore, it is reasonable to assume that the knowledge of the caused-motion construction can facilitate the learning of the transitive resultative construction. This idea was first put into practice in teaching a small set of ASCs such as ditransitive and prepositional dative (Hyunwoo Kim, 2013) or caused-motion and resultative (Ruiz de Mendoza & Agustín, 2016), but recently a comprehensive examination of seven major ASCs in English was conducted by Rah (2014).

In his doctoral dissertation, Rah developed and administered an 8-week long program for Korean EFL college students, in which an ASC was explicitly taught in relation to another one which is syntactically and semantically simpler. For example, the caused-motion construction (e.g., *He kicked the ball into the net*) was taught first, and its formal and functional features were used to explain the transitive resultative construction (e.g., *He kicked me black and blue*). Rah found that those who learned the ASCs in a hierarchical fashion improved their ability to use and interpret ASCs significantly more than those who learned the ASCs in a disconnected way.

The third type of instruction is task-based. A variety of tasks have been developed to teach the forms and meanings of ASCs in an implicit manner. This type of instruction has special advantages when teaching ASCs to young EFL learners, who have difficulties in keeping their focus and interest on explicit grammar instruction, and in understanding complex linguistic principles (Gorp & Bogaert, 2006; Shintani, 2011). For example, the meaning of the transitive resultative construction, *X causes Y to become Z*, was effectively taught using a meaning-centered task in which learners were given a resultative sentence and asked to choose which of two pictures, one showing a change of state experienced by the subject and the other by the object, expressed the correct interpretation of the sentence (Sung & Yang, 2016).

Task-based instruction was also found to be effective in teaching the forms of ASCs. Torres-Martínez (2016) used data-driven tasks in which

learners were exposed to multiple authentic examples of ASCs from large-scale corpora and guided to notice structural patterns. In Holme (2010), a more explicit task was devised: learners were provided with tabulated structures of ASCs and created new sentences using the tables.

The aforementioned types of construction-based instruction (i.e., input-, rule-, and task-based) are not mutually exclusive: a lesson about ASCs can be rule-based as well as task-based if the teacher first explains formal and functional principles of ASCs and later presents tasks that require the learners to apply the principles to language production and comprehension. Therefore, a variety of issues involved in the three types of instruction — e.g., frequent usage patterns, simplified and learner-friendly rules, and meaningful tasks — were comprehensively taken into consideration when developing construction-based instruction for the present study.

2.2 Verb-Particle Constructions

2.2.1 Definition and scope

English VPCs are combinations of verb and adverbial particle (e.g., *break up*). The VPC is one of the most frequent linguistic units in English (Biber et al., 1999), and it is recognized as a representative feature of English as a satellite-framed language (Dagut & Laufer, 1985; Talmy, 1975). The VPC exhibits a variety of intriguing syntactic and semantic properties such as

transitivity (e.g., *wake up; wake him up*), particle placement (e.g., *put the gun down; put down the gun*), and idiomaticity (e.g., *hang out a flag; hang out with friends*). In Greenbaum and Quirk (1997), the VPC and other types of multi-word verb are classified into six types of multi-word verbs and two types of free combinations, as is summarized in Table 2.3.

Table 2.3
Classification of Multi-Word Verbs

N	Classifi-cation	Cate-gory	Type	Structure & Example
1)	Multi-word Verb	Phrasal verb	Intransitive	Verb + Particle *Take off*
2)			Transitive	Verb + Particle + NP (or NP + Particle) *Blow up the building*
3)		Preposi-tional verb	Type 1	Verb + Prep. + NP *Cope with the issue*
4)			Type 2	Verb + NP + Prep. + NP *Remind me of the time*
5)		Preposi-tional phrasal verb	Type 1	Verb + Adverb + Prep. + NP *Look forward to the wedding*
6)			Type 2	Verb + NP + Adverb + Prep. + NP *We put our success down to hard work.*
7)	Free combi-nation	Verb + (pure) Prep. + NP *Fly to the airport*		
8)		Verb + (pure) Adverb + (NP) *Run up (the hill)*		

In this categorization, the combination of a verb and a particle is defined as a multi-word verb only when it has a figurative or idiomatic meaning (e.g., *run up the bill*), while the transparent or literal use of a verb and a particle (e.g., *run up the hill*) belongs to the category of free combinations.

This dichotomous approach has a critical shortcoming, as “it is hard to

make an absolute distinction between free combinations and fixed multi-word verbs; one should rather think of a cline on which some verbs or uses of verbs are relatively free and others relatively fixed" (Biber et al., 1999: 403). Bolinger (1971) also acknowledged the implausibility of making a categorical distinction between literal and figurative VPCs, stating that "literal uses lie at the core, and figurative ones surround them at varying distances" (p. 16).

The present study adopts a broader concept of the multi-word verb, encompassing both literal and figurative VPCs. Following the general approach suggested by Quirk et al. (1985), the present study considers every sequence of a verb and a particle that has the [+ adverbial particle] feature as a VPC, regardless of its semantic transparency[3], as exemplified in (8):

(8) a. *He came in.*

[– direct object], [+ adverbial particle], [– preposition]

b. *They put him up for election.*

[+ direct object], [+ adverbial particle], [+ preposition]

[3] This broad concept includes cases where VPCs are followed by prepositional phrases, as in (8b). Although the present study mainly focused on VPCs not followed by any prepositional phrase, this issue may deserve some discussion. Indeed, there is a claim that VPCs followed by a prepositional phrase should represent a category on their own (Greenbaum & Quirk, 1997); however, it seems more appropriate to include the structure as a variation within the category, in light of the semantic properties of the prepositional phrase following a VPC. The prepositional phrase in this structure mainly serves as an elaboration on the path of the VPC, specifying the source, the medium, or the goal of the motion event, e.g., *fall down into the fireplace below* (Alejo, 2010; Slobin, 1997). Therefore, a VPC followed by a prepositional phrase should be analyzed as a variant form of VPC, not a different category unto itself.

2.2.2 Previous analyses

This section focuses on two previous analyses of VPCs that have been influential in determining instructional practices. One is the lexical analysis, and the other is the particle-centered analysis.

2.2.2.1 Lexical analysis

According to the lexical analysis, each VPC is an individual lexical item and thus its form and meaning are stored in the lexicon (Snyder, 2001). This claim is based on the observation that the meanings of many VPCs are not predictable from its components (i.e., verb and particle), as in (9):

(9) a. She chewed out her son.

b. He ran up the bill.

The meaning of *chew out* in (9a), "to speak angrily to someone because they have done something wrong," is difficult to predict given the verb *chew* and the particle *out*. This issue of semantic non-compositionality also applies to the meaning of *run up*, "to allow a bill, debt, etc. to reach a large total." Therefore, the lexical analysis argues that the forms and meanings of *chew out* and *run up* should be stored in the lexicon, even though all their components (i.e., *chew, out, run, up*) are already in the lexicon.

The lexical analysis has also endeavored to account for formal structures

of VPCs in the lexicon because, unlike most lexical items (e.g., *car, tree*), VPCs are multi-word. In addition, the particle placement of transitive VPCs, as in (10), needs to be discussed with regard to formal structures of VPCs in the lexicon (Johnson, 1991; Ramchand & Peter Svenonius, 2002).

(10) a. She chewed out her son.

b. She chewed her son out.

The lexical approach proposed that VPCs are stored in the lexicon as *complex predicates* (V^0) with the transformational information that the verb and the particle can be separated by syntactic operations (Ramchand & Peter Svenonius, 2002). Therefore, the object *her son* in (10) is predicated by the complex verb *chew out*, as in (11a). This complex predicate analysis assumes that the verb must adjoin to a functional head such as μ (Johnson, 1991) and Comp (Zeller, 2002). The adjoining verb can be the complex predicate *chew out* as in (11b), or only the verb *chew* as in (11c), which leads to the separation of verb and particle.

(11) a. D-structure: $[_{\mu P}\ [_{\mu'}\ [_{\mu}\ ]\ [_{VP}\ [_{V'}\ [_{V}$ *chew out*$]\ [_{NP}$ *her son* $]\ ]\ ]\ ]\ ]$

b. $[_{\mu P}\ [_{\mu'}\ [_{\mu}\ [_{V}$ *chew out*$]_i\ [_{\mu}\ ]\ ]\ [_{VP}\ [_{NP}$ *her son*$]_j\ [_{V'}\ [_{V}\ t_i\ ]\ t_j\ ]\ ]\ ]\ ]$

c. $[_{\mu P}\ [_{\mu'}\ [_{\mu}\ [_{V}$ *chew*$_i\ ]\ [_{\mu}\ ]\ ]\ [_{VP}\ [_{NP}$ *her son*$]_j\ [_{V'}\ [_{V}\ t_i$ out$]\ t_j\ ]\ ]\ ]\ ]$

Traditional instruction of VPCs was based on the lexical approach, as teachers and text books provided a list of VPCs, usually sorted by the verb

or the alphabetical order, that included their definitions and examples (Side, 1990). VPCs were often presented as synonymous to Latinate one-word verbs (e.g., *tell off* = *admonish*) and particle placement was taught as a structural variation without any semantic difference.

2.2.2.2 Particle-centered analysis

Early semantic studies of VPCs argued that particles make little contribution to the meanings of VPCs, as shown in Fraser's (1976, p. 77) statement that "there is no need to associate any semantic feature with the particle, only phonological and syntactic features." The particle was often analyzed as meaningless, especially when it is optional. As the semantic contribution of the particle was analyzed as inconsistent and inexplicable, the meanings of idiomatic VPCs were seen as non-compositional and unpredictable (Gibbs, 1991).

However, it was found that the particle makes semantic differences (Talmy, 2000, p. 262):

(12) a. The police hunted the fugitive for/*in three days (but they didn't catch him).

b. The police hunted the fugitive down *for/in five days (*but they didn't catch him).

The examples in (12) clearly show that the particle *down* has aspectual

meanings such as perfective and fulfillment which assign telicity to the event. In (12a), the verb *hunt* is an activity verb whose action can be described with a duration (i.e., *for three days*), and the usage of *hunt* does not determine the fulfillment of an intended result (i.e., capturing). Therefore, negation of the intended result is possible. In contrast, the VPC *hunt down* in (12b) refers to a telic event of which the intended result is fulfilled; therefore, a negation of the fulfillment is precluded by the addition of *down*.

In Bolinger (1971), this type of subtle semantic contribution by particles was defined as figurative and contrasted with literal meanings of particles. For example, the particle *up* has a literal meaning (i.e., upward movement or direction) in the sentence *he threw the ball up*, while it has a figurative meaning in the sentence *he looked up the word*. Bolinger (1971) further argued that the core literal meaning of a particle serves as a semantic motivation for various figurative meanings of that particle (cf. Boers, 2004).

Although figurative meanings of the particle are less transparent than literal meanings and thus difficult to grasp, there have been meaningful studies identifying representative figurative meanings of particles. One such study was conducted by Side (1990), who identified semantic complexity as a major problem in the L2 learning of VPCs and examined literal and figurative meanings of three frequent particles, *off*, *out*, and *up*. For example, the literal meaning of *out* is "into open, away from, not in or at a place, removal" (p. 148), but it also has some figurative meanings, such as *making*

views public (e.g., speak out) or *above average* (e.g., stands out). These findings allow him to make a rather bold statement (p. 146):

> The point is that in all phrasal verbs the particle carries some meaning. In many, it carries most of the meaning.

A more comprehensive semantic analysis of VPCs is presented in Celce-Murcia and Larsen-Freeman's (1999) *The Grammar Book*, where VPCs are categorized according to semantic contributions of particles (p. 432):

e.g., Literal VPCs: *sit down, stand up*

Aspectual VPCs:

- Inceptive (to sign a beginning state): *John took off.*
- Continuative (to show that the action continues): *Her speech ran on and on.*
- Iterative (to show repetition): *He did it over and over again until he got it right.*
- Completive (to show that the action is complete): *He drank the milk up.*

Idiomatic VPCs: *run up the bill.*

The observation that particles have a variety of semantic features and make significant contributions to the meanings of VPCs appears to indicate that, in certain VPCs, the particle functions autonomously (or independently) in some respects:

(13) a. They marched off the hangover.

b. They marched the hangover off.

In (13a), the relationship of the noun phrase *the hangover* to the verb *march* is not that of direct object; instead, the two post-verbal components *the hangover* and *off* seem to constitute a predicational structure, i.e., a small clause (Dikken, 1995). This small clause analysis assumes that the object is base-generated as the complement of the particle, but moved to the specifier position of the small clause to be case-marked by the verb:

(14) Base Order: [*march* [$_{SC}$ [*off* [*the hangover*]]]]

Shifted Order: [*march* [$_{SC}$ [*the hangover*]$_i$ [*off* t$_i$]]]

The particle-centered analysis of VPCs led researchers to develop new types of instruction that focused on the literal and figurative meanings of particles (Jang, 2014; White, 2012; Yasuda, 2010). Specific examples of particle-centered instruction will be provided in Section 2.2.5.

2.2.3 Constructionist analysis

Construction grammar contends that pairings of form and meaning, i.e., constructions, are basic units of human language. Accordingly, constructionists have endeavored to provide a comprehensive account of

both forms and meanings of VPCs. In particular, special interest has been placed on the most controversial issue, namely particle placement (e.g., *pick up the book* vs. *pick the book up*). As a mono-stratal and non-derivational framework, construction grammar has associated the different structures with different meanings and functions.

Gries (2003) examined whether the particle placement of 403 transitive VPCs in the British National Corpus (hereafter, BNC) is accurately predicted by a number of variables that had been thought to be influential in previous studies. These variables included phonological (e.g., stress of verb), morphosyntactic (e.g., NP type), semantic (e.g., the animacy of objects), discourse-functional (e. g., last mention of the referent), and miscellaneous factors (e.g., disfluency markers). For example, if an object is a pronoun, there is a strong tendency for the object to precede the particle (e.g., *turn it off*). Employing a series of multifactorial analyses, Gries was able to identify reliable predictors of particle placement (e.g., morphosyntactic variables) and argue that the two constructions (i.e., V Prt OBJ; V OBJ Prt) are associated with different functional motivations and thus do not constitute a unitary category of VPC.

A similar finding was made in another corpus-based study of VPCs by Gilquin (2015). She conducted distinctive collexeme analyses on the use of VPCs in native-speaker and learner corpora of English to determine whether certain functional properties are associated with the two structural patterns of the transitive VPC. The results revealed that there is “a strong association

between [V OBJ Prt] and concrete movement on the one hand, and between [V Prt OBJ] and idiomaticity on the other" (p. 81). Although these corpus-based studies set forth the meaningful finding that the two transitive constructions have ontologically independent features, the studies did not present a definite association between a surface structure and a propositional meaning, such as in Goldberg (1995), e.g., NP_X V NP_Y NP_Z; X causes Y to receive Z.

One such association was made by Gorlach (2004) from a sign-oriented perspective. In this approach, the basic unit of *langue* (i.e., an abstract language system) is the linguistic sign, consisting of a perceivable signal (i.e., *signifiant*) combined with a concept (i.e., *signifé*). This idea seems to correspond to the definition of constructions as form-meaning pairings. This one-form-to-one-meaning relationship in the sign-oriented theory postulates the principle of non-synonymy: "a change of signal (form) should bring about some change in concept (meaning), and vice versa" (Gorlarch, 2004, p. 40). Even when two different structures seem to share most of their formal and functional properties, a distinction is made by identifying (subtle) semantic changes between the two.

Accordingly, the two transitive structures of VPCs were analyzed as two different linguistic signs; in terms of resultative meanings, the discontinuous one (i.e., V OBJ Prt) has more concrete sense than the continuous one (i.e., V Prt OBJ). For example, the continuous construction (15a) indicates a possibility for result, while the discontinuous construction (15b), as a more

marked one, expresses a resultative event:

(15) a. *to eat up the apple* greater possibility for result
b. *to eat the apple up* compulsory claim for result
(Adapted from Gorlach, 2004, p. 40)

Noting that this word order change from continuous to discontinuous enhances the implied possibility of result, Golarch (2004) further argues that the latter construction (i.e., V OBJ Prt) should be treated as a subcategory of resultative constructions. Since she defined the notion of *result* as a broad concept including spatial (destination, boundary, limit), temporal (completion, terminus, endpoint), and existential factors (consequence, telic point, goal, outcome), the resultative construction she referred to seems to indicate multiple ASCs in construction grammar, such as motion and resultative constructions.

A more evident attempt to analyze VPCs in terms of ASCs was made by Goldberg (2015). She proposed that the transitive VPC inherits many formal and functional properties form the caused-motion construction:

Caused-Motion Construction	Transitive VPC
Form: V {NP, PP}	Form: V {NP, Prt}
Function: cause-move (causee, path)	Function: cause-move (causee, path)
e.g., *She sneezed the foam off the cappuccino.*	e.g., *She sneezed the foam away*.

This proposal is based on meaningful linguistic observations. First, every particle has a locative sense and thus is comparable to prepositional phrases. Second, many verbs that select prepositional phrases to express a location or path can collocate with particles. Third, research in L1 acquisition (Diessel & Tomasello, 2005) and diachronic linguistics (Thim, 2012) revealed that the default structure of the transitive VPC is [V OBJ Prt], which shows structural similarity with the caused-motion construction, while the other structure, [V Prt OBJ], is produced when general constraints of verb phrases (e.g., end-weight principle: *she picked up* <u>*the most precious ring*</u>) override the default word order (see Figure 2.3, adapted from Goldberg, 2015, p. 17).

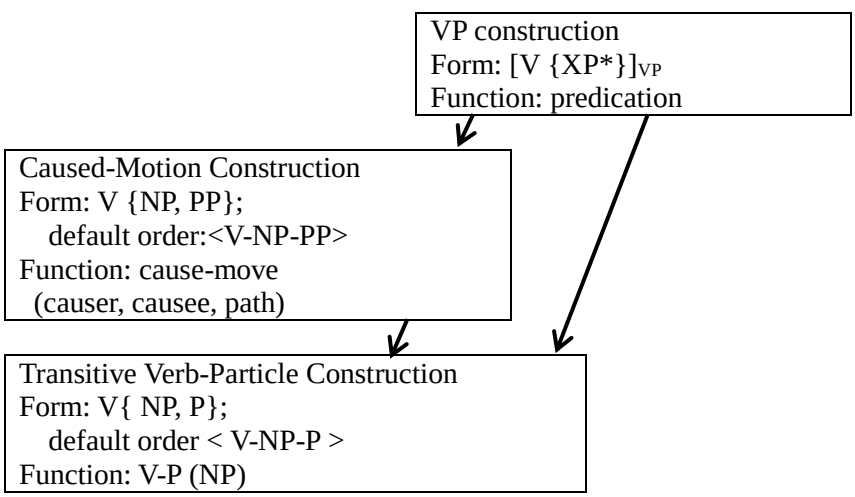


Figure 2.3
Relationship Among Transitive VPC and its Dominating Constructions

Goldberg further comments, with regard to figurative VPCs, that "their meanings are metaphorical extensions of the locative meanings. These non-locative verb-particle combinations, then, only inherit indirectly from the caused-motion construction" (Goldberg, 2015, p. 128). It is noteworthy that metaphorical extension is also posited between the caused-motion and the

resultative construction. That is, it is analogous to assume another inheritance link between metaphorical extensions of the transitive literal VPC (i.e., transitive figurative VPC) and those of the caused-motion (i.e., transitive resultative construction), as illustrated in Figure 2.4.

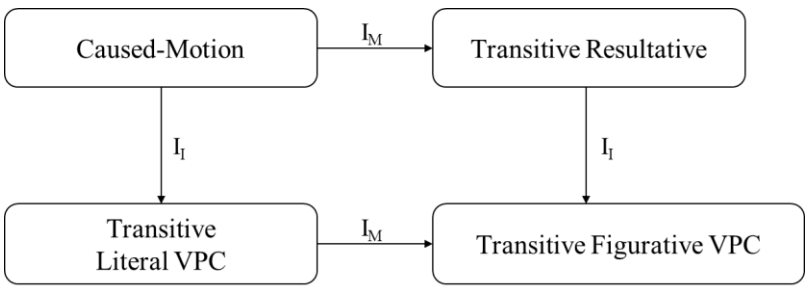


Figure 2.4
Inheritance Links Among Transitive ASCs and VPCs

Recall that the inheritance link between the caused-motion construction and the transitive literal VPC was supported by the understanding that particles such as *up* and *down* share many formal and functional features with prepositional phrases (Goldberg, 2015). When this commonality is applied to the intransitive motion construction and intransitive literal VPCs, it is possible to propose another inheritance link between the two constructions:

Intransitive Motion Construction			Intransitive Literal VPC		
Form:	V	PP	Form:	V	Prt
Function:	manner-move	path	Function:	manner-move	path
e.g., *The kids jumped into the pool*.			e.g., *The kids jumped in*.		

According to Lakoff and Johnson (1980), intransitive figurative VPCs are metaphorical extensions of literal ones:

Intransitive literal VPC	*jump up*
Intransitive figurative VPC	*I am feeling up*
Metaphorical extension	*moving to a higher position*
	→ *becoming better*

Then, another group of inheritance links can be analogously drawn between intransitive ASCs and intransitive VPCs (see Figure 2.5).

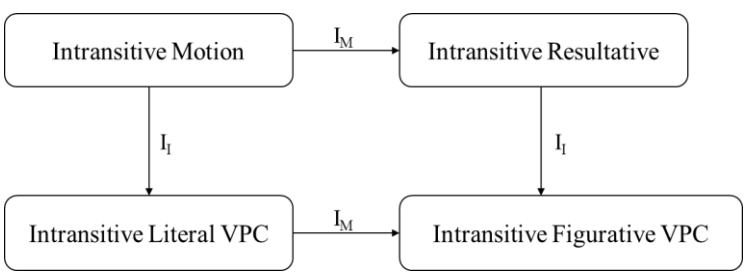


Figure 2.5
Inheritance Links Among Intransitive ASCs and VPCs

These multiple inheritance links between ASCs and VPCs may account for many formal and functional varieties of VPCs in a comprehensive fashion, providing meaningful implications for English language learning: the knowledge of ASCs is systematically associated with that of VPCs (see Table 2.4).

Table 2.4
Constructionist Classification of VPCs

Canonical ASCs	Form (Meaning)	VPCs
Intransitive Motion	Sub V $Obl_{path/loc}$	Intransitive Literal VPC
Jack jumped into the room.	(X moves $Y_{path/loc}$)	*Jack jumped in.*
Intransitive Resultative	Sub V RP	Intransitive Aspectual VPC
Chris came awake.	(X becomes Y_{state})	*Chris woke up.*
Caused-Motion	Sub V Obj $Obl_{path/loc}$	Transitive Literal VPC
Juliet put her tongue on ice.	(X causes Y to move $Z_{path/loc}$)	*Juliet put her tongue out.*
Transitive Resultative	Sub V Obj RP	Transitive Aspectual VPC
Lee knocked him unconscious.	(X causes Y to become Z_{state})	*Lee knocked him out.*

In addition, the inheritance networks among the ASCs in Goldberg (1995, 2006) may apply to the analysis of VPCs. For example, the intransitive resultative construction dominates the transitive resultative construction via instance links (I_I); the event expressed by the transitive resultative construction is an instance of that expressed by the intransitive one. The same inheritance link is observed between intransitive and transitive figurative VPCs.

Intransitive Resultative: *He fell unconscious.*

Transitive Resultatives: *She kissed him unconscious*
A classmate beat him unconscious.

Intransitive Figurative VPC: *He woke up.*

Transitive Figurative VPCs: *The nightmare woke him up.*
His teacher woke him up.

Consequently, formal and functional varieties of VPCs can be captured in a hierarchical network, which seems to parallel the hierarchical network of

motion and resultative constructions (see Figure 2.6).

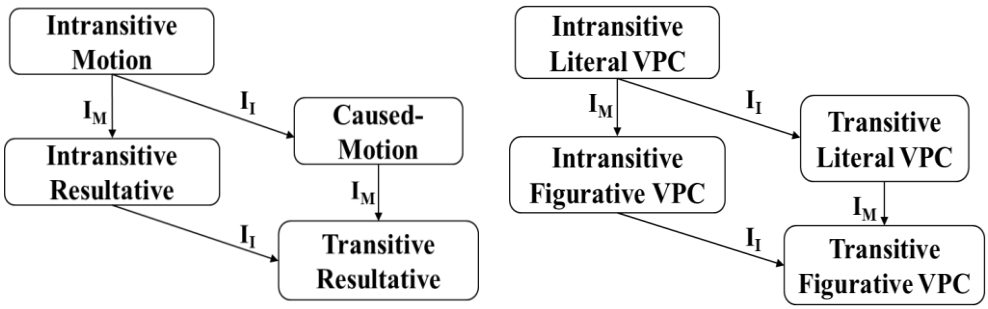


Figure 2.6
Hierarchical Networks of ASCs and VPCs

2.2.4 VPCs in L1 acquisition and use

First-language acquisition of the VPC has been investigated under the framework of prepositional phrases (Grimm, 1975; Johnston & Slobin, 1979). Johnston and Slobin (1979) found that the acquisition of prepositions and particles is affected by the relative *cognitive* complexity of locative concepts. In early stages of first language acquisition, prepositions or particles with low cognitive complexity such as *in* and *on* are learned. Prepositions or particles of higher complexity such as *between* and *back* are learned later. Grimm (1975) also noted the significance of cognitive complexity for the acquisition of particles, reporting that concrete uses of particles (i.e., spatial concepts) emerge first and gradually expand to include abstract uses (i.e., temporal or grammatical concepts). In addition, Tomasello (1987) found that early acquisition of particles is greatly aided by the cognitive concept of spatial opposition (e.g., *up* vs. *down* or *in* vs. *out*).

Johnston and Slobin (1979), however, also noted that some variations in acquisition sequence may be ascribed to *linguistic* factors such as morphological complexity and homonymy (i.e., multiple meanings). Tomasello's (1987) study lends credence to these findings. Investigating a dense corpus of his daughter's utterances, Tomasello also concluded that some prepositions and particles may be acquired later than others due to such linguistic factors as homonymy and synonymy (i.e., two words expressing the same concept). He also revealed that first-language acquisition of particles and prepositions shows interesting structural development:

- Holophrase: Particles are used alone, often bound to certain collocates (e.g., *Down; Up-here*)
- Combination: Particles come after nouns (e.g., *Towel down, Nail out*)
- Prepositional: A full prepositional phrase follows a noun (e.g., *Bug on monkey-bars*)

It is noteworthy that children's use of particles at the first developmental stage (i.e., holophrase) is verb-like; utterances of single particles are not restricted to the indication of location or path but used to request an action of a listener (e.g. *up*; *lift me up*) or comment on an activity (e.g., *down*; *I put the towel down*). This early usage shows that particles play a pivotal role in

learning to express movement- or location-related events in English. From a typological perspective (Choi & Bowmann, 1991), this path-breaking role of particles can be accounted for by the fact that English is a satellite-framed language, i.e., that it expresses locative and directional meanings in satellites such as prepositions (e.g., *down the stairs*) or particles (e.g., *away*). Accordingly, particle-related structures, especially VPCs, are central to English language acquisition.

This statement is supported by empirical evidence that VPCs are very frequent in conversation between English-speaking children and their caregivers (Slobin, Bowerman, Brown, Eissenbeiss, & Narasimhan, 2011). This usage pattern is in sharp contrast with the patterns found in conversations between children speaking verb-framed languages and their caregivers. For example, in one study, Korean-speaking children produced locative and directional expressions less frequently than English-speaking children. Instead, they learned and used a greater number of verbs (Kim, McGregor, & Tompson, 2000).

Being a key structure in English, VPCs are very frequently used by English-speaking adults. In the *Longman Grammar of Spoken and Written English*, Biber et al. (1999) quantitatively analyzed a 40-million-word corpus of four different registers (i.e., conversation, fiction, news, and academic prose) and found that the VPC is pervasive and frequent in all registers, especially in conversation. This frequency issue was further explored in Gardner and Davies' (2007) investigation of the BNC. One of

their significant findings was the high productivity of the lexemes used in VPCs; twenty verbs and eight particles account for approximately a half of all VPC tokens in the BNC.

A similar observation was made in Liu's (2011) multi-corpora examination, which compared the use of VPCs in the BNC with that in the Corpus of Contemporary American English (COCA). Liu provided quantitative evidence for the claim made by Gardner and Davies (2007) that certain verbs and particles are very productive both in terms of type frequencies (i.e., creating VPCs) and token frequencies (i.e., frequently occurring), but she also noted that some "less productive verbs show some concentrated use" (Liu, 2011, p. 669). For example, the verb *hang* was not listed as a frequent verb by Gardner and Davies (2007), but it constitutes three VPCs (*hang up*, *hang on*, and *hang out*) that are listed among the 150 most frequent VPCs in COCA. In addition, Liu found that some VPCs have "prominent use in one of the two English varieties" (p. 671). For example, *sort out* is much more frequent in British English (BNC rank = 37; COCA rank = 136), while *figure out* is vice versa (BNC rank = 147; COCA rank = 21).

2.2.5 VPCs in L2 learning and teaching

VPCs are known to be notoriously difficult for L2 learners to acquire and use. Even advanced learners of English have difficulties in achieving native-

like production of VPCs (Siyanova & Schmitt, 2007). In general, VPCs are underused by L2 learners, especially by those whose L1 does not have a VPC equivalent (Houshyar & Talebinezhad, 2012; Laufer & Eliasson, 1993; Liao & Fukuya, 2004). For example, Laufer and Elliason (1993) compared L1 Hebrew-speaking learners' use of English VPCs to that of L1 Swedish-speaking learners. The authors found that the Hebrew learners, whose L1 does not have a VPC equivalent, underused VPCs significantly more than the Swedish learners, whose L1 does have a VPC equivalent. A similar finding was made by Waibel (2007, p. 162), who further argued that "language distance, i.e. structural differences between the native and the target language, impedes the successful learning of [VPCs]." Such cross-linguistic analyses may be relevant in accounting for Korean EFL learners' significant underuse of VPCs because their mother tongue, i.e., Korean, is a verb-framed language and thus lacks particles, let alone VPCs.

In addition to the overall underuse of VPCs, L2 learners of English make unnatural patterns such as particle omission, e.g., *they picked *(up) the menu* (Ahn, 2013), illegitimate collocations, e.g., *he's *putting/lifting up his legs* (Lennon, 1996), and violation of particle placement rules, e.g., ?*turn on it* (Celce-Murcia & Larsen-Freeman, 1999). These persistent difficulties have been ascribed not only to crosslinguistic influence (Dagut & Laufer, 1985) and inefficient instruction (Yasuda, 2010), but also to idiosyncratic features of VPCs such as confusion between prepositional and phrasal verbs (Side, 1990), synonymous one-word verbs (Waibel, 2007), semantic

opaqueness (Lennon, 1996), and register- or context-appropriateness (Kovács, 2014).

Of these different sources of difficulties in learning VPCs, much focus has been placed on the meaning construal of VPCs, i.e., literal, aspectual, figurative, and idiomatic senses. For instance, Side (1990) proposed a new pedagogical approach that acknowledges the semantic categories of the particle. This approach assumes that figurative or idiomatic meanings of VPCs are metaphorically and compositionally motivated and thus teachable. One of the examples in his study is that the meaning of the VPC *sell up* (=sell everything) is partly ascribed to a figurative meaning of the particle *up,* namely "completion of act" (Side, 1990, p. 150).

This particle-centered approach to VPCs has been applied to instruction studies (Jang, 2014; White, 2012; Yasuda, 2010). For example, Yasuda (2010) instructed Japanese university EFL learners on the metaphorical meanings of particles, such as "UP is completion," and found that increasing awareness of these metaphorical meanings greatly aided the learning of VPCs. A similar finding was reported in a study with L1 Korean-speaking high school English learners (Jang, 2014). They were divided into two groups: a particle-focused group and a memorization-based group. The former group was taught how literal and aspectual meanings of particles *up, down, out, on, off,* and *back* contribute to the meanings of VPCs, while the latter group memorized the meanings of VPCs. Results of the pre- and the posttest revealed that the particle-focused group achieved greater

improvements both in production and comprehension of VPCs than the memorization-based group.

Although these particle-centered approaches to the teaching of VPCs have had desirable outcomes, most instructional studies focused on a few senses of particles and only a small number of lessons were administrated. Therefore, it is difficult to generalize the findings to the comprehensive system of VPCs. In addition, these approaches have had limited success in teaching structural features of VPCs such as transitivity and particle placement, which are considered another source of difficulty for L2 learning of VPCs.

Another interesting suggestion for teaching VPCs is a data-driven approach using concordance lines to teach their structural and semantic characteristics (Ko, 2005; Mishand, 2004). For example, the teacher operates a concordance program such as *AntConc* to generate authentic examples for VPCs using the same verb (e.g., *get on*, *get off*, and *get by*) and asks learners to investigate the concordances and use them to generalize formal and functional patterns of the VPCs. This data-driven approach seems potentially effective in that both forms and meanings of VPCs can, in theory, be learned. However, it may be time-consuming and cognitively challenging for L2 learners to generalize syntactic and semantic patterns from instances of VPCs. Moreover, their generalizations are often incorrect and thus misleading.

Noting that previous attempts to teach forms and meanings of VPCs have

the abovementioned shortcomings, the present study aims to develop a more systematic VPC instruction within the framework of construction grammar. The instruction is based on the constructionist idea that VPCs are form-meaning pairings (i.e., constructions; cf. Chapter 2.2.3) and inherit many significant linguistic features from core ASCs (Goldberg, 2015).

This construction-based instruction intends to pay systematic attention to the forms and meanings of VPCs, which have previously been considered idiosyncratic features of individual lexical items. This novel approach is expected to be more effective than both the particle-centered and lexical approaches in (a) teaching Korean English learners figurative VPCs, which have been observed to be particularly difficult for L2 learners, (b) helping them to acquire unfamiliar VPCs, to which the learners have few chances to be exposed, and (c) improving their knowledge of core ASCs, with which VPCs are associated in various constructional ways.

CHAPTER 3. METHODS

3.1 Pilot Studies

Materials for instruction and testing, as well as overall experimental procedures, were examined through three pilot studies. In the first pilot study, conducted on November 30, 2015, 22 students from a middle school — 15 from the eighth grade and seven from the ninth grade — took a translation test. They were asked to write Korean meanings for 24 English sentences containing different VPCs. When they had trouble translating, they were asked to report specific areas of difficulty, as shown in (1).

(1) English Sentence: *I'm always so sleepy in classes, so I can't take in very much.*

- Korean Meaning: _____
- What makes translation difficult? _____

The results showed that the translation test would be inappropriate when assessing knowledge of VPCs, since some aspectual meanings of particles or VPCs were not overtly expressed in the Korean translation. Therefore, it was often uncertain whether the learners understood the meanings of VPCs or simply relied on the meanings of verbs:

(2) English Sentence: *She locked up the store and went home*

Translation:	kunye-nun	kakey-lul	camku-ko	cip-ey	ka-ss-ta
	she-NOM	shop-ACC	lock-and	home	go-PST-DC

The second pilot test was conducted with twelve students from a ninth-grade class on September 7, 2016. They took a scene description test in which they were asked to watch 24 video clips and fill in the blanks in 24 sentences based on the content of the clips. Each of the first 12 items had two blanks for verbs and particles (e.g., *Mr. Dracula was angry when his favorite drink* _____ _____), while each of the remaining 12 items had one blank for verbs and three options for particles (e.g. *the man saw the brown book in the box and* _____ *it* [*out, on, in*]). The results showed that the first test formation would be more appropriate for evaluating L2 knowledge of VPCs, because it drew more varied (many times, incorrect) responses from the learners, e.g., *Mr. Dracula was angry when his favorite drink* _*put on* _. At the same time, however, it was found that interpretation of certain video clips varied among the learners because they paid attention to different aspects of them. Those items that impeded the consistency of interpretation were modified by substituting them with those delivering clearer messages, or by inserting speech bubbles to direct learners' attention toward the intended meanings.

The last pilot test was conducted to examine all the teaching and testing materials, as well as the overall procedure. The participants were 44

students from two seventh-grade classes. They were divided into two groups according to their intact classes. One group was provided with construction-based instruction of VPCs, while the other was provided with particle-centered instruction. The participants also took four types of test, two for VPCs and the other two for ASCs. The results confirmed that the teaching and testing materials were appropriate for seventh graders, but it was also observed that the students were less capable of paying consistent attention, both to the instruction and to the test; therefore, administrating more than one instruction unit or two types of test per class hour was precluded. Since there were twelve units for each type of instruction and three tests (i.e., pre-, post-, and delayed posttest) assessing four tasks in the main study, it was determined that 18 class hours would be needed — 12 for instruction and six for testing (i.e., two classes for four tasks of one test session).

3.2 Participants

A total of 75 students from three seventh-grade classes in a girls' middle school participated in the main study in the spring semester of 2017. Their English language learning at public school started when they were in the third grade, but a majority of them (n=54, 72%) started to learn English earlier through private education. Five of them had lived in English-speaking countries with mean length of stay of about three years, but the pretest revealed that they also had limited knowledge of VPCs and ASCs for

they made similar errors with those who had not lived abroad.

The participants were divided into three groups according to what type of instruction they would be given: a construction-based instruction group (CG), a particle-centered instruction group (PG), and a lexical instruction group (LG). Every group was provided with 12 lessons on VPCs.

Participants' knowledge of VPCs and ASCs before the instructional treatment was measured by the pretest of four tasks. Students who missed or did not respond to the test were excluded from the analysis. The results indicated that the three groups were homogeneous in terms of their knowledge of VPCs and ASCs, as Kruskal-Wallis H tests found no significant difference between the three groups in any of the four tasks.

The selection of this particular learner population (i.e., Korean seventh-grade students) was planned to address a serious gap in the instructional research of VPCs. The majority of the participants in previous studies were university students (e.g., White, 2012; Yasuda, 2010), with little attention paid to younger learners, so it is still uncertain how effectively younger L2 learners can learn VPCs in instructional settings. This research gap seems particularly problematic, given the finding that VPCs are learned and used early in first language acquisition (Goldberg, 1999). Therefore, this dissertation takes younger L2 learners as its participants, to identify how effectively VPCs can be taught to these younger L2 learners and which type of instruction is more effective to them.

3.3 Target Constructions

A variety of VPCs containing six particles (*up, down, in, out, on,* and *off*) were selected for the instruction and test. According to Gardner and Davies (2007), these six particles are among the most frequent eight particles in VPCs, with the other two being *back* and *over.* The six particles are also considered the most productive since they form many frequent VPCs (Biber et al., 1999). Moreover, the six particles are grouped into three pairs of opposite meaning (i.e., *up-down, on-off,* and *in-out*), and these semantic contrasts have been found to facilitate the learning of particles or VPCs (Condon, 2008; Tomasello, 1987).

The selection of individual VPCs was based on the following three characteristics of VPCs: First, both literal and figurative VPCs were included. Second, the polysemy of particles was addressed by matching each particle with one literal meaning and two representative figurative meanings (e.g., *up*=INCREASE and COMPLETION). Third, both intransitive and transitive VPCs were selected. Table 3.1 shows the list of VPCs selected using these criteria.

When selecting VPCs, the researcher prioritized frequently-used VPCs, based on the usage information in the *Longman Phrasal Verbs Dictionary* (2000). However, it was often very difficult to find high-frequency VPCs for certain combinations of semantic and syntactic features. Therefore, it was inevitably necessary to include some less frequent VPCs, such as *trigger off*.

Table 3.1
Semantic and Syntactic Characteristics of Instructed VPCs

Particle	Meaning	Intransitive VPCs	Transitive VPCs
up	To a higher place	*come up, go up, stand up*	*pick up, put up, turn up*
	Increase	*get up, grow up, wake up*	*bring up, step up, turn up*
	Completion	*give up, shut up, break up*	*make up, set up, shut up*
down	To a lower place	*come down, sit down, fall down*	*put down, set down, take down*
	Decrease	*calm down, slim down, slow down*	*cut down, bring down, turn down*
	Stop/Termination	*close down, break down, shut down*	*close down, shut down, turn down*
in	To inside	*come in, get in, move in*	*fill in, bring in, plug in*
	physical entity	*get in, breathe in, check in*	*take in, rub in, pull in*
	abstract entity	*give in, sink in, fill in*	*bring in, put in, take in*
out	To outside	*come out, get out, pull out*	*take out, throw out, lock out*
	Accessible	*break out, stand out, leak out*	*figure out, hold out, lay out*
	Displacement	*go out, sit out, drop out*	*put out, turn out, cross out*
on	Surface support	*get on, step on*	*get on, put on, sip on*
	Active/Engage	*come on, get on, log on*	*put on, take on, turn on*
	Continue	*carry on, go on, move on*	*carry on, keep on, pass on*
off	Detached	*break off, get off, take off*	*break off, cut off, take off*
	Stop (inactive)	*go off, break off, leave off*	*put off, take off, turn off*
	Start (active)	*go off, set off, drive off*	*set off, trigger off, start off*

In Table 3.1, each VPC can be categorized by its particle and the abovementioned three characteristics. For example, the VPC *grow up* in the second line can be analyzed as [up]-[figurative; increase; transitive]. This information was useful for the systematic development of instruction.

The construction-based instruction arranged the VPCs into the system of ASCs based on the understanding that literal VPCs are analyzable as motion constructions, and figurative VPCs as resultative constructions. In addition to the semantic classification, the structural distinction between transitive and intransitive helped the researcher to further categorize the VPCs into four ASCs (see Table 3.2). For example, intransitive literal VPCs were categorized as the intransitive motion construction.

Table 3.2
ASC-based Categorization of VPCs

	Intransitive	Transitive
Literal	Intransitive Motion e.g., *The boy stood up.*	Caused-Motion e.g., *She put the gun down.*
Figurative	Intransitive Resultative e.g., *The car slowed down.*	Transitive Resultative e.g., *Her mom woke her up.*

3.4 Procedure

The experiment was conducted for 10 weeks, from March to June of 2017. In the first week, the students took a pretest of four tasks. From the second to the fifth week, every group received a total of twelve lessons on VPCs, with each lesson taking up approximately 20 minutes of a regular 45-minute class.

In the sixth week, all the students took an immediate posttest of the four tasks, and the delayed posttest was administered in the tenth week, with a four-week interval from the immediate posttest (cf. Rah, 2014). The overall procedure is illustrated in Table 3.3.

Table 3.3
Procedures of Instruction and Testing

Week	Construction Group	Particle Group	Lexical Group
1	Pretest (four tasks)		
2–5	Construction-based instruction	Particle-centered instruction	Lexical instruction
6	Immediate posttest (four tasks)		
7–9	Interval		
10	Delayed posttest (four tasks)		

3.5 Instruction

Three types of instruction (i.e., construction-based, particle-centered, and lexical) were developed according to three different understandings of VPCs. The underlying notion of construction-based instruction was that VPCs inherit their formal and functional properties from major English argument structure constructions (ASCs) and thus determine overall form and meaning of sentences. In contrast, particle-centered instruction was based on the metaphorical analysis that the non-literal and less transparent meanings of VPCs are attributable to figurative meanings of particles. Finally, lexical instruction treated each VPCs as an individual lexical item whose form and meaning are stored in the lexicon.

3.5.1 Construction-based instruction

The construction-based instruction presented VPCs as instances of four ASCs, namely the intransitive motion, the caused-motion, the intransitive resultative, and the transitive resultative (see Table 3.2). For example, when teaching the VPC *turn on*, the construction-based instruction illustrated that a sentence composed of *turn on* (e.g., *the boy turned the radio on*) has the overall form and meaning of the transitive resultative construction (i.e., Sub-Verb-Obj-RP; X causes Y to become Z):

Sentence:	*The boy*	*turned*	*the radio*	*on.*
Form:	Subject	Verb	Obj	RP
Meaning:	*They boy caused the radio to work by turning it.*			

Therefore, the twelve units of the construction-based instruction were organized according to hierarchical networks of ASCs (Goldberg, 1995; Rah, 2014). The first lesson introduced VPCs as target linguistic units and showed that VPCs can express four different event types: a) X moves Z, b) X causes Y to move Z, c) X becomes Y, and d) X caused Y to become Z. These event types are the construction meanings of the four reference ASCs. It was also taught that each meaning is paired with a different sentence structure.

After the introductory unit outlining the constructionist framework of VPCs, the second and third units focused on VPCs corresponding to the intransitive motion ASC, which has the simplest form and meaning (i.e., Sub-Verb-Obl; X moves Y) among the four reference ASCs. Then, a structural extension (i.e., from [Sub-Verb-Obl] to [Sub-Verb-*Obj*-Obl]) was made in the next three units by moving on to VPCs corresponding to the caused-motion ASC. Finally, a semantic extension (i.e., from change of location to change of state) was made by teaching VPCs corresponding to the (in)transitive resultative ASCs in the last six units (see Table 3.4).

Table 3.4
Organization of Construction-Based Instruction

Unit	Contents	Unit	Contents
1	Introduction of VPCs	7	Resultatives: Overview
2	Intransitive Motion: Part 1	8	Resultatives: Increase/Decrease
3	Intransitive Motion: Part 2	9	Resultatives: Completion/Termination
4	Caused Motion: Part 1	10	Resultatives: Appear/Disappear
5	Caused Motion: Part 2	11	Resultatives: Work/Stop/Continue/Depart
6	Caused Motion: Part 3	12	Resultatives: particle *in*

Each unit presented six to eight types of construction-based activities for target VPCs. For example, the first learning activity in Unit 2 is presented in Figure 3.1. This activity was intended to help the learners to conceptualize two types of motion-related events in English. The pictures in Figure 3.1 describe three VPCs that have the particle *out* — *fly out*, *kick out*, and *come out* — and each corresponds either to the intransitive motion or the caused-motion construction. The learners in CG were asked to identify the event type in each picture with one of two semantic markers ("X→Z" and "X: Y→Z") that indicate the intransitive motion and the caused-motion construction, respectively, in a symbolic fashion.

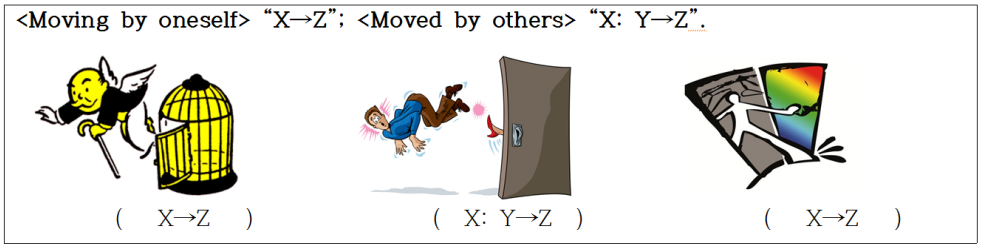


Figure 3.1
Construction-Based Activity: Marking Events with Semantic Symbols

While the activity in Figure 3.1 focuses only on the constructional

meanings of VPCs, the activity in Figure 3.2 links constructional forms and meanings. The first and second sentences in Figure 3.2 correspond to the intransitive and the transitive resultative construction, respectively. The learners were provided with two form-meaning pairing templates, each representing either the intransitive or the transitive resultative construction, and various pictures illustrating VPC sentences. The learners were then asked to describe the pictures using one of the templates. This involves two constructional processes: a) identifying the constructional meanings of the pictures and b) mapping the constructional meanings onto the constructional forms.

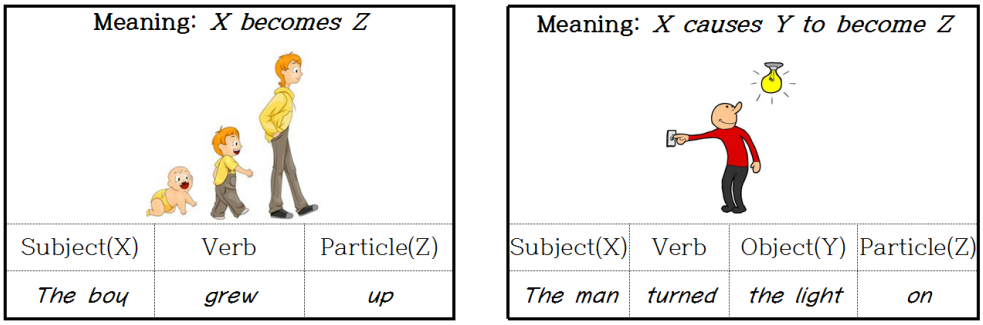


Figure 3.2
Construction-Based Activity:
Writing Sentences in Form-Meaning Pairing Templates

It may be worth noting that the construction-based instruction was given to teach VPCs, with no instruction provided for non-VPC instances. Although both VPC sentences (e.g., *the robber put the gun down*) and non-VPC sentences (e.g., *the robber put the gun on the floor*) can instantiate the same ASC (i.e., caused-motion), the learners in CG were not taught the

constructional relationship between VPC-sentences and non-VPC sentences explicitly.

In addition, constructional forms and meanings were presented without any specific mention of ASCs. The learners were not taught any ASC terms such as intransitive motion and transitive resultative. Instead, they were taught that forms and meanings of VPCs can be accounted for by four event types.

3.5.2 Particle-centered instruction

The particle-centered instruction is based on the metaphorical analysis that the figurative meanings of particles contribute to the semantic complexities of VPCs (Bolinger, 1971). Accordingly, a special focus was placed on the semantic contribution that particles make to the meanings of VPCs. For example, when teaching the VPC *turn on*, the particle-centered instruction highlighted a figurative meaning of *on* (i.e., *working*) to account for the meaning of *turn on* (i.e., *to start the flow of electricity, gas, water, etc. by moving a switch or a button*).

Therefore, the particle-centered instruction was organized according to the literal and figurative meanings of the six particles (i.e., *in, out, up, down, on*, and *off*). After an introductory unit about VPCs, literal and figurative meanings of each particle, except those of *in*, were taught over two units (see Table 3.5). The units were sequenced in such a way that two particles of opposite meanings, such as *up-down*, were to be taught consecutively since

their literal (e.g., higher position vs. lower position) as well as figurative (e.g., increase vs. decrease) meanings show distinct contrasts that may facilitate L2 learners to understand the semantic structures of the particles.

Table 3.5
Organization of Particle-Centered Instruction

Unit	Contents	Unit	Contents
1	Introduction of VPCs	7	Down: *lower position/decrease*
2	In: *physical & abstract*	8	Down: *termination*
3	Out: *outside & disappear*	9	On: *attached/continue*
4	Out: *appear*	10	On: *working*
5	Up: *higher position/appear*	11	Off: *detached/ depart*
6	Up: *increase/completion*	12	Off: *stop*

As in the construction-based instruction, six to eight types of particle-centered activities were provided in each lesson. For example, the students in the PG were given a set of pictures describing figurative meanings of *off* and asked to guess what the figurative meaning is (Figure 3.3). In another activity, the students were provided with sentences containing different VPCs and asked to identify the meanings of the particles (Figure 3.4).

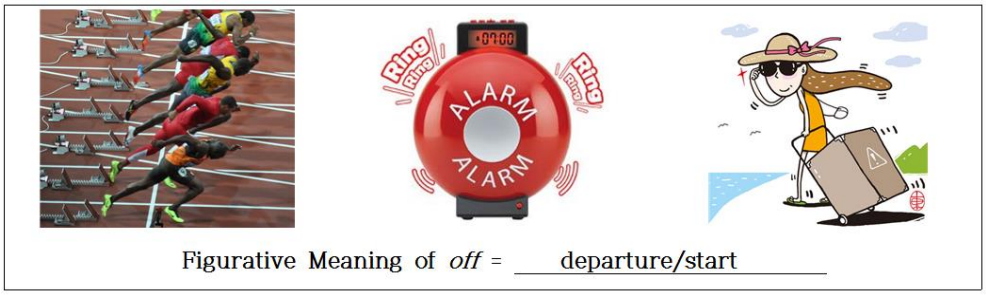


Figure 3.3
Particle-Focused Activity for Figurative *Off*

What are the meanings of the particles *up* and *down* in the following sentences?

1 When the police came in, the robber put the gun ***down***.
[to a lower position]

2 The boy grew ***up*** so fast that 10 years seemed like 10 weeks.
[increase]

Figure 3.4
Particle-Focused Activity: Figurative Particles in Sentences

3.5.3 Lexical instruction

The underlying notion of the lexical instruction was that each VPC is an individual lexical unit whose form and meaning should be stored in the lexicon. Therefore, the lexical instruction presented each VPC as an individual lexical item, with its form and meaning unanalyzed. For example, the meaning of the VPC *turn on* was presented in the students' L1 without any further explanation of the meaning construal.

Table 3.6
Organization of Lexical Instruction

Unit	Contents	Unit	Contents
1	Introduction of VPCs	7	VPCs with *down*
2	VPCs with *in*	8	VPCs with *down*
3	VPCs with *out*	9	VPCs with *on*
4	VPCs with *out*	10	VPCs with *on*
5	VPCs with *up*	11	VPCs with *off*
6	VPCs with *up*	12	VPCs with *off*

The unit sequence of the lexical instruction was similar to that of the particle-centered instruction (i.e., each unit focusing on VPCs with a certain particle), but the students in the lexical instruction group were not taught

literal or figurative meanings of particles (see Table 3.6). Instead, each unit instructed the learners to memorize the meanings of VPCs in L1 (Figure 3.5) or to fill in blanks with given VPCs (Figure 3.6).

** Read the VPCs in the table and write down their Korean translation.*

VPC	Korean translation	VPC	Korean translation
jump in		wake up	
turn on		climb up	

Figure 3.5
Lexcal Activity: Memorizing VPCs in Learners' L1

** Complete the sentences about the pictures with the given VPCs*

come in jump in plug in put in sink in

1 I was studying English when my sister _____ ____.
2 When the water starts to boil, _____ the noodles ____.
3 I read the difficult book five times, and the story finally _____ ____.

Figure 3.6
Lexical Activity: Fill-in-Blanks with VPCs

More examples for the learning activities used in the three types of instruction are presented in Appendix 1.

3.6 Test

The present study conducted three test sessions, one before and two after the instruction, i.e., pretest, immediate posttest, and delayed posttest. Each test consisted of four tasks: two for VPCs and the other two for ASCs. The ability to accurately produce VPCs was measured by a sentence completion task and a scene description task, while the knowledge of ASCs was assessed by a sentence sorting task and a grammaticality judgment task. The four tasks were administered over two days — the tasks for VPCs on Day 1 and those for ASCs on Day 2 — since the pilot study had identified that Korean middle school students were not able to maintain consistent attention when the four tasks were conducted on a single day.

3.6.1 Sentence completion task

The sentence completion task (hereafter, SCT) was a fill-in-the-blank task which had a blank for each of 24 situations. The students were asked to fill in the blanks with the most appropriate of the six particles (i.e., *up, down, in, out, on,* and *off*). This task has been found to be useful when examining L2 learners' use of various types of VPCs, both literal and figurative ones as well as both instructed and uninstructed ones (Kovecses & Szabo, 1996; Yasuda, 2010).

In this design, it was important to make sure that the students understood the given situations, so Korean translation of difficult English words were

provided on the test sheet:

(3) *Why don't you take a week _____ — you need a *break.* **break: 휴식*

The 24 items were evenly distributed in terms of the six particles, with four items pertaining to each particle. The items were further balanced by two conditions: a) literal vs. figurative, and b) instructed vs. uninstructed. This means that each particle appeared in four types of VPCs: instructed literal, instructed figurative, uninstructed literal, and uninstructed figurative VPCs (see Table 3.7).

Table 3.7
Distribution of VPCs in SCT

No.	VPC	Sense	Instruction	No.	VPC	Sense	Instruction
1	stand up	Literal	O	13	break up	Figurative	O
2	put down	Literal	O	14	break down	Figurative	O
3	come in	Literal	O	15	rub in	Figurative	O
4	take out	Literal	O	16	run out	Figurative	O
5	get on	Literal	O	17	turn on	Figurative	O
6	cut off	Literal	O	18	go off	Figurative	O
7	hold up	Literal	X	19	bring up	Figurative	X
8	go down	Literal	X	20	keep down	Figurative	X
9	ask in	Literal	X	21	fill in	Figurative	X
10	walk out	Literal	X	22	find out	Figurative	X
11	try on	Literal	X	23	hang on	Figurative	X
12	come off	Literal	X	24	take off	Figurative	X

3.6.2 Scene description task

The scene description task (hereafter, SDT) was also a fill-in-the-blank task, but there were two blanks in each item, one for the verb and the other for the particle. As noted earlier, a pilot study found that the format of two blanks

would be more appropriate for the SDT since various responses from the learners were drawn.

The SDT was based on the same 24 VPCs as the SCT, but a more spontaneous production of VPCs was examined. In each item, students were given 20 seconds to watch a short video clip and describe it by filling in the blanks. Given that the length of each video clip was five to ten seconds, a certain amount of time pressure was put on the students when answering each item of the SDT. Of course, it would have been better to measure free sentence production, but the students were not proficient enough to perform free production tasks.

*This is how to peel a pineapple. First, ____ the *ends ____.* *ends=끝부분

Figure 3.7
Example of Scene Description Task

The items were presented using Microsoft PowerPoint, one to a slide. Each video repeated at least twice until the next slide appeared, so as to ensure the students' understanding. A sound effect was also added between

each slide to encourage the students to notice the change of slides, even when they were looking at the test paper and writing down an answer to the previous item.

The SDT used the same videos over the three test sessions, while the items of the other three tasks in the pretest were modified in the immediate and delayed posttests. Using the same videos in the three test sessions was inevitable given the need for reliability of test results and practicality of test development. As found in a pilot study, some students reported very different interpretations for the same videos. If different videos had been used in the posttests, the results might have been biased by inconsistent interpretations among the students. In addition, finding (or making) different videos that depict the meaning of a single VPC was a very difficult task. As such, it was impractical to present different videos in the two posttests.

3.6.3 Grammaticality judgment task

The grammaticality judgment task (hereafter, GJT) consisted of sixteen sentences using the four ASCs: intransitive motion, caused-motion, intransitive resultative, and transitive resultative. Eight sentences were grammatical, while the remaining eight were ungrammatical. The ungrammatical sentences had errors that had frequently been observed in L2 English (Rah, 2014), such as misordering (*the lake solid froze*), preposition omission (s*he sent the money her sister*), or using adverbs instead of

adjectives (*he made the girl happily*). When judging (un)grammaticality of the items, the knowledge of ASCs was needed since lexical knowledge such as verb valency was insufficient. For example, the knowledge of the verb *sneeze* did not help the students to determine that the sentence *she sneezed the foam off the coffee* is grammatical.

The students were asked to judge the grammaticality of the sentences in 10 minutes, using a 3-point Likert-type scale: 1 = ungrammatical, 2 = not sure, and 3 = grammatical. The second point of *not sure* was intended to prevent the students from selecting answers in an arbitrary manner. In addition, the students were asked to underline and correct grammatical errors. This also helped the researcher to prevent the students from selecting answers randomly. As in the SCT and SDT, the students were provided with Korean translation of difficult English words.

Mark scores based on the grammaticality of the following sentences.
(1: ungrammatical, 2: not sure, 3: grammatical)
For ungrammatical sentences, underline and correct grammatical errors.

English Sentence	**Point**		
The ball rolled a garden. (roll: 구르다)	1	2	3
I sent the letter to my grandmother.	1	2	3

Figure 3.8
Example of Grammaticality Judgment Task

In Rah (2014), judgments on ungrammatical items were counted as correct only when proper error corrections were made by the participants

(i.e., college students). However, the present study counted every accurate marking of ungrammatical items as correct, regardless of whether proper error corrections were provided. This decision was based on the fact that the participants were young students who were not used to grammaticality judgment and error correction. They often confessed that they felt a sentence was wrong, but didn't know how to correct it.

Moreover, using the same scoring standard for both grammatical and ungrammatical items seemed more appropriate, because it prevented a bias in the scoring toward grammatical or ungrammatical items. If an additional requirement that one should provide proper error correction had been applied to the scoring of ungrammatical items, getting a point from ungrammatical items would have been more difficult, and the scoring would have been biased toward grammatical items, regardless of the students' grammatical competence.

3.6.4 Sentence sorting task

The sentence sorting task (hereafter, SST) examined whether the students relied on the knowledge of ASCs or of verbs when interpreting English sentences. Following previous research (e.g., Bencini & Goldberg, 2000), the task presented sixteen sentences, composed by four ASCs and four verbs, in a random order (see Table 3.8).

Table 3.8
Items of Sentence Sorting Task at Pretest

	Transitive	Ditransitive	Caused-motion	Resultative
cut	Barbara cut the fish.	Jennifer cut Terry a pear.	Meg cut the cheese onto the dish.	Nancy cut the box open.
get	Lee got the card.	Beth got Liz a bottle.	Laura got the book into the bag.	Dana got the TV fixed.
take	Larry took the eraser.	Paula took Sue a ticket.	Kim took the balloon into the room.	Rachel took the chimney down.
throw	Amy threw the watch.	Chris threw Linda a coin.	Pat threw the shoes onto the street.	Lyn threw the phone apart.

The students were asked to read these sixteen sentences and translate the sentences into their L1, i.e., Korean. This process was to make sure that the students carefully read every sentence. Then, they were instructed to sort the sentences into four groups of four sentences according to the meanings of the sentences. Finally, they were asked to make short notes on how they had sorted the sentences.

When administering the SST to the young students of the present study, however, it was quite difficult for them to complete the translation task. Many students questioned the necessity of the translation task for the SST, which seemed to indicate that the SST's face validity for the translation task was low. In addition, translating sixteen English sentences into Korean appeared to be a daunting task for young, low-level L2 learners of English, as shown by their frequent complaint that the translation task was hard and tiring. Consequently, many students' translations in the SST of the delayed posttest were too incomplete to be included in the quantitative and qualitative analyses.

3.7 Analysis

Quantitative analysis of the data was conducted using SPSS 21.0. Descriptive statistics were first calculated to report general patterns across different groups and different test sessions.

Given that the data of the present study satisfied neither the condition of normal distribution nor that of homoscedasticity, non-parametric tests of inferential statistics were conducted, with the statistical alpha level set at .05. For between-test analysis of each group (e.g., pretest vs. posttest of CG), the Friedman test and its post hoc analysis (i.e., multiple paired comparsions with a Bonferroni correction applied) were administered. For between-group testing for each test session (e.g., CG vs. PG in pretest), the Kruskal-Wallis H test was used. When a significant between-group difference was found, a post hoc analysis was conducted to identify the groups between which the significant difference exists. It should be noted here that between-group analysis was conducted only for the tests of VPCs (i.e., SCT and SDT). Results of the ASC-related tests (i.e., GJT and SST) were put only on between-test analysis within CG.

For the data gathered from the SST, Cdev and Vdev were calculated, following the protocol of previous research (e.g., Bencini & Goldberg, 2000). As noted earlier, the SST has two competing standards for sentence sorting: verbs and constructions. Cdev and Vdev are deviation scores from an entirely construction-based sort and an entirely verb-based sort,

respectively. The deviation score from a construction-based sort (i.e., Cdev) was “the number of changes that would have to be made for a sort to be entirely by construction” (Bencini & Goldberg, 2000, p. 644). The same calculation was applied to Vdev, which represents how many changes are needed for a sort to be entirely verb-based. The maximum value of Cdev or Vdev is 12. For example, an entirely verb-based sort received 12 Cdev and 0 Vdev, while an entirely construction-based sort received 0 Cdev and 12 Vdev.

The SST also asked the students to translate every sentence into Korean before sorting them into four groups. The students’ translation was qualitatively analyzed to identify what types of difficulties they had in comprehending English sentences and to ascertain the kinds of improvements that were made after the VPC instruction.

CHAPTER 4. RESULTS

This chapter reports the results of the four tasks in the main study. The first two sections present quantitative results of between-test and between-group analyses for the two tasks on VPCs, while the other two sections show both quantitative and qualitative results for the two tasks on ASCs.

4.1 Sentence Completion Task

4.1.1 Results of between-test analysis

The mean score for the SCT increased in every group after the instruction (See Table 4.1). Another mean increase was observed for CG and LG between the immediate and the delayed posttest, while the mean score of PG decreased. A series of Friedman tests were conducted for each group to examine whether there were significant differences between the test sessions.

Table 4.1
Results of Friedman Tests for SCT

Group	N	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
		M	*SD*	*M*	*SD*	*M*	*SD*		
CG	22	10.54	5.40	12.50	4.92	13.05	5.74	12.35	.002*
PG	23	8.00	3.80	10.35	2.63	8.87	4.42	9.83	.007*
LG	22	9.54	5.76	10.32	5.07	10.50	4.30	2.58	.275

Note. *Every value, except p, has been rounded to one hundredth.*

The Friedman tests identified significant between-test differences in CG

and PG, rendering Chi-square values of 12.35 (p<.01) and 9.83 (p<.01), respectively. Accordingly, post hoc analysis of paired comparsion with a Bonferroni correction applied was conducted for the two groups. In CG, a signficant difference was reported between the pretest and the delayed posttest (*adj*. p<.01), with a difference only slightly short of the alpha value observed between the pretest and the immediate posttest (*adj*. p<.07). In PG, there was a significant difference only between the pretest and the immediate posttest (*adj*. p<.01).

4.1.2 Results of between-group analysis

4.1.2.1 Overall results

The mean scores of the three groups in the SCT were compared for each test session. Kruskal-Wallis H test was administered to measure whether there was any significant mean difference between the groups.

In the pretest, the mean score of CG (M=10.5, SD=5.4) was higher than that of PG (M=8.0, SD=3.8) or LG (M = 9.5, SD = 5.8), as in Table 4.2, but the differences were not statistically significant (χ^2= 2.287, df=2, p=.319).

Table 4.2
Scores of SCT in Pretest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	10.54	5.40	8.15	12.94	2	22
PG	23	8.00	3.80	6.36	9.64	1	15
LG	22	9.54	5.76	6.99	12.10	1	22

Note. *Every value, except p, has been rounded to one hundredth.*

Similar patterns were observed both in the immediate and the delayed posttests; the mean score of CG was higher than that of any other group (see Tables 4.3 and 4.4). The between-group differences in the immediate posttest were not statistically significant (χ^2=3.469, *df*=2, *p*=.176), while those in the delayed posttest were statistically significant (χ^2=7.213, *df*=2, *p*<.05).

Table 4.3
Scores of SCT in Immediate Posttest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	12.50	4.92	10.32	14.68	4	22
PG	23	10.35	2.63	9.21	11.49	5	15
LG	22	10.32	5.07	8.07	12.26	3	21

Note. *Every value has been rounded to one hundredth.*

Table 4.4
Scores of SCT in Delayed Posttest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	13.05	5.74	10.50	15.59	3	23
PG	23	8.87	4.42	6.96	10.78	2	18
LG	22	10.50	4.30	8.60	12.41	5	19

Note. *Every value has been rounded to one hundredth.*

A post hoc test revealed that a significant difference in the delayed posttest existed between CG (Mean = 13.0, SD = 5.7) and PG (Mean = 8.9, SD = 4.4), Std. Test Statistic=2.684, *adjusted p*<.05. The other between-group differences in the delayed posttest were not statistically significant (see Table 4.5).

Table 4.5
Post Hoc Analysis of SCT in Delayed Posttest

(I) Group	(J) Group	Test Statistics	Std. Error	Std. Test Statistic	*Sig*	*Adj. Sig.*
CG	PG	15.548	5.857	2.684	.007	.022
	LG	8.455	5.857	1.443	.148	.447
PG	LG	7.094	5.793	1.224	.221	.662

When the mean scores were plotted along the test sessions, each group showed different patterns. While every group showed a mean increase in the immediate posttest, the mean increase of PG (2.35) was greater than that of CG (1.96) or LG (1.22). In contrast, only PG showed a mean decrease (1.48) between the immediate and the delayed posttest, whereas the other groups showed moderate mean increases (CG=0.55, LG=0.18), leading to the abovementioned significant mean difference between CG and PG in the delayed posttest.

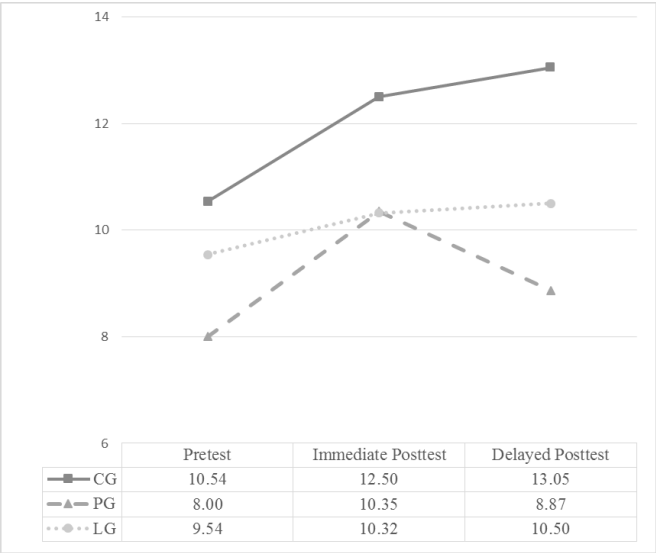


Figure 4.1
Mean Scores of Groups in SCT

4.1.2.2 Literal and figurative VPCs

The 24 items in the SCT were composed of 12 literal and 12 figurative VPCs. Mean scores of literal VPCs were higher than those of figurative VPCs in every group and every test, except the pretest of CG (literal=5.18; figurative=5.36).

For literal VPCs, the mean scores of CG and PG increased in the immediate posttest, while that of LG slightly decreased. Between the immediate and the delayed posttest, however, LG showed a mean increase, recovering from its earlier decrease, and PG showed a mean decrease, losing much of its earlier improvement. Kruskal-Wallis H tests found that the between-group difference for literal VPCs was insignificant in every test session (pretest, p=.662; immediate posttest, p=.213; delayed posttest, p=.121).

Table 4.6
Mean Scores of Literal and Figurative VPCs in SCT

Group	Pretest		Immediate Posttest		Delayed Posttest	
	Literal	Figurative	Literal	Figurative	Literal	Figurative
CG	5.18	5.36	6.55	5.96	6.73	6.32
PG	4.48	3.52	5.74	4.61	5.00	3.87
LG	5.50	4.05	5.27	5.05	6.05	4.46

Note. *Every value has been rounded to one hundredth.*

For figurative VPCs, CG showed steady mean increases in the immediate and the delayed posttest, while the mean scores of the other groups increased in the immediate posttest but decreased in the delayed posttest

(see Figure 4.2). Accordingly, the between-group differences for figurative VPCs were found to be significant in the delayed posttest (χ^2=8.783, *df*=2, *p*<.05), but not in the other tests (pretest: *p*=.077, immediate posttest: *p*=.199)

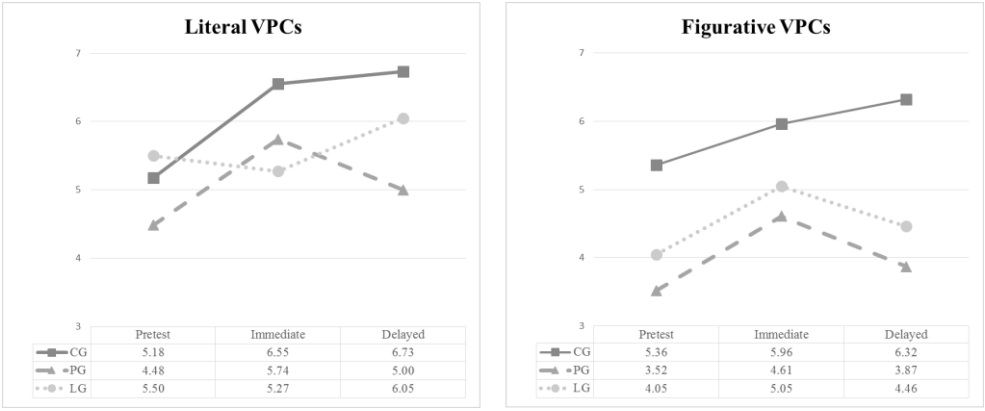


Figure 4.2
Mean Scores of Groups for Literal and Figurative VPCs in SCT

A post hoc analysis identified that there was a significant difference between CG (Mean = 6.32) and PG (Mean = 4.46) in the delayed posttest of figurative VPCs, Std. Test Statistic=16.552, *adjusted p*<.05. The other between-group differences in the delayed posttest of figurative VPCs were found to be insignificant (see Table 4.7).

Table 4.7
Post Hoc Analysis of Figurative VPCs in SCT at Delayed Posttest

(I) Group	(J) Group	Test Statistics	Std. Error	Std. Test Statistic	*Sig*	*Adj. Sig.*
CG	PG	16.552	5.774	2.867	.004	.012*
	LG	12.250	5.838	2.098	.036	.108
PG	LG	4.302	5.774	.745	.456	1.000

4.1.2.3 Instructed and uninstructed VPCs

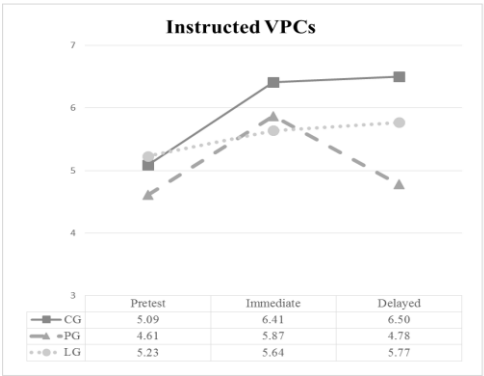
The 24 items in the SCT were also classified into 12 instructed and 12 uninstructed VPCs. Between the pretest and the immediate posttest, as shown in Table 4.8, every group showed greater mean increases for the instructed VPCs than for the uninstructed VPCs (CG = 1.32 vs. 0.63; PG = 1.26 vs. 1.09; LG = 0.41 vs. 0.36). Between the immediate and the delayed posttests, however, mean changes for instructed VPCs varied among the groups. The mean score of instructed VPCs in the delayed posttest decreased only in PG, from 5.87 to 4.78, but this variance did not result in a significant between-group difference for instructed VPCs at the delayed posttest (p=.123)

A more noteworthy change between the immediate and the delayed posttests was observed for the uninstructed VPCs: the mean score of CG increased from 6.09 to 6.55 (gain = 0.46), while the mean scores of the other groups showed little increase (i.e., LG = 0.05) or decrease (i.e., PG = – 0.39).

Table 4.8
Mean Scores of Instructed and Uninstructed VPCs in SCT

Group	Pretest		Immediate Posttest		Delayed Posttest	
	Instructed	Uninstructed	Instructed	Uninstructed	Instructed	Uninstructed
CG	5.09	5.46	6.41	6.09	6.50	6.55
PG	4.61	3.39	5.87	4.48	4.78	4.09
LG	5.23	4.32	5.64	4.68	5.77	4.73

Note. *Every value has been rounded to one hundredth.*



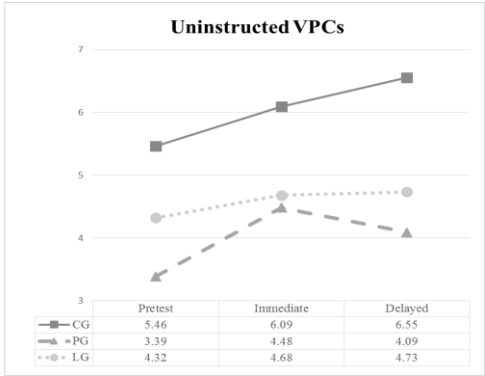


Figure 4.3
Mean Scores of Groups for Instructed and Uninstructed VPCs in SCT

Kruskal-Wallis H tests found that the between-group differences for the uninstructed VPCs were significant in the immediate posttest (χ^2=6.416, *df*=2, *adjusted p*<.05) as well as the delayed posttest (χ^2=8.399, *df*=2, *adjusted p*<.05). Post hoc tests identified significant differences between CG and PG for uninstructed VPCs; they were marginally significant in the immediate posttest (*p*=.021; *adjusted p*<.07, see Table 4.9) and significant in the delayed posttest (*adjusted p*<.05, see Table 4.10).

Table 4.9
Post Hoc Analysis of Uninstructed VPCs in SCT at Immediate Posttest

(I) Group	(J) Group	Test Statistics	Std. Error	Std. Test Statistic	*Sig*	*Adj. Sig.*
CG	PG	13.304	5.752	2.313	.021	.062(*)
	LG	11.977	5.815	2.060	0.39	.118
PG	LG	1.327	5.752	.231	.818	1.000

Table 4.10
Post Hoc Analysis of Uninstructed VPCs in SCT at Delayed Posttest

(I) Group	(J) Group	Test Statistics	Std. Error	Std. Test Statistic	*Sig*	*Adj. Sig.*
CG	PG	16.130	5.768	2.797	.005	.015*
	LG	12.068	5.831	2.070	.038	.115
PG	LG	4.062	5.768	.704	.481	1.000

4.2 Scene Description Task

4.2.1 Results of between-test analysis

The mean score for the SDT also increased after the instruction in every group (see Table 4.11). A series of Friedman tests were conducted for each group to examine if there was a significant difference between the test sessions.

Table 4.11
Results of Friedman Tests for SCT

Group	N	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
		M	*SD*	*M*	*SD*	*M*	*SD*		
CG	22	3.86	3.62	8.41	5.96	8.09	5.36	31.40	.00*
PG	23	3.61	2.27	6.44	3.64	6.44	3.64	23.93	.00*
LG	22	3.55	3.63	6.09	4.36	6.59	4.43	22.62	.00*

Note. *Every value has been rounded to one hundredth.*

The Friedman tests identified significant differences in every group, rendering Chi-square values of 31.40 (p<.001) for CG, 23.93 (p<.001) for PG, and 22.62 (p<.001) for LG. Post hoc analysis of paired comparsions with a Bonferroni correction applied was conducted for each group. In every group, signficant differences were observed between the pretest and both of the posttests at *adj*. p<.01. However, there was no significant difference between the immediate and the delayed posttest in any group.

4.2.2 Results of between-group analysis

4.2.2.1 Overall results

The mean scores of the SDT among the three groups were compared for the pretest, the immediate posttest, and the delayed posttest (see Table 4.12-14). In the pretest, the mean scores of the three groups appeared to be similar (CG=3.86; PG=3.61; LG=3.55) and thus were found to have no significant difference (χ^2=.326, *df*=2, *p*=.849).

Table 4.12
Scores of SDT in Pretest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	3.86	3.62	2.26	5.47	0	11
PG	23	3.61	2.27	2.63	4.59	0	8
LG	22	3.55	3.63	1.93	5.16	0	18

Table 4.13
Scores of SDT in Immediate Posttest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	8.41	5.96	5.77	11.05	0	19
PG	23	6.44	3.64	4.86	8.01	0	12
LG	22	6.09	4.36	4.16	8.03	1	18

Table 4.14
Scores of SDT in Delayed Posttest

Group	N	Mean	SD	95% Confidence Interval		Min	Max
				Low	Upper		
CG	22	8.09	5.36	5.71	10.47	0	17
PG	23	6.44	3.64	4.86	8.01	0	13
LG	22	6.59	4.43	4.63	8.55	1	19

***Note**. Every value has been rounded to one hundredth, in Table 4.12-14.*

In the immediate posttest, the mean increase of CG (=4.55) was greater than that of PG (=2.83) or LG (=2.54), creating greater mean differences between CG and the other groups. This difference remained in the delayed posttest, since there was no drastic mean change in any group between the immediate and the delayed posttests. However, Kruskal-Wallis H tests identified no significant between-group differences in the immediate (*p*=.415) or the delayed posttest (*p*=.491).

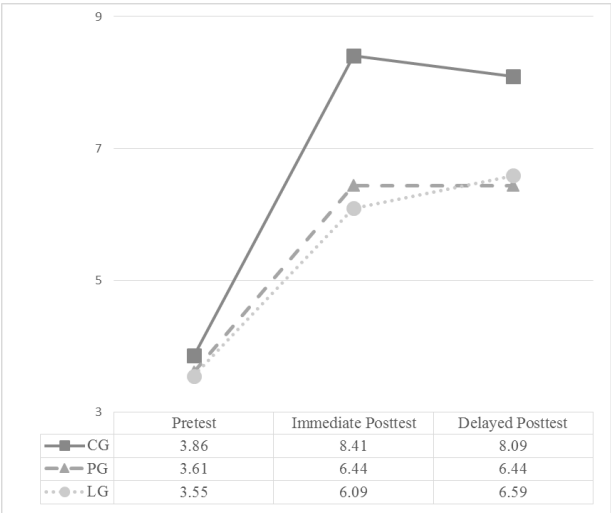


Figure 4.4
Mean Scores of Groups in SDT

4.2.2.2 Literal and figurative VPCs

The mean scores of literal VPCs in the SDT were higher than those of figurative VPCs, in every group and every test session (see Table 4.15). For example, the mean score of literal VPCs at the pretest was higher than 2.5 in every group, while that of figurative VPCs was lower than 1.5. This result corresponds to the pattern reported for the SCT in Section 4.1.2.2.

Table 4.15
Mean Scores of Literal and Figurative VPCs in SDT

Group	Pretest		Immediate Posttest		Delayed Posttest	
	Literal	Figurative	Literal	Figurative	Literal	Figurative
CG	2.59	1.27	4.96	3.46	4.86	3.23
PG	2.74	.87	4.44	2.00	4.57	1.87
LG	2.73	.82	3.73	2.36	4.32	2.27

In the immediate posttest, there was mean increase in every group, but the greatest increase both for literal and figurative VPCs were observed for CG, creating greater mean differences among the groups. The mean differences of literal VPCs seemingly decreased in the delayed posttest, with the mean scores converging around 4.5, while those of figurative VPCs remained similar (see Figure 4.5). Therefore, the overall mean difference between CG and the other two groups in the delayed posttest (see Figure 4.4) is attributable to the strong performance of CG with figurative VPCs.

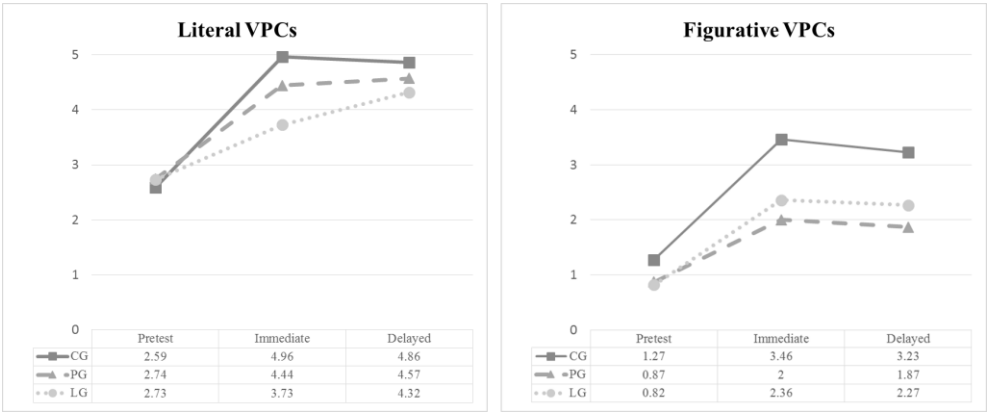


Figure 4.5
Mean Scores of Groups for Literal and Figurative VPCs in SDT

Despite these varying mean scores among the groups in each test session, no significant between-group difference was identified.

4.2.2.3 Instructed and uninstructed VPCs

Every group showed mean increases both for the instructed and uninstructed VPCs in the immediate posttest, with the improvements of CG being the greatest for both types of VPCs. In particular, CG was distinguished from the other two groups in terms of answering items of uninstructed VPCs in the immediate posttest. While the mean increases for the instructed VPCs in CG, PG, and LG — 2.27, 1.95, and 1.50, respectively — approximated one another, the mean increase for the uninstructed VPCs in CG (i.e., 2.14) was about twice that in PG (0.91) or LG (1.04).

Table 4.16
Mean Scores of Instructed and Uninstructed VPCs in SDT

Group	Pretest		Immediate Posttest		Delayed Posttest	
	Instructed	Uninstructed	Instructed	Uninstructed	Instructed	Uninstructed
CG	2.27	1.59	4.68	3.73	4.32	3.77
PG	1.96	1.61	3.91	2.52	3.78	2.65
LG	2.32	1.23	3.82	2.27	4.00	2.59

Note. *Every value has been rounded to one hundredth.*

Consequently, mean differences for the uninstructed VPCs became greater in the immediate posttest and little changed in the delayed posttest (see Figure 4.6). This may indicate that the substantial difference in the delayed posttest scores between CG and the other groups, as in Figure 4.4, should be attributed to the uninstructed VPCs, not to the instructed ones.

Kruskal-Wallis H tests, however, reported no significant between-group differences for the instructed or the uninstructed VPCs in any test session.

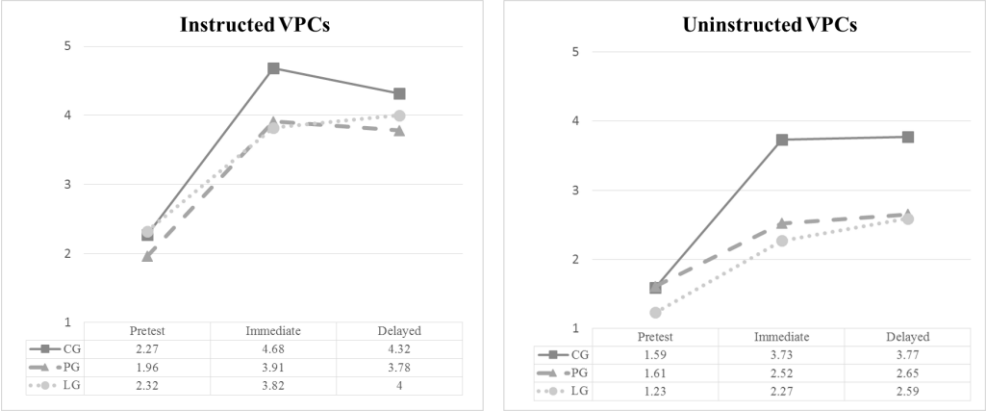


Figure 4.6
Mean Scores of Groups for Instructed and Uninstructed VPCs in SDT

4.3 Grammaticality Judgment Task

4.3.1 Overall results

The GJT consisted of 16 items across four ASCs — i.e., intransitive motion, caused-motion, intransitive resultative, and transitive resultative, with half of the items being grammatical sentences and the other half ungrammatical ones. The GJT was conducted to examine whether the construction-based instruction of VPCs improved Korean middle school students' ability to identify grammaticality of English sentences.

The mean scores of CG in the GJT across the three test sessions are presented in Table 4.17. The mean scores gradually increased over the test sessions (i.e., 10.64 to 11.00 to 11.50), but there was no statistical significant between-test difference, rendering Chi-square values of 0.67 (p=.71).

Table 4.17
Mean Scores of CG in GJT

Group	N	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
		M	*SD*	*M*	*SD*	*M*	*SD*		
CG	22	10.64	4.51	11.00	4.11	11.50	3.26	.68	.71

Note. *Every value has been rounded to one hundredth.*

4.3.2 Grammatical and ungrammatical sentences

In the pretest and the immediate posttest, the mean scores for grammatical sentences were greater than those for ungrammatical ones. However, in the delayed posttest, the learners in CG achieved a higher mean score for ungrammatical sentences than for grammatical ones.

Table 4.18
CG Mean Scores of Grammatical and Ungrammatical Items in GJT

Item Type	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
	M	*SD*	*M*	*SD*	*M*	*SD*		
Grammatical	5.59	2.15	5.82	2.06	5.41	1.76	3.60	.166
Ungrammatical	5.05	2.68	5.18	2.22	6.09	1.72	10.89	.004*

Note. *Every value, except p, has been rounded to one hundredth.*

These results can be attributed to the different patterns observed for grammatical and ungrammatical items. For grammatical items, the mean score increased in the immediate posttest but then decrease in the delayed posttest; however, the mean scores for ungrammatical items seemed to increase throughout the test sessions (5.05 to 5.18 to 6.09).

Accordingly, the between-test differences for the grammatical items were not statistically significant (χ^2=3.60, *df*=2, *p*=.166), while those for the

ungrammatical items were statistically significant (χ^2=10.89, *df*=2, *p*<.01). A post hoc analysis with a Bonferroni correction applied identified significant differences between the pretest and the delayed posttest (*adjusted p*<.05), and between the immediate and the delayed posttest (*adjusted p*<.01).

4.3.3 Argument structure constructions

In the pretest, the learners in CG scored higher with motion constructions (i.e., intransitive and caused-motions) than resultative constructions (i.e., intransitive and transitive resultatives). In particular, the learners had the lowest scores with the transitive resultative construction, e.g., *She cut the bag open* (see Table 4.19).

Table 4.19
CG Mean Scores For ASCs in GJT

ASC	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
	M	*SD*	*M*	*SD*	*M*	*SD*		
Intrans. Motion	2.73	1.28	2.59	1.40	3.09	1.11	4.28	.118
Caused-Motion	3.23	1.11	3.00	1.45	3.09	1.06	1.50	.472
Intrans. Resultative	2.64	1.33	2.86	1.32	2.23	1.19	6.93	.031*
Trans. Resultative	2.05	1.50	2.55	0.80	3.09	1.06	8.09	.017*

Note. *Every value, except p, has been rounded to one hundredth.*

The mean scores of the transitive resultative construction, however, gradually increased over the test sessions (from 2.05 to 2.55 to 3.09), resulting in significant between-test differences (χ^2=8.09, *df*=2 *p*<.05). A post hoc analysis with a Bonferroni correction applied identified a significant difference between the pretest and the delayed posttest (from 2.05 to 3.09: *adj. p*<.01).

It also should be noted that there is another ASC that shows significant between-test differences (i.e., intransitive resultative; χ^2=6.93, *df*=2, *p*<.05). A post hoc analysis found that this result can be attributed to a significant mean decrease between the immediate and the delayed posttest (from 2.86 to 2.23: *adj*. *p*<.05).

4.4 Sentence Sorting Task

4.4.1 Quantitative analysis

The SST measured the extent to which the learners used knowledge of ASCs for sentence comprehension. In general, the learners in CG relied more on the meanings of verbs than those of constructions; Cdevs were greater than Vdevs in every test session (see Table 4.20).

Table 4.20
Mean Cdevs and Vdevs of CG across Three Test Sessions

Deviation Type	Pretest		Immediate Post		Delayed Post		χ^2	*Sig.*
	M	*SD*	*M*	*SD*	*M*	*SD*		
Cdev	9.68	4.51	8.82	5.07	9.50	4.70	7.41	.025*
Vdev	2.55	4.58	3.59	5.28	2.95	5.02	5.44	.066

Note. *Every value, except p, has been rounded to one hundredth.*

After the instruction, CG showed a decrease of Cdev (9.68 to 8.82) and an increase of Vdev (2.55 to 3.59). However, the effects of construction-based instruction seemed to wane in the delayed posttest, as the Cdev and Vdev rebounded to their initial levels.

Accordng to results of Friedman tests, the mean differences of Cdev were statistically significant (χ^2=7.41, *df*=2, *p*<.05), while those of Vdev were not χ^2=5.44, *df*=2, *p*=.066). A post hoc analysis with a Bonferroni correction applied, however, did not find any statistically significant difference in any pair of test sessions.

4.4.2 Qualitative analysis

In the SST at the pretest, the learners in CG had difficulties in translating sentences with two post-verbal components (i.e., ditransitive, caused-motion, and transitive resultative). In particular, they had trouble assigning idiosyncratic constructional meaning to each component. Instead, it was often observed that the two post-verbal components were misunderstood as a single object of the simple transitive construction (i.e., SVO). For example, the two objects in the ditransitive construction were often misunderstood as POSSESSOR and POSSESSED, as in the following response made by a learner in CG:

(4) Student A's translation in pretest

- Stimulus: Chris threw *Linda an eraser*.

- Translation:	khulisu-nun	linta-uy	ciwukay-lul	tenci-ess-ta.
	Chris-SUB	Linda-POSS	eraser-ACC	throw-PAST-DC.

'Chris threw *Linda's eraser*.'

The error in (4) is attributable to two types of overgeneralization that have been argued to be persistent among low-level L2 learners: overgeneralization of the transitive construction and that of noun compounds (cf. Choi, 2105; Sim, 2012). First, Student A seemed to be unaware that the sentence structure [NP_X-V-NP_Y-NP_Z] is paired with the propositional meaning "X caused Y to receive Z" in the ditransitive construction, and thus mistakenly relied on the meaning of the simple transitive construction "X acts on Y." Second, Student A seemed to overgeneralize her knowledge of English noun compounds when grouping the two post-verbal NPs (i.e., *Linda*; *an eraser*) into a single object of the simple transitive construction. In English, many noun compounds such as *company car, family car, family estate, woman apartment,* and *child foot* have the semantic relation of POSSESSION (Balyan & Chatterjee, 2015; Girju, Moldovan, Tatu, & Antohe, 2005). Student A might have acquired this semantic knowledge of noun compounds and overgeneralized it to the interpretation of the post-verbal components in (4), i.e., *Linda an eraser.*

After the construction-based instruction of VPCs, Student A was able to use relevant constructional meaning in translating ditransitive sentences, assigning each of the post-verbal NPs its appropriate constructional role (i.e., RECIPIENT and THEME). Accordingly, the overgeneralization of noun compound, which bound the two NPs into a single object with the semantic relation of POSSESSION, disappeared, as in (5):

(5) Student A's translation in immediate posttest

- Stimuli: Chris threw *Linda a pencil*.

- Translation: khulisu-nun *linta-eykey* *yenphil-ul* tenci-ess-ta.

Chris-SUB *Linda-REC* *pencil-ACC* throw-PAST-DC.

'Chris threw *Linda a pencil.*'

A similar overgeneralization was observed for the caused-motion construction, in which many learners again misunderstood the two post-verbal components as a single object of the transitive construction, as in (6):

(6) Student B's translation in pretest

- Stimuli: Meg cut *the meat onto the pan*.

- Translation: meyku-nun *phayn wiey issten* *koki-lul* calla-ss-ta.

Meg-Sub *pan on being* *meat-ACC* cut-PAST-DC.

'Meg cut *the meat that was on the pan.*'

As shown in (6), Student B did not apply the meaning of the caused-motion construction (i.e., X causes Y to move Z) to translation of the caused-motion sentence *Meg cut the meat onto the pan*, simply relying on the meaning of the transitive construction. In doing so, the post-verbal NP and PP (*the meat; onto the pan*) were misinterpreted as THEME-LOCATION instead of THEME-PATH: the prepositional phrase *onto the pan* was misinterpreted as a locative modifier of the preceding noun phrase *the meat.* This incorrect interpretation

seems to be attributable to another type of phrasal-level overgeneralization. Student B might have learned a structure of NP modified by PP such as *the book on the table* and *foods in the fridge* and overgeneralized this knowledge to the postverbal components of the caused-motion sentence in (6).

After the construction-based instruction of VPCs, Student B used the relevant constructional meaning for a similar sentence, assigning the sentence-final prepositional phrase with the meaning of PATH or DESTINATION. Accordingly, the overgeneralization of the transitive construction as well as that of the prepositional modification disappeared:

(7) Student B's translation in immediate posttest

- Stimuli: Meg cut *the ham onto the plate.*
- Translation: meyku-ka calun haym-ul *cepsi wilo* *noh*-ass-ta.

  Meg-SUB sliced ham-ACC *plate onto* *put*-PAST-DC.

  'Meg *put* the sliced ham *onto the plate.*'

Another interesting observation was made for the resultative construction. In the following example, Student C made a mistake in the pretest; she understood the adjective in a resultative sentence as a depictive modifier, not as a result of action, as in (8). In the immediate posttest, she applied the meaning of the resultative construction (i.e., X causes Y to become Z) for the sentence-final adjective to serve as the indicator of a result, as in (9).

(8) Student C's translation in pretest

- Stimuli: Lyn threw *the chair apart.*

- Translation: lin-un *cokaknan* *uyca-lul* ten-ci-ess-ta.

Lyn-Sub *broken* *chair-ACC* throw-PAST-DC.

'Lin threw *the broken chair.*'

(9) Student C's translation in immediate posttest

- Stimuli: Lyn threw *the box apart.*

- Translation: lin-un paksu-lul *cokak-na-tolok* tenci-ess-ta.

Lyb-SUB box-ACC *into-pieces-RESULT* throw-PAST-DC.

'Lyn threw the box *into pieces*'

In addition to these calibrated understandings of post-verbal components, knowledge of ASCs allowed students to avoid their overgeneralization of a single meaning for a verb. For example, many students simply relied on the common meaning of the verb *get* (i.e., obtain) and arrived at an incorrect understanding of a caused-motion sentence in the pretest:

(10) Student D's translation in pretest

- Stimuli: Laura *got* the coin into the hole.

- Translation: lola-ka kwumeng-eyse tongcen-ul *cwuwe*-ss-ta.

Laura-SUB hole-LOC coin-ACC *pick*-PAST-DC.

'Laura *picked up* the coin at the hole'

In the immediate posttest, however, the same student used the constructional meaning of the caused-motion construction and accordingly interpreted the verb *get* as a neutral cause of motion (i.e., *put*):

(11) Student D's translation in immediate posttest

- Stimuli: Laura got the ball into the net.
- Translation: lola-ka kong-ul neythu-anulo *neh*-ess-ta.

  Laura-SUB ball-LOC net-into *put*-PAST-DC.

  'Laura *put* the ball into the net'

In sum, construction-based instruction of VPCs enhanced the knowledge of ASCs among the students in CG. Prior to the instruction, they had trouble translating sentences of two post-verbal components such as caused-motion and transitive resultative. They often relied on the meaning of the simple transitive construction, assigning incorrect semantic relationships to post-verbal elements (e.g., POSSESSOR and POSSESSED; THEME and LOCATIVE) and verbs (e.g., common but contextually inappropriate meanings). After the construction-based instruction of VPCs, the students in CG started to apply the constructional meanings of complex ASCs to the translation task, overcoming overgeneralizations of irrelevant L2 knowledge such as noun compound and prepositional modification. Such qualitative change was observed among twelve out of twenty-two students in CG (55%).

CHAPTER 5. DISCUSSION

This chapter discusses the research findings as a response to the research questions. Section 5.1 discusses the relative effects of construction-based, particle-centered, and lexical instruction on the learning of VPCs. Section 5.2 discusses the effects of construction-based instruction of VPCs on the knowledge of ASCs.

5.1 Instructional Effects on Learning VPCs

This section discusses effects of three different types of instruction on the learning of VPCs. It begins with general discussion on the overall improvements of the three groups. Then, the focus is placed on the two important issues raised in the research questions, namely figurative and uninstructed VPCs.

5.1.1 Overall effects on learning VPCs

The first research question of the present study is whether construction-based instruction is more effective than the other two types of instruction in improving Korean middle school students' production of VPCs. To address this research question, quantitative results of the two tasks testing VPCs (i.e., SCT and SDT) were analyzed in Section 4.1 and 4.2. The results are

summarized below, in Table 5.1 and 5.2, to present the descriptive statistics along with significant between-group and between-test differences.

Table 5.1
Between-Test and Between-Group Analysis of SCT Means

	Pretest	Immediate Posttest	Delayed Posttest	Sig. difference (between-test)
CG	10.54	12.50	13.05	Pre.< Del.**
PG	8.00	10.35	8.87	Pre.<Imm.**
LG	9.54	10.32	10.50	*n/a*
Sig. difference (between-group)	*n/a*	*n/a*	CG>PG*	

Note. Pre.=pretest; Imm.=immediate posttest; Del.=delayed posttest;
* *adjusted p*<.05, ** *adjusted p<.01*

Table 5.2
Between-Test and Between-Group Analysis of SDT Means

	Pretest	Immediate Posttest	Delayed Posttest	Sig. difference (between-test)
CG	3.86	8.41	8.09	Pre.<Imm.** Pre.<Del.**
PG	3.61	6.44	6.44	Pre.<Imm.** Pre.<Del.**
LG	3.55	6.09	6.59	Pre.<Imm.** Pre.<Del.**
Sig. difference (between-group)	*n/a*	*n/a*	*n/a*	

* *adjusted p*<.05, ** *adjusted p<.01*

In the SCT, the between-test mean differences of LG were not statistically significant, while both those of CG and those of PG were statistically significant. In particular, the mean increase of CG was the greatest in the delayed posttest, resulting in a significant between-group difference (CG=13.05; PG=8.87; LG=10.50).

The between-group differences in the SDT showed similar patterns, though none of them were statistically significant. The mean scores of the groups in the pretest were not much different from one another (CG=3.86; PG=3.61; LG=3.55), but the immediate posttest showed a clear difference between CG (8.41) and the others (PG=6.44; LG=6.09). This difference remained in the delayed posttest.

These results indicate that construction grammar-based instruction, which teaches VPCs in association with canonical ASCs such as caused-motion and resultative, is more effective in teaching VPCs than particle-centered instruction, which has been proposed as a better way to teach VPCs, or a lexical approach, which is still very popular in English classes.

The effectiveness of the construction-based instruction may be attributed to its systematic and integrative approach to forms and meanings of VPCs. In contrast with the two other types of instruction, which treat forms and meanings of VPCs in item-based fashions, the construction-based instruction considers VPCs as form-meaning pairings (i.e., constructions) and makes systematic associations between forms and meanings of VPCs. This system of form-meaning mapping serves as a useful conceptual framework for L2 learning that promotes deep learning and longer retention (Celce-Murcia & Larsen-Freeman, 1999; Littlemore, 2009).

The effectiveness of the construction-based instruction may also be ascribed to its cognitive advantage. According to Ausubel, Novak and Hanesian (1978), meaningful learning takes place when new concepts or

rules are associated with existing ones and subsumed under a more inclusive conceptual system. In meaningful learning, the newly acquired information becomes an integral part of the system, so the information is more likely to be retained. In the construction-based instruction of the present study, VPCs were associated with the system of ASCs and became an integral part of English grammar of the learners. Therefore, the knowledge of VPCs was more likely to be retained, even when the learners were exposed to non-VPC sentences during the four-week interval between the immediate and the delayed posttest.

Finally, a brief discussion is warranted on the fact that there was no significant between-group mean difference in the SDT, despite the greater mean increases of CG (see Table 5.2). This finding should be attributed to the task design. As noted in Section 3.6.2, the SDT used the same videos over the three test sessions, which was necessary to ensure the reliability of the test results and the practicality of test development. This condition may have helped the learners in all three groups to provide more correct answers in the posttests, obscuring the causal relationship between the instructional types and the mean changes in the SDT.

5.1.2 Effects on learning figurative VPCs

Figurative VPCs are known to be difficult for L2 learners of English (Dagut & Laufer, 1985; Liao & Fukuya, 2004). Dagut and Laufer (1985) reported

that L2 learners of English tend to avoid figurative VPCs (e.g., *let down*) more frequently than literal VPCs (e.g., *go out*). Even advanced learners of English have trouble using figurative VPCs as productively as literal ones (Liao & Fukuya, 2004).

This difficulty has been attributed to semantic complexities of figurative VPCs (Celce-Murcia & Larsen-Freeman, 1999; Talmy, 2000). A single particle often has multiple figurative meanings in addition to its literal meaning. For example, the particle *up* has multiple meanings,

- literal *up*: stand up
- inceptive *up*: start up
- completive *up*: turn up
- idiomatic *up*: catch up

(Extracted from Celce-Murcia and Larsen-Freeman, 1999, pp. 423–433)

and some of these meanings result in VPCs of high frequency having multiple interpretations:

e.g., bring up

1) *up* as increase *He was brought up by his grandmother.*

2) *up* as accessible *Why did you have to bring up the subject?*

The present study has placed a special focus on figurative VPCs and investigated whether construction-based instruction is more effective in teaching figurative VPCs than the other types of instruction. The relevant data, which were provided in Section 4.1.2.2 and 4.2.2.2, are summarized in Table 5.3 and 5.4 to discuss effects of different types of instruction.

Table 5.3
Between-Group Analysis of Means for Figurative VPCs in SCT

	Pretest	Immediate Posttest	Delayed Posttest
CG	5.36	5.96	6.32
PG	3.52	4.61	3.87
LG	4.05	5.05	4.46
Sig. difference	*n/a*	*n/a*	CG>PG*

* *adjusted p*<.05, ** *adjusted p<.01*

Table 5.4
Between-Group Analysis of Means for Figurative VPCs in SDT

	Pretest	Immediate Posttest	Delayed Posttest
CG	1.27	3.46	3.23
PG	0.87	2.00	1.87
LG	0.82	2.36	2.27
Sig. difference	*n/a*	*n/a*	*n/a*

* *adjusted p*<.05, ** *adjusted p<.01*

In the SCT, CG showed mean increases for figurative VPCs over the test sessions (5.36 to 5.96 to 6.32), while the other two groups showed mean decreases between the immediate and the delayed posttest (PG, 4.61 to 3.87; LG, 5.05 to 4.46). This divergent pattern led to a significant between-group mean difference for figurative VPCs in the delayed posttest. A similar observation was made for the SDT, though statistically insignificant. The mean difference between CG and the other groups increased in the immediate posttest and seemed to remain in the delayed posttest.

In the construction-based instruction of the present study, the main focus was given to constructional properties of figurative VPCs. For example, the figurative VPC sentence *she turned the TV on* was presented as an example of the transitive resultative construction (Gorlach, 2005). Then, each

component of the sentence (e.g., the subject *she*) was assigned with a constructional role (e.g., AGENT) which contributes to the propositional meaning of the construction (i.e., X causes Y to become Z):

Sentence:	*She*	*turned*	*the TV*	*on*
Constructional role:	AGENT	MANNER	PATIENT	RESULT-GOAL
Meaning:	*She caused the TV to work by turning it.*			

Since the learners in CG were presented with systematic semantic properties of this type for figurative VPCs, they were not forced to memorize non-literal meanings by rote. Instead, they were able to apply this semantic framework to different VPCs and generate their meanings in constructional manners.

In contrast, particle-centered instruction placed a rather exclusive focus on the meaning of the particle, leaving learners with the daunting task of learning the semantic roles of the other components and combining them into a single proposition. The learners in PG often complained that it was difficult to understand meanings of figurative VPCs based only on the semantics of particles. They may have internalized the idea that the meanings of figurative VPCs are idiosyncratic and unpredictable, and so eventually simply memorized the meanings of individual VPCs.

In that sense, the particle-centered instruction may not have been much different from the lexical instruction, and its semantic account of the particle may have be redundant and unnecessary information which merely

increased cognitive loads. This result is in sharp contrast to previous findings about the effectiveness of particle-centered instruction (Yasuda, 2010; White, 2012). The different results seem to be ascribable to the different characteristics of the participants. In those previous studies, the participants were university students, and these adult learners have been known to be more capable of abstract and metaphoric thinking in L2 learning than young learners. These types of complex cognitive abilities are often required in particle-centered instruction, as learners have to understand the figurative meanings of particles based on their literal meanings. This may be the reason that the middle school students in the present study were not as successful in learning figurative VPCs as the university students in the previous studies.

In sum, the knowledge of figurative VPCs that the students in PG and LG acquired may have been less likely to be associated with the formal and functional features of verbs and particles and thus not much retained, which would explain the decrease of the mean scores between the immediate and the delayed posttest of SCT. In contrast, the construction-based instruction provided consistent associations between forms and meanings of figurative VPCs, allowing for schematization of L2 knowledge and long-term retention (or memory). In particular, the meanings of figurative VPCs, which are the main source of difficulty in L2 learning of VPCs, are structurally schematized and thus become less opaque and more learnable.

5.1.3 Effects on learning uninstructed VPCs

The present study investigated whether construction-based instruction helped L2 learners to tackle uninstructed VPCs. More specifically, it examined whether the learners in CG gained generalizable understandings of VPCs, perceived them as analyzable strings of words whose forms and meanings are not arbitrarily stipulated but systematically motivated, and applied the constructional knowledge to the accurate production of uninstructed VPCs (Littlemore, 2009). The relevant data, which were provided in Section 4.1.2.3 and 4.2.2.3, are summarized in Table 5.5 and 5.6 to present the descriptive statistics as well as significant between-group differences.

Table 5.5
Between-Group Analysis of Means for Uninstructed VPCs in SCT

	Pretest	Immediate Posttest	Delayed Posttest
CG	5.46	6.09	6.55
PG	3.39	4.48	4.09
LG	4.32	4.68	4.73
Sig. difference	*n/a*	*n/a*	CG>PG*

* *adjusted p*<.05, ** *adjusted p<.01*

Table 5.6
Between-Group Analysis of Means for Uninstructed VPCs in SDT

	Pretest	Immediate Posttest	Delayed Posttest
CG	1.59	3.73	3.77
PG	1.96	2.52	2.65
LG	1.23	2.27	2.59
Sig. difference	*n/a*	*n/a*	*n/a*

The results of the SCT and SDT indicated that the learners in CG were much better at using uninstructed VPCs. In the immediate posttest of the SCT, every group showed a mean increase for uninstructed VPCs; however, only CG showed a notable mean increase (+0.46) between the immediate and the delayed posttest, with PG losing much of its earlier gains (-0.39) and LG showing a very small mean increase (+0.05). This variation in the delayed posttest led to a significant mean difference for uninstructed VPCs between CG (M=6.55) and PG (M=4.09). Similarly, the mean scores for uninstructed VPCs in the SDT exhibit greater between-group differences after instruction. In the pretest, the mean scores for uninstructed VPCs among the groups were similar (CG=2.27; PG=1.96; LG=2.32). In the immediate posttest, however, the mean increase of CG (=2.14) was over twice as large as those of the other groups (PG=0.91; LG=1.04), and this difference was little changed in the delayed posttest.

The test results may indicate that construction-based instruction, which teaches forms and meanings of VPCs within the framework of ASCs, facilitates learners in making generalizations about forms and meanings of VPCs and thereby using unfamiliar VPCs.

This empirical finding further proves the pedagogical significance of the proposal that VPCs should be understood as instances of canonical ASCs (Goldberg, 2015). ASCs may provide a new categorical system where different forms and meanings of VPCs are generalized into (at least) four ASCs, namely intransitive motion, caused-motion, intransitive resultative,

and transitive resultative (Goldberg, 2015; Gorlach, 2005). For example, the following instances of six VPCs are to be understood and taught as the caused-motion construction, inheriting its form (NP-V-NP-Obl) and meaning (X causes Y to move Z):

He picked the coin up.	*The soldier put the gun down.*
Somebody put the plug in.	*She put the mask on.*
She threw it out.	*Chris brushed the dust off.*

A construction-based account of VPCs such as this has important cognitive advantages. First, it allows us to apply a unified account to the forms and meanings of VPCs, instead of treating each VPC as an individual lexical item which has a variety of idiosyncratic features. This effect reduces unnecessary cognitive burden and makes the teaching and learning of VPCs more efficient and effective.

More importantly, the construction-based account contends that the VPC constitutes an integral part of the comprehensive linguistic system. This comprehensive view informs us of what kind of linguistic knowledge is prerequisite to the learning of VPCs, as well as what kind of linguistic knowledge develops along with the learning of VPCs. For example, the idea that many figurative VPCs are examples of the resultative constructions may lead one to propose that the knowledge of resultative constructions facilitates as well as is facilitated by the learning of those figurative VPCs. Such information could potentially serve as an organizational basis for

enhancing the systematicity and efficiency of teaching and learning English as a foreign language.

5.2 Instructional Effects on Knowledge of ASCs

5.2.1 Grammaticality judgment

The second research question of the present study is whether construction-based instruction of VPCs improves Korean middle school students' knowledge of ASCs. In particular, the GJT was conducted to examine whether construction-based instruction of VPCs improves Korean middle school students' ability to identify grammaticality of English sentences.

As the summary of the results shows (see Table 5.7), it has been found that the overall mean scores increased throughout the test sessions but did not make a statistically significant between-test difference. However, some notable results were identified for different item types.

For grammatical sentences, the mean score of CG increased in the immediate posttest and then decreased in the delayed posttest, thus leading to no significant between-test difference. However, their responses to ungrammatical sentences exhibited statistically significant differences between the pretest and the delayed posttest ($p<.01$) and between the immediate and the delayed posttest ($p<.05$).

Table 5.7
Between-Test Analysis of CG Means for Item Types in GJT

Item Type	Pretest	Immediate Posttest	Delayed Posttest	Sig. difference (between-test)
Grammatical	5.59	5.82	5.41	*n/a*
Ungrammatical	5.05	5.18	6.09	Pre.**/Imm*<Del.
Intransitive Motion	2.73	2.59	3.09	*n/a*
Caused-Motion	3.23	3.00	3.09	*n/a*
Intransitive Resultative	2.64	2.86	2.23	Imm.>Del.*
Transitive Resultative	2.05	2.55	3.09	Pre.<Del.**
Total	10.64	11.00	11.50	n/a

* *adjusted p*<.05, ** *adjusted p<.01*

These varying results seem to indicate that the knowledge needed to accept grammatical sentences is different from that needed to reject ungrammatical sentences (Ellis, 2004; Gutiérrez, 2013; Munnich, Flynn, & Martohardjono, 1994). According to Gutiérrez (2013) and others, the judgment of a sentence as grammatical is made by implicit knowledge, while the judgment of a sentence as ungrammatical is made by explicit knowledge. This difference was very likely to exist in the GJT of the present study, because different types of responses were required in determining grammatical and ungrammatical sentences. The learners were not asked to provide any reason when marking a sentence as grammatical, but they were asked to underline and correct grammatical errors when marking a sentence as ungrammatical. Therefore, the CG learners' improved ability to identify ASC-related ungrammaticality seemed to indicate that the construction-based instruction of VPCs was effective in enhancing the explicit knowledge of ASCs.

It should be also noted that the significant mean increase for ungrammatical sentences occurred between the immediate posttest and the delayed posttest, which means that the learners' ability to identify ASC-related errors significantly improved during the four-week interval. One possible account of this improvement is that, during the four weeks, the learners may have made a generalization that the constructional knowledge of VPCs can apply to not only VPC but also non-VPC sentences.

Results of the GJT also revealed that, among the four ASCs tested, the transitive resultative construction is the most difficult one for Korean middle school students. In the pretest of the GJT, the mean score for the transitive resultative construction was the lowest in every group (see Figure 4.8). This result is consistent with the previous finding that the transitive resultative construction is one of the most challenging ASCs for L2 learners of English (Lee & Kim, 2011; Rah, 2013).

This finding may be ascribed to the effect of *markedness*, "asymmetries within categories" (Lakoff, 1987, p. 59). According to Sung and Yang (2016), the transitive resultative construction is more marked than other constructions, because it is the most syntactically and semantically complex in the hierarchical network of ASCs. Since a marked member of a category is known to be hard to learn, it is expected that EFL learners find it difficult to learn the transitive resultative construction.

A special remark is in order about the pedagogical effectiveness of construction-based instruction. In the posttests, a significant mean increase

was identified only for the transitive resultative construction, between the pretest and the delayed posttest ($p<.01$). Given that the mean score of the transitive resultative construction in the delayed posttest (=3.09) was the same as that of the intransitive motion construction or that of the caused-motion construction, it seems that the construction-based instruction helped the learners to improve their knowledge of the most marked ASC (i.e., transitive resultative) to the level of those less marked constructions.

Finally, the significant mean decrease for the intransitive resultative between the immediate and the delayed posttest (see Table 5.7) needs to be discussed. There seem to be two plausible accounts of this decrease. First, the learners in CG might have lost their ability to identify grammaticality of intransitive resultative sentences during the four-week interval. For example, both the immediate and the delayed posttest had a grammatical intransitive resultative sentence using the same verb *become* (i.e., *we became silent*; *they became loud*). The number of students who correctly judged these sentences as grammatical decreased between the immediate and the delayed posttest (i.e., from 17 to 14). Given that the two sentences seem to pose the same level of difficulty, the decreased number of students who correctly identified the *become* sentences as grammatical may indicate that some students in CG became less able to use the construction knowledge of the intransitive resultative in the delayed posttest.

Second, lexical difficulty may have affected the significant mean decrease for the intransitive construction. For example, the learners were given the

following ungrammatical sentences where adjectives (*angry, pale*) should have been used instead of adverbs (*angrily, palely*).

Immediate Posttest : *The teacher got angrily*
Delayed Posttest : *His face turned palely.*

In the immediate posttest, 14 students noticed ungrammaticality of the sentence *the teacher got angrily,* while the similar sentence in the delayed posttest (i.e., *his face turned palely*) was correctly marked as ungrammatical only by 7 students. This change seems to be related with the lexical difficulty: the adverb in the delated posttest (i.e., *palely*) is more difficult than that in the posttest (i.e., *angrily*), thus preventing the learners from pay due attention to other linguistic aspects of the sentence.

5.2.2 Sentence sorting

The SST measured another important aspect of ASC knowledge, namely sentence interpretation. That is, it was examined whether the construction-based instruction improved the learners' ability to interpret English sentences. The results found that, immediately after the instruction, the Cdev (i.e., deviation from constructions) decreased and Vdev (i.e., deviation from verbs) increased. This finding may indicate that the learners in CG became more dependent on ASCs and less dependent on verbs when interpreting English sentences (see Table 5.8).

Table 5.8
Between-Test Analysis of CG Means for Cdev and Vdev

Deviation Type	Pretest	Immediate Posttest	Delayed Posttest	Sig. difference (between-test)
Cdev	9.68	8.82	9.50	*n/a*
Vdev	2.55	3.59	2.95	*n/a*

Note. *Every value has been rounded to one hundredth.*

In the delayed posttest, however, this instructional effect seems to be lost as the Cdev and Vdev rebounded to their initial levels. This result may be ascribed to the observation that the students had difficulties in maintaining consistent attention. As note in Section 3.6.4, it was observed that many students paid less attention to the STT at the delayed posttest due to test fatigue and low facial validity. They were less attentive or conforming to the task guideline that the sentences should be sorted according to the meanings of the sentence. Instead, they might have focused on the easily notable patterns (i.e., verbs), with little effort made to look for semantic similarities among the sentences.

Another piece of evidence for the students' improved knowledge of ASCs was identified in the qualitative analysis of the learners' translation in the SST. In the pretest, the learners in CG had difficulties in interpreting English sentences with two postverbal components such as ditransitives (S-V-O-O) and caused-motions (S-V-O-L). Instead of using relevant ASC knowledge, the learners simply relied on a less marked ASC (i.e., the transitive construction; S-V-O) and overgeneralized irrelevant word- or phrasal-level

knowledge such as noun compounds and locative modifier, ending up with wrong interpretations of English sentences.

For example, a student in CG mistakenly applied the semantic structure of the locative modifier to the translation of a caused-motion sentence in the pretest, interpreting the sentence-final prepositional phrase (e.g., *onto the pan* in *Meg cut the meat onto the pan*) as modifying the preceding noun phrase (i.e., *the meat that was on the pan*). In the posttest, on the other hand, the same student produced a correct translation of an equivalent caused-motion sentence *Meg cut the ham onto the plate*, interpreting the sentence-final prepositional phrase (i.e., *onto the plate*) as a destination of movement[4]. Thus, it can be argued that the construction-based instruction of VPCs improved Korean EFL learners' knowledge for English sentence interpretation, preventing them from overgeneralizing irrelevant linguistic patterns.

Consequently, different types of overgeneralizations, including aforementioned one (i.e., locative modifier), started to be avoided after the construction-based instruction. In particular, the construction-based instruction helped the learners to overcome their overreliance on the matrix verb. In the pretest of the SST, the Cdev (=9.68) was much higher than the Vdev (=2.55), which indicates that the learners focused on the meaning of the verb when interpreting a sentence, with less consideration given to the constructional meaning. This overreliance on the matrix verb was reduced

[4] For more examples, see Section 4.4.2.

after the construction-based instruction, as shown in the increase of Vdev in the immediate posttest.

Although EFL learners' reliance on the meaning of the verb may be an effective reading strategy, it can lead to incorrect interpretation of English sentences. For example, the representative meaning of the verb *get* (i.e., obtain) does not go along well with the meaning of the caused-motion construction (i.e., X causes Y to move Z). If learners simply rely on the representative meaning of the verb when reading a caused-motion sentence such as *Laura got the coin into the hole*, they may make incorrect interpretations of the sentence. The overreliance on the matrix verb often caused such problems in the pretest phase, but the learners who received the construction-based instruction came to make more use of constructional knowledge and assign construction-wise contextualized meanings to verbs. For instance, the sentence *Laura got the ball into the net* was understood as a case of the caused-motion construction, and its matrix verb *get* was interpreted as a neutral cause of motion like *put.*

To sum up, the construction-based instruction of VPCs was effective in improving the learners' knowledge of ASCs, especially marked ones having two post-verbal components (e.g., transitive resultative). When the learners did not have the constructional knowledge of these marked ASCs, they tended to use a less marked ASC (i.e., transitive construction), overgeneralizing irrelevant lexical and/or phrasal knowledge for sentence interpretation. After the construction-based instruction of VPC, however, the

learners appeared to apply the constructional meanings to sentence interpretation, refraining from making incorrect overgeneralizations. This developmental pattern, where a transitive construction (i.e., X acts on Y) diverges into various causative constructions (e.g., X causes Y to become Z), seems coherent with the previous finding that there is a certain developmental sequence in the L2 learning of ASCs (Lee & Kim, 2011).

Finally, the present findings support Goldberg's (1995) constructionist idea that English sentence structures constitute a systemic whole, and the educational grammar framework of Yang (2010) in which a systematic understanding of sentential structures is considered prerequisite to principled and effective foreign language learning and teaching. In particular, VPCs have been considered to be rather exceptionally fragmentary and hard to learn (Dagut & Laufer, 1985; Goldberg, 2015), but this study shows that they are interconnected and constitute an integral whole with other constructions, and that the constructional system helps EFL learners learn them in a systematic and effective way.

CHAPTER 6. CONCLUSION

This chapter summarizes major findings of the study and concludes the study with pedagogical implications, limitations, and suggestions for future research.

6.1 Major Findings and Pedagogical Implications

The present study explored effects of construction-based instruction on Korean middle school students' learning of VPCs. The first major finding of the present study is that the construction-based instruction was more effective than the other types of instruction in teaching VPCs. In the immediate posttest, greater mean increases were identified for the CG than for the other groups, resulting in notable mean differences. In addition, these mean differences remained or even increased in the delayed posttest, which indicates a long-term positive influence of construction-based instruction.

The second major finding is that the construction-based instruction was more effective in helping the learners produce figurative and uninstructed VPCs. This finding may indicate that construction-based instruction is beneficial for learning semantically difficult VPCs (i.e., figurative VPCs) and gaining generalizable understandings of VPCs which allow L2 learners to use unfamiliar VPCs.

The last major finding is that learning VPCs as constructions (i.e., form-meaning pairings) improved the knowledge of ASCs. In particular, the

knowledge of marked ASCs such as the caused-motion and the transitive resultative construction improved after the construction-based instruction of VPCs. As the learners in CG came to use more constructional knowledge in the posttests, their overgeneralizations of irrelevant L2 knowledge began to disappear.

The findings of the present study suggest meaningful pedagogical implications for teaching and learning the VPC in EFL settings. The VPC represents a deviation from the common distinction between lexicon and syntax (Thim, 2012) and thus has not been discussed alongside "the 'core' phenomena of each such subdiscipline" (Dehé, 2002, p. 70). Consequently, the VPC has not been given due attention either in vocabulary teaching or grammar instruction.

This "neglective" understanding of VPCs is observed in the Korean 2015 revised national English curriculum (Ministry of Education, 2015), which lists 40 grammar patterns and 3,000 vocabulary items mandated to be taught to students at elementary or junior high schools in South Korea. Neither of the lists presents the VPC as a basic component that EFL students at Korean public schools should learn. Obviously this is a problem, given the finding that the learning of VPCs can contribute to the learning of ASCs, a core aspect of English grammar, and thus improve L2 learners' ability to process English sentences. A special focus should be given to the VPC in future revisions of the national English curriculum.

Another pedagogical implication is that construction grammar offers

effective ways to teach VPCs. It has been common practice to instruct the VPC as having idiosyncratic forms and meanings which cannot be accounted for by general syntactic and semantic rules. Although the existing approaches to the teaching of VPCs (e.g. Yasuda, 2010; White; 2012) have successfully adopted findings in cognitive linguistics such as conceptual metaphors (e.g. UP is completion) and end-weight principle (e.g., **turn off it*), there has been no comprehensive schema for relations between forms and meanings of VPCs.

Such a schema, however, is proposed in the framework of construction grammar, according to which VPCs inherit linguistic properties from canonical ASCs. This novel understanding may allow teachers to apply formal and functional structures of ASCs to the instruction of VPCs. Since this instructional approach facilitates learners to understand a great variety of VPCs as instances of a handful of ASCs, we can reasonably assume that this approach will have more lasting instructional impact (Yang, 2008, 2010), as confirmed in the present study. Hierarchical networks among ASCs also appear to impose a degree of systematicity, making instruction of VPCs more efficient and effective.

Finally, VPCs can be used to teach hard-to-learn marked ASCs such as caused-motion and transitive resultative, since the particles of VPCs can replace the sentence-final components of the marked ASCs such as prepositional phrases and verb phrases. For example, these pairs of non-VPC and VPC sentences —*put the gun on the ground* vs. *put the gun down*;

let them feel disappointed vs. *let them down*— seem to express the same events and have structural similarities. Therefore, VPC sentences can be used as good examples of such marked ASCs, and the learning of VPCs may contribute to the learning of ASCs. In fact, this approach that links VPCs to ASCs is also supported by empirical evidence in the research of first-language acquisition: L1 English-speaking children first produce NP-particle patterns (e.g., *towel down*) before the emergence of fully fledged sentences (e.g., *put the towel in the box*).

6.2 Limitations and Suggestions

A few practical limitations of the present study are worth mentioning to provide meaningful suggestions for future studies. First, the instruction, which was composed of twelve 20-minute-long lessons, was provided over a quite extensive period (i.e., four weeks). During this long period, the participants might have been exposed to VPCs through other channels such as movies and private education. It is also likely that some of the participants in CG learned grammatical rules about ASCs, for Korean middle school students and teachers consider English sentence structures to be important grammar knowledge. Therefore, a more intensive instruction of VPCs in a future study (although it is very difficult to design such intensive instruction given the restrictive conditions in public schools, including the number of English classes a week and the exclusive focus on prescribed textbooks) will identify (dis)advantages of each instruction type

in a more reliable fashion.

Second, the present study was conducted with seventh graders at a single middle school in Seoul, and thus it is inappropriate to generalize its findings to other EFL contexts at this moment. Only when similar observations are made in other EFL settings varying in terms of mother tongue, region, or student age, will it be possible to conclude that construction-based instruction is very effective in teaching VPCs to L2 learners.

Lastly, the construction-based instruction in the present study did not make an explicit link between VPC sentences and non-VPC sentences. For example, the instruction provided the overall form and meaning of a VPC sentence *she put it down* based on the properties of the caused-motion construction. However, it did not present that the VPC sentence has the same form and meaning as the non-VPC caused-motion sentence *she put it on the ground.* That is, the participants might have learned constructional forms and meanings of VPCs, not knowing that the same forms and meanings can be applied to non-VPC sentences. This limitation might account for why the students in CG showed just moderate improvement in their knowledge of ASCs.

Notwithstanding these limitations, the present study is significant since it is the first empirical effort to develop and administer construction-based instruction of VPCs and show its relative effectiveness in teaching VPCs. This novel approach, which accounts for the forms and meanings of VPCs in a comprehensive and constructional manner, provides an alternative to

traditional instruction of VPCs, which is restricted to either formal features or semantic compositions. In addition, the present study suggests that teaching VPCs as instances of canonical ASCs is effective not only for L2 acquisition of VPCs, but also for that of ASCs, shedding new light on the important issue of how to overcome many restrictions in EFL settings and make English language learning more efficient.

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APPENDICES

Appendix I. Instruction Materials Samples

Appendix II. Testing Materials

Appendix I. Instruction Materials Samples

1.1 Construction-Based Instruction

Unit 2. X가 Z로 이동한다: Part 1

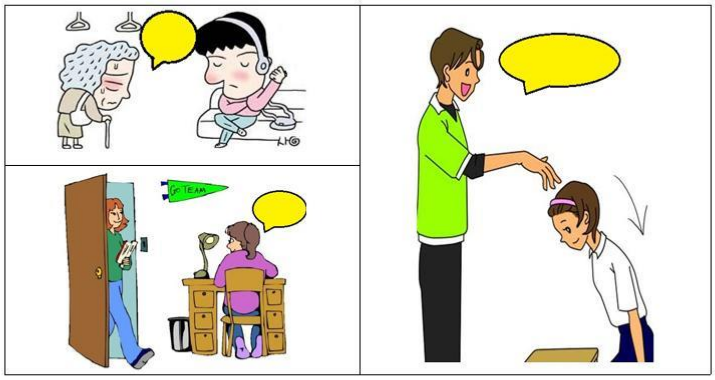
A

<스스로 이동하는 장면>에는 "X→Z"를 적으세요.
<누군가에 의해 옮겨지는 장면>에는 "X: Y→Z"를 적으세요.

(　　)　　(　　)　　(　　)

B

그림 속 상황을 보고 말풍선 안 대사를 <조각 동사>로 적어 보세요.



C

[보기]에 주어진 영어 문장들을 읽으면서 머리 속으로 장면을 그려 보세요. 그리고 문장의 "의미"에 대해 설명을 보고 괄호 안에서 올바른 내용을 선택(O)하세요

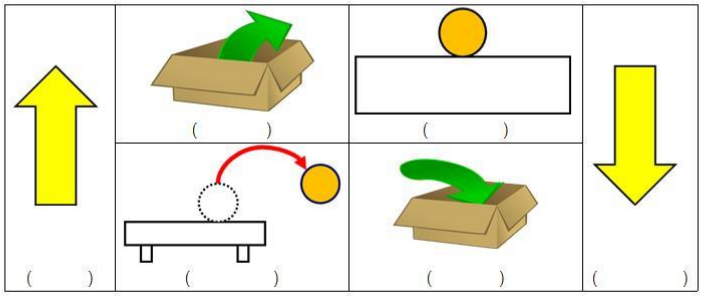
[보기]　1) The boy stood up.　2) The girl ran down.　3) Her sister came in.
　　4) The car got out.　5) Passengers got on.　6) The plane took off.

설 명
1　위 문장들은 (스스로 이동하는 / 무언가를 옮기는) 상황이다.
2　"이동 방법(예: 달리기)"은 (동사 / 조각말)을 보면 알 수 있다.
3　"이동 방향(예: 아래로)"은 (동사 / 조각말)을 보면 알 수 있다.

D

주어진 그림을 가장 잘 묘사하는 조각말을 [보기]에서 골라서 괄호 안에 적어보세요.

[보기] UP IN OUT ON DOWN OFF



※ 위 그림을 참고하여, 정반대 의미를 가진 조각말끼리 적어보세요.

♠ UP ↔ _____ ♠ IN ↔ _____ ♠ ON ↔ _____

E

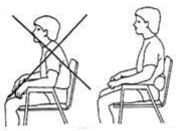
아래 그림에서 나타난 움직임을 묘사하는 조각말을 사용하여 <조각 동사>를 완성하세요.

[1]


[2]


[3]


[4]


[5]


[6]


1 The door opened and the bird flew __out__.

2 Mr. Ahmar fell _____ from the stairs. He was reading an English textbook.

3 Make sure you wear a bike helmet before you get ____.

4 The plane took ____ an hour late.

5 You should sit ____. Then, you can focus on the class.

6 Mr. Starr jumped ____, and the balls waved.

Unit 3. X가 Z로 이동한다: Part 2

A

[보기]에 주어진 문장을 읽고, 아래의 질문에 답하세요.

[보기] The boy stood up. The girl sat down. Her sister came in.
The car got out. Passengers got on. The airplane took off.

1. 위 문장들이 공통적으로 묘사하는 장면은?
   ① 사람/사물이 무엇을 얻는 장면
   ② 사람/사물이 어디로 이동하는 장면
   ③ 사람/사물의 상태가 바뀌는 장면

2. 위 문장의 공통적인 구조는?
   ① 주어 + 동사 + 목적어
   ② 주어 + 동사 + 보어
   ③ 주어 + 동사 + 조각말

B

위 A문항의 문장을 활용하여 아래의 표를 완성하세요.

주어	동사	조각말	주어	동사	조각말
The boy	*stood*	*up*			

C

위 A문항의 문장 중 두 개를 골라 그림으로 표현하세요.

예. The airplane took off.		
	YOUR OWN	YOUR OWN

D

그림에 나타나는 움직임을 보고 아래의 문장들이 맞으면 다시 한 번 적고, 틀리면 [보기]와 같이 틀린 부분을 표시하고 다시 고쳐서 적으세요.

	[보기] The man went ~~in.~~ → The man went up.		1 The lady came down. → _____.
	2 The boy ran in. → _____.		3 The girl walked in. → _____.
	4 The dog ran up. → _____.		5 The bird flew out. → _____.

E

Youtube 영상(Pancake Manor)을 시청하며 빈 칸에 up 혹은 down을 적으세요.

UP and DOWN Song ♪

Things go ____, then things come ____.
____ in the air, then ____ to the ground.
Toss a ball ____ in the air. It goes ____ and ____
Throw a sock ____ in the air. It goes ____ and ____.
Look around and see ____! ____!
Things go ____, then things come ____.
____ in the air then ____ to the ground

F

글의 맥락에 적절한 움직임을 나타내는 <조각 동사>를 [보기]에서 찾아 적으세요.

[보기]	go up	get off	moved in
	fell out	stay on	knelt(무릎 꿇었다) down

1 The horse was jumping up and down, but I could ____ ___.
2 (버스 안 대화) Now I should ___ ___. See you tomorrow. – Bye!
3 He read her a love letter. Then, he _____ _____ and gave her a diamond ring.
4 When we _____ ___, I had no friends in this town.
5 I was eating very sticky(=끈적끈적한) jelly and suddenly a tooth ___ ___.
6 The cat was meowing on a tree. How could she ___ ___ there?

G

대화 맥락에 적절한 움직임을 나타내는 <조각 동사>를 [보기]에서 찾아 적으세요.

[보기] stand up sit down come in get out get on take off

1 사장실에서 사장과 직원 사이의 대화

Chris: (똑똑똑)
Boss: _____ ___
Chris: (사장실 문을 조심스럽게 열고 들어온다)
Boss: Welcome, Chris. (소파를 가리키며) Please ___ _____.
Chris: (바닥에 한쪽 무릎을 꿇으며) Boss. I'm so sorry.
Boss: Hey, _____ ___. What's the matter?
Chris: I just broke the *porcelain. It was a mistake.
Boss: WHAT?!? Don't you know how expensive that is?
Chris: Please, forgive me.
Boss: ____ ____! I don't want to see you again!

*porcelain: 도자기

2 공항에서 여행 가는 친구 사이의 대화

A: Ji-Young, hurry up, or we cannot _____ _____.
B: Why are you such in a hurry?
A: The plane is going to _____ ____ in 10 minutes.
B: Really? Oh, my goodness. It's already ten to four. RUN!

1.2 Particle-Centered Instruction

Unit 3. 조각말 OUT: Part 1 – 구체적 의미(밖으로) & 추상적 의미(사라짐)

A

<조각 동사>에서 조각말 OUT과 조각말 IN은 반대의 뜻으로 사용됩니다. [보기]에는 앞 장에서 소개된 <in이 쓰인 조각 동사>들과 그것들의 반의어인 <out이 쓰인 조각 동사>가 제시되어 있습니다. 밑줄 친 반의어를 사용하여 아래의 문장을 완성하여 보세요.

[보기] 1~3번	[보기] 4~6번	[보기] 7~9번
jump in ⇔ jump out	come in ⇔ come out	take in ⇔ get out
check in ⇔ check out	rub in ⇔ rub out	let in ⇔ let out
plug in ⇔ plug out	*reel in ⇔ reel out	tune in ⇔ tune out

*reel (낚시)줄을 감다

1 When you leave the room, you should _____ the heater ____.
2 Hotel guests should _____ ____ by noon. If not, they should pay more.
3 Just before the train crushed the car, the driver _____ ____ and ran away.
4 If you make a mistake, just ____ it ____ and rewrite the answer.
5 Fishing is simple. First, ____ ____ a big bait(미끼). Second, wait.
6 Mom put the dirty sheet in boiling water and then all the wine stain came out.
7 This song keeps playing in my head. I can't ____ it ____ of my mind.
8 During the class, the students often _____ ____ and do something else.
9 The girl cried, "Who ___ the dogs ____?"

B

위 A문항의 <조각 동사> 중에, "OUT"이 구체적인 의미로 사용된 경우와 추상적인 의미로 쓰이는 경우가 있습니다. "OUT"의 의미에 따라, 아래의 표에 <조각 동사>를 적어 보세요.

OUT의 구체적 의미[장소 이동] = "밖으로"	OUT의 추상적 의미 = "사라짐, 없어짐"

C

[보기]에는 OUT이 "밖으로"라는 구체적인 뜻으로 사용된 <조각 동사>가 제시되어 있습니다. 이를 사용하여 아래의 그림을 묘사하는 문장을 완성해 보세요.

[보기] fly out get out kick out take out

[1]

[2]

[3]

[4]

1 The door opened and the bird _____ ____.
2 Jack made a big mistake. So, the boss will _____ him ____.
3 The prisoner digged a long tunnel. He will soon ____ ____.
4 The brave man jumped into the burning house and he _____ ____ a baby.

D

[보기]에는 OUT이 "사라짐, 없어짐"이라는 뜻으로 사용된 <조각 동사>가 제시되어 있습니다. [보기]의 표현을 사용하여 아래의 그림을 묘사하는 문장을 완성하고 우리말로 해석하세요.

[보기] cross out go out put out run out

[1] 

[2] 

[3] 

[4] 

1 Cathy drove to the gas station because the oil was _____ ____.
→ 우리말 해석 = _____

2 (가수 오디션에서) I don't think she is a good singer. Let's _____ her ____.
→ 우리말 해석 = _____

3 The light suddenly _____ ____. So, we were very scared.
→ 우리말 해석 = _____

4 Susan called 911. They arrived just in 2 minutes and ____ ____ the fire.
→ 우리말 해석 = _____

E

그림을 참고하여 밑줄 친 <조각 동사>가 무슨 뜻인지 유추해 보세요.

[1] 

[2] 

[3] 

[4] 

1 She often <u>leaves out</u> the letter *E*. [뜻: _____]
2 I tried to <u>wash out</u> the stain on the shirt. [뜻: _____]
3 He's <u>locked</u> himself <u>out</u> of his car. [뜻: _____]
4 Can't find the exit(출구)? I'll <u>show</u> you <u>out</u>. [뜻: _____]

F

<조각 동사>를 사용하여, 영화 "Inside out"의 대본을 완성해 보세요.

[상황] 전학 간 학교에서 자기소개

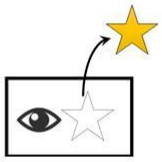
RILEY: But everything's different now.
Since we moved... (crying ㅠ_ㅠ)

TEACHER: Thank you, Riley. I know it can be tough moving to a new place, but we're happy to have you here. Alright everyone, _____ your history books _____ and turn to chapter seven.

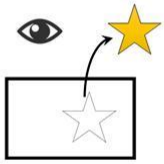
Unit 4. 조각말 OUT: Part 2 – 추상적 의미(나타남) & 종합

A

조각말 OUT은 "사라짐"과 "나타남"이라는 두 개의 다른 뜻으로도 사용됩니다.
아래의 두 그림이 "사라짐"과 "나타남" 중 어떤 의미를 나타내는지 체크(√)하세요.



(나타남 vs 사라짐)



(나타남 vs 사라짐)

B

[보기]에는 OUT이 "나타남"이라는 뜻으로 사용된 <조각 동사>가 제시되어 있습니다.
그림에 적절한 <조각 동사>를 괄호 안에 적어보세요

[보기] come out point out stand out

		
( )	( )	( )

C

위 B문항의 그림을 묘사하는 문장을 완성하고, 밑줄 친 문장을 우리말로 해석하세요.

1 You can easily find who Linda is. She ( ) in every group.
→ 우리말 해석 = _____

2 The movie "NYSM 2" will ( ) in June 10. I *look forward to it.
→ 우리말 해석 = _____

*look forward to~ ~을 기대하다

3 Somin is always kind. The teacher ( ) her ( ) as the class president.
→ 우리말 해석 = _____

D

그림을 참고하여, 밑줄 친 <조각 동사>의 뜻을 추측하여 아래 괄호에 적어보세요.

[1]

[2]

[3]

1 Ella always ***lays out*** clothes and shoes. Her dream is a fashion designer.
[ ]

2 When a war ***breaks out***, many people are injured or killed.
[ ]

3 After a few minutes, she finally ***figured out*** the problem.
[ ]

E

아래 다섯 문장에서 밑줄 친 OUT이 어떤 의미를 가지는지 체크(√)하세요.

영어문장	밖으로	사라짐	나타남
1 I became happy because my favorite song came ***out***.			
2 We went to the gas station, because the oil ran ***out***.			
3 Can't find the exit(출구)? I will show you ***out***.			
4 I tried to wash ***out*** the stain on the shirt.			
5 If you make a mistake, rub it ***out*** and rewrite.			
6 Her parents found ***out*** that Minji had a boyfriend.			

F

아래 빈 칸에 가장 적절한 <두 단어 동사(단, out이 반드시 포함)>를 적어 넣으세요.

1 ____ ____ the park map on the desk. Let's find some *attractions to ride.
2 I was eating very **sticky jelly. ***Suddenly, a tooth ____ ____.
3 The light suddenly _____ ____ and everyone screamed.
4 Computers have a lot of personal information. You should be careful when you _____ them ____.
5 When the fire _____ ____, Susan called 911.
Fire fighters arrived in 2 minutes and ____ it ____ soon.
6 The singer entered a very famous university but _____ ____ soon,
because her new album _____ ____ and she didn't have any time for studying.
7 The name was written in Chinese, but I was able to _____ it ____.

*attractions 놀이기구 **sticky 끈적끈적한 ***suddenly 갑자기

1.3 Traditional Instruction

Unit 8. 조각말 DOWN: Part 2

A 아래에 제시된 "close up"과 "close down"은 어떤 의미 차이를 가질까요?

1 Why don't we close up and go out for lunch?
2 Many shops have closed down because of the recession(불황).

♠ 의미 차이 = _____

B 그림의 상황에 적절한 <조각 동사>를 [보기]에서 찾아 적어보세요.

[보기]] break down close down gun down
shut down tie down turn down

[1]

(shut down)

[2]

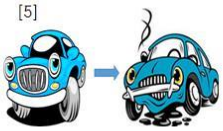

( )

[3]

( )

[4]

( )

[5]

( )

[6]

( )

C 위 B문항 그림을 묘사하는 영어문장을 완성하세요. 각각의 그림에 해당하는 <조각 동사>를 사용하세요.

1 If you press this button for 3 seconds, the phone will _____ _____.
2 There is no kid in the town. So, the school will _____ _____.
3 Jack proposed to Ella. But she _____ it _____ in front of many people.
4 My sister becomes sad when she is ____ _____.
5 Our car _____ _____ on the *freeway. We were scared.
6 The hunter became very happy after he _____ _____ a **deer.

*freeway 고속도로 **deer 사슴

D

아래 문장에서 조각 동사에 밑줄 치고, 그 아래에 의미를 적어보세요.

1 When the police came in, the robber put the gun down.

2 The boy grew up so fast that 10 years seemed like 10 weeks.

3 If you have a fever, ask your doctor how to bring the temperature down.

4 Min-Jung saw a bill and quickly picked it up.

5 The couple fought a lot. I am not surprised to hear that they finally broke up.

6 Your computer is making a strange sound. We'd better shut it down.

E

괄호 안의 단어를 배열하여 문장을 완성하세요.

1 Jack said to the robber, "Please, (the gun, put, down)."
⇒ Jack said to the robber, "Please. ."

2 Focus on your back muscle, (the bar, pull, down) below your chin.
⇒ Focus on your back muscle, below your chin.

3 The hunter became very happy after he (gunned, a deer, down).
⇒ The hunter became very happy after he .

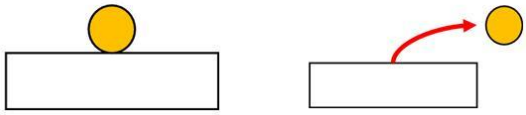
4 She told me the movie schedule, but I didn't (it, take, in).
⇒ She told me the movie schedule, but I didn't .

5 The fire fighter jumped into the fire and (took, a baby, out).
⇒ The fire fighter jumped into the fire and .

6 It might be difficult to (put, a tent, up) by yourself.
⇒ It might be difficult to by yourself.

Unit 9. 조각말 ON: Part 1

A 주어진 그림 아래에 해당하는 조각말을 적어보세요.



(　　)　　(　　)

B 그림의 상황에 적절한 <조각 동사>를 [보기]에서 찾아 적어보세요.

[보기]　　get on　　put on　　stay on

[1] 

[2] 

[3] 

[4] 

(　　)　　(　　)　　(　　)　　(　　)

C 조각 동사를 사용하여 위 그림을 묘사하는 영어문장을 완성하세요.

1 A kind man gave his shirt to a poor man and helped him ___ it __.

2 The horse was jumping around. But the man could ____ ___.

3 You should wear a bike helmet before you ___ ___.

4 I found a nice cap and asked, "Can I ___ this ___?"

D 다음 대화는 영화 "Inside Out"에서 가져온 것입니다. 빈 칸에 들어갈 <조각 동사>는?

※ 상황 = 꿈센터(Dream Production)에서 의상 준비

Joy는 근처에서 강아지 의상을 발견하고 Sadness에게 그것을 넘긴다

JOY: Ooh, Riley loves dogs. ____ this ___!
SADNESS: I don't think that'll work.

E 그림의 상황에 적절한 <조각 동사>를 [보기]에서 찾아 적어보세요.

[보기] pass on march on carry on

[1]

( )

[2]

( )

[3]

( )

F 조각 동사를 사용하여 위 그림을 묘사하는 영어문장을 완성하세요.

1 The angry people _____ ___ and arrived at the castle.

2 When you get the scissors, _____ them ___ to the next person.

3 The boy is proud of the family business. He decided to _____ it ___.

G [보기]에 주어진 <조각 동사>를 활용하여 아래의 대화를 완성하고, <조각 동사>의 뜻을 추측하여 괄호 안에 적어 보세요.

[보기] go on live on read on

1 The book was very exciting. Judy _____ ___ until dawn. ( )

2 The meeting _____ ___ a lot longer than I expected. ( )

3 Her death is a great loss, but her memory will ____ ___. ( )

H 오늘 배운 조각 동사 중 특이한 것을 찾아 적어보세요,

조각 동사	우리말 뜻

Appendix II. Testing Materials

2.1 Sentence Completion Task

IRB No. 1701/003-008 유효기간: 2018년 1월 22일

문장 완성하기 (Sentence completion): 사전시험(Pretest)

__학년 __반 __번

※ 아래 상자에 주어진 단어를 맥락에 맞게 활용하여 문장을 완성하세요.

up	down	in	out	on	off

No.	Sentences	
1	During the class, Richard stood _____ and moved out.	
2	Jackson returned home from the travel because his money ran _____.	
3	There's too much noise in here. Can you keep it _____? I'm trying to sleep.	
4	Marion walked to the *projector, turned it _____, and showed some pictures.	**project: 프로젝터*
5	When gum got *stuck in her hair, Jimin cut it _____.	**stuck: 들러 붙은*
6	Sally was waiting at the door, but nobody asked her _____.	
7	It is going to rain soon. Would you like to come _____ and have a drink?	
8	Ella's grandparents brought her _____. They are like her parents.	
9	A: May I speak to Sally? B: Hang _____—I'll see if she's still here.	
10	We will make posters about nature. We will hold them _____ in front of the factory.	
11	After a big fight, the couple broke _____.	
12	My car broke _____, so I took a bus.	
13	When your eyes feel heavy, put this cream around them and rub it _____.	
14	I don't know who wrote this song, but I'll find it _____.	
15	Paul walked _____, *slamming the door.	**slam: 쾅 닫다*
16	Get _____. The train will leave soon.	
17	Judy will be on vacation next week, so someone should fill _____ for her during the vacation.	
18	What are you doing with that *knife? Put it _____!	**knife: 칼*
19	The *stain on the clothes will never come _____.	**stain: 얼룩*
20	The phone in the bag started to ring. Rinda took it _____ and saw who was calliing.	
21	I like this shirt. Can I try it _____?	
22	The *bomb went _____, but luckily there was no one in the building.	**bomb: 폭탄*
23	Why don't you take a week _____ — you need a *break.	**break: 휴식*
24	The stairs to the *basement are very long. Be careful when you go _____.	**basement: 지하실*

2.2 Scene Description Test

2.2.1 Images of video clips in SDT

Back off

Break down

Check in

Eat up

Grow up

Run out

Stand up

Turn on

2.2.2 Test Paper of SDT

IRB No. 1701/003-008 유효기간: 2018년 1월 22일

장면 묘사

_학년 __반 __번

※ 주어진 영상을 보고, 그 내용에 따라 아래 영어 문장의 빈 칸을 채우세요.

No.	Test sentence
(예)	Our goal was a cemetery. The doctor _marked_ it __out__ on the map. *cemetery=묘지
(예)	When the monster showed her fire, she _backed_ __off__.
1	Mr. Dracula was angry when his favorite drink _____ ____.
2	Ms. Son _____ a day _____ in a week.
3	The box was very heavy, so the doctor ____ it ____ on the table
4	The statue was falling, so he _____ it _____ with his hands.
5	The monkey said, "It is fun. _____ _____ for a moment. I will bring my mat."
6	There was too much noise, so he said, "Can you _____ it _____?"
7	A black man looked back and _____ _____.
8	During the race, the bikes' wheels _____ _____. It looked very dangerous.
9	After the kids _____ _____, the bus turned into a *plane. *plane=비행기
10	Kids do not grow up alone. Their parents _____ them _____.
11	The man opened the door and said, "Please, _____ _____."
12	Mr. Dracula knocked, and then a witch _____ him _____.
13	He put sun cream on his belly and _____ it _____.
14	This is how to peel a pineapple. First, _____ the *ends _____. *ends=끝부분
15	A man was driving, but the car suddenly _____ _____.
16	The *temperature _____ _____, so he felt chilly. *temperature=기온
17	The *bomb _____ _____, so a man got hurt. *bomb=폭탄
18	The couple _____ _____ last week.
19	Are you watching 무한도전? Mr. Yang is _____ _____ for Mr. Jung.
20	She has many dresses. Before going out, she _____ them_____.
21	We don't know who was the *criminal. The *detective is trying to _____ it _____. *criminal=범인, *detective=탐정
22	The man found the brown book in the box and _____ it _____.
23	The doctor told the monster to _____ _____.
24	He _____ the radio _____, and a song came out.

2.3 Grammaticality Judgment Task

IRB No. 1701/003-008 유효기간: 2018년 1월 22일

문법성 판단 평가(Grammaticality Judgment Test): 사전시험(Pretest)

__학년 __반 __번

※ 주어진 문장에 아래와 같이 점수를 부여(O표)하세요.

1점을 부여한 경우, 문법적으로 틀렸다고 생각하는 부분에 밑줄을 긋고 바르게 고치세요.

- 1점: 문법적으로 틀림 - 2점: 모르겠음 - 3점: 문법적으로 맞음

순서	영어문장	점수		
1	I sent the letter to my grandmother.	1	2	3
2	The kid his dog into the river pushed.	1	2	3
3	They quiet became.	1	2	3
4	The bird flew over the hill.	1	2	3
5	The sky turned red.	1	2	3
6	She sneezed the tissue the table. (sneeze: 재채기를 하다)	1	2	3
7	She cut the bag open.	1	2	3
8	The ball rolled a garden. (roll: 구르다)	1	2	3
9	The kid got excited.	1	2	3
10	Jack hammered the spoon flat. (hammer: 망치질하다; flat: 평평한)	1	2	3
11	He the bear dead shot.	1	2	3
12	I put the book on the table.	1	2	3
13	He made the girl happily.	1	2	3
14	The bottle broke openly. (broke: break[깨지다]의 과거형)	1	2	3
15	A cat out of the box jumped.	1	2	3
16	He went to the station. (went: go의 과거형)	1	2	3

2.4 Sentence Sorting Task

IRB No. 1701/003-008 유효기간: 2018년 1월 22일

Sorting test (pretest)

학년: ___ 반 : ___ 번호 : ___

◈ **지시에 따라 과제를 수행하시오.**

1. 다음 16개의 제시된 문장들을 잘 읽고 그 의미(뜻, 해석)를 우리말로 적으시오.

(1) Chris threw Linda an eraser.
의미 (뜻) : _____

(2) Laura got the coin into the *hole. *hole: 구멍
의미 (뜻) : _____

(3) Nancy cut the ball open.
의미 (뜻) : _____

(4) Lyn threw the chair *apart. *apart: 조각난
의미 (뜻) : _____

(5) Lee got the letter.
의미 (뜻) : _____

(6) Pat threw the book onto the desk.
의미 (뜻) : _____

(7) Kim took the box into the car.
의미 (뜻) : _____

(8) Amy threw the ring.
의미 (뜻) : _____

(9) Jeniffer cut Terry a tomato.
의미 (뜻) : _____

(10) Paula took Sue a notebook.
의미 (뜻) : _____

(11) Dana got the car fixed. *fixed: 고쳐 진
의미 (뜻) : _____

(12) Barbara cut the banana.
의미 (뜻) : _____

(13) Rachel took the tower down.
의미 (뜻) : _____

(14) Beth got Liz a present.
의미 (뜻) : _____

(15) Meg cut the meat onto the pan.
의미 (뜻) : _____

(16) Larry took the spoon.
의미 (뜻) : _____

1

2. <보기>는 1번 문제에서 해석했던 16개의 영어 문장들입니다. 이들을 4개의 문장씩 네 그룹으로 분류하세요. 이 때, 각각의 문장이 가진 의미를 중심으로 분류하여, <문장분류> 표 안에 문장의 번호를 적으세요.

<보 기>

Example sentences (16문장)

(1) Chris threw Linda an eraser.	(9) Jennifer cut Terry a tomato.
(2) Laura got the coin into the hole.	(10) Paula took Sue a notebook.
(3) Nancy cut the ball open.	(11) Dana got the car fixed.
(4) Lyn threw the chair apart.	(12) Barbara cut the banana.
(5) Lee got the letter.	(13) Rachel took the tower down.
(6) Pat threw the book onto the desk.	(14) Beth got Liz a present.
(7) Kim took the box into the car.	(15) Meg cut the meat onto the pan.
(8) Amy threw the ring.	(16) Larry took the spoon.

<문장분류>

Group A		Group B		Group C		Group D	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

3. 위와 같이 분류한 이유를 아래의 표 안에 구체적으로 작성해 주세요.

<분류 기준>

Group A	Group B	Group C	Group D

국 문 초 록

구문문법(Goldberg, 2015)에 따르면, 영어 동사-첨사 구문은 형태와 의미의 짝으로서 사역이동구문 및 타동결과구문 등 영어의 주요 논항구조구문으로부터 형태적, 기능적 자질을 상속받는다. 본 연구는 한국 중학생들에게 동사-첨사 구문을 가르치기 위하여 구문기반 교수를 개발하였고, 그것의 교육적 효과를 측정하였다.

구문기반 교수의 효과는 첨사중심 교수 및 어휘적 교수의 효과와 비교되었다. 따라서 학생들은 세 개의 교수 집단(구문기반 교수 집단, 첨사중심 교수 집단, 어휘적 교수 집단)으로 나뉘었다. 모든 교수 집단은 12차시의 수업과 3번의 평가 회기(사전, 사후, 지연사후)에 참여하였다. 각 평가 회기에서 학생들은 네 개의 과업을 수행하였다: 문장 완성, 장면 묘사, 문법성 판단, 문장 분류. 첫 두 과업은 동사-첨사 구문의 사용을 평가하였고, 나머지 두 과업은 논항 구조 구문의 지식을 검사하였다.

주요실험결과는 다음과 같이 요약된다. 첫째, 구문기반 교수가 동사-첨사 구문의 정확한 발화에 더 효과적인 것으로 나타났다. 특히, 문해적 동사-첨사 구문보다 더 어렵다고 알려진 비유적 동사-첨사 구문을 사용함에 있어서 구문기반 교수 집단의 학습자들이 유의미한 향상을 보였다. 구문기반 교수 집단의 학습자들은 또

한 교수되지 않은 동사-첨사 구문의 사용에 있어서도 다른 두 교수 집단의 학습자들보다 더 큰 향상을 보였다.

둘째, 구문기반 교수가 학습자들의 논항구조구문 지식을 향상시켰다. 특히 타동결과구문과 사역이동구문과 같은 유표적 구문에서 두드러진 향상을 보였다. 구문기반 교수를 받은 학습자들은 논항구조구문 관련 오류를 판별함에 있어서 유의미한 향상을 보였으며, 주동사에만 의존하지 않고 구문적 지식을 함께 활용함으로써 영어 문장 해석의 오류가 감소하였다.

본 연구는 한국인 영어 학습자들이 비유적 동사-첨사 구문과 유표적 논항구조구문과 같은 어려운 구조를 학습함에 있어서 구문기반 교수가 효과적임을 밝히며, 외국어 교수 및 학습의 효율성을 제고하는 방안으로서 언어학 이론에 입각한 체계적인 접근을 제안한다.

주요어: 구문문법, 외국어 교수, 동사-첨사 구문, 논항구조구문

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