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교육학석사학위논문

Instructional Effects of English Verb-Particle
Construction on the Learning of Prototypical
Caused-Motion and Resultative Constructions
by Korean High School Students

구동사의 구문문법기반 교수가 한국인 고등학생의
사역이동구문과 결과구문의 습득에 미치는 영향

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박 보 라 미

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by
Borami Park

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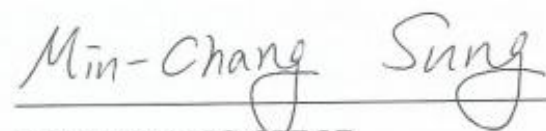


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APPROVED BY THESIS COMMITTEE:



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ABSTRACT

The present study explored the effects of instruction of verb-particle construction (VPC) based on construction grammar on the learning of the prototypical caused-motion construction (CMC) and transitive resultative construction (TRC) by Korean high school students. According to Celce-Murcia and Larson-Freeman (1999), VPC can be divided into three categories based on its semantics: literal VPC, aspectual VPC, and idiomatic VPC. Goldberg (2015) regards VPC as one of the important constructions in English and contends that it inherits functional and formal properties from CMC and TRC, bearing semantic and syntactic resemblances. That is to say, literal VPC is a type of CMC and aspectual VPC is a form of TRC. The current study investigated effects of learning literal VPC (i.e., a subtype of CMC) on the acquisition of the prototypical CMC and those of learning aspectual VPC (i.e., a subtype of TRC) on the acquisition of the prototypical TRC.

The participants for the study were divided into two instructional groups: a literal VPC instructional group and an aspectual VPC instructional group. Both groups participated in two lessons and two testing sessions (i.e., a pre-test and a post-test). The pre- and post-tests examined the acquisition of the prototypical CMC and TRC by the participants and two tasks were administered: picture description and English-to-Korean translation. The former tested the participants' production of the prototypical CMC and TRC, while the latter examined the participants' comprehension of the prototypical CMC and TRC.

Results revealed that learning literal VPC based on the construction grammar framework enhanced the acquisition of the prototypical CMC. The literal VPC group showed greater improvement than the aspectual VPC group in both production and comprehension tasks. As for the acquisition of the prototypical TRC, the aspectual VPC group experienced an enhancement in the acquisition of TRC. Meanwhile, learning literal VPC also facilitated the acquisition of the prototypical TRC, suggesting that CMC and TRC are two instance constructions of one category and that constructions do not exist independently but are connected to one another in a hierarchical network. Improvements in the acquisition of the prototypical TRC were more conspicuous than the learning of the prototypical CMC in both groups.

These findings showed that the construction grammar-based instruction of VPC promotes the acquisition of the linguistically related constructions (i.e., prototypical CMC and TRC), offering pedagogical implications on English education in Korea and teaching and learning VPC in EFL settings.

Key Words: construction grammar, verb-particle construction, phrasal verb, caused-motion construction, resultative construction, English argument structure construction

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Chapter 1. INTRODUCTION

This study aims to explore the effects of construction grammar-based instruction of verb-particle construction on the learning of prototypical caused-motion construction and resultative construction by Korean learners of English. This chapter introduces the current study with its theoretical framework and necessity. Also, the problem and purpose of the study are discussed, which are followed by the research questions.

1.1. Statement of the Problem and Purposes of the Study

Caused-motion construction (hereafter, CMC) and transitive resultative construction (TRC, henceforth) have been intensively studied in cognitive linguistics, acknowledging the importance of them in English language acquisition. CMC (e.g., *She put the book in the box*) represents the spatial meaning of ‘X causes Y to move Z,’ and the prototypical form is [Sub V Obj Obl] where Obl slot is filled with prepositional phrases (Goldberg, 1995). The spatial and movement events are fundamental to human cognition (Tomasello, 1098), and how to encode them into lexicalized forms is significant since it provides the core structuring principles for many extended meanings that are not fundamentally spatial (Choi & Bowerman, 1991; Goldberg, 1995). Thus, learning to use CMC is a very crucial part of children’s grammatical development in that not only it indicates the essential

concept in languages, i.e., motion events, but also the use of preposition is a major device in English for indicating syntactic relations (Tomasello, 1987). In other words, the acquisition of CMC can lay the groundwork for learning other constructions and linguistic concepts.

TRC (e.g., *He hammered the metal flat*) also represents one of the scenes that are basic to human experience, which is ‘X causes Y to become Z,’ with its prototypical form of [Sub V Obj RP] where adjectival phrases usually fill in RP slot (Goldberg, 1995). It is the extended construction of CMC since the change of the location (i.e., *The book moved in the box*) in the constructional meaning of CMC is metaphorically extended to the constructional meaning of TRC, i.e., the change of the state (i.e., *The metal became flat*) (Goldberg, 1995, 1999). The acquisition of TRC is regarded as canonical in advanced English speakers. According to Hawkins and Buttery (2010), TRC is a criterial construction which decides the speaker to be B2 level (intermediate-advanced) on a six-level scale of the CEFR (Common European Framework of Reference). In sum, TRC has great importance in that it represents one of the basic notions of human experience, which is ‘someone causes something to change state,’ and is the critical construction to be advanced in language development.

Despite the importance of CMC and TRC in language acquisition, they have been reported as the most challenging constructions to learn for Korean EFL learners. Lee and Kim (2011) conducted a translation test for 65 Korean EFL learners and found out that TRC was the hardest construction to acquire, followed by CMC among eight different English constructions. Kim et al.’s (2013)

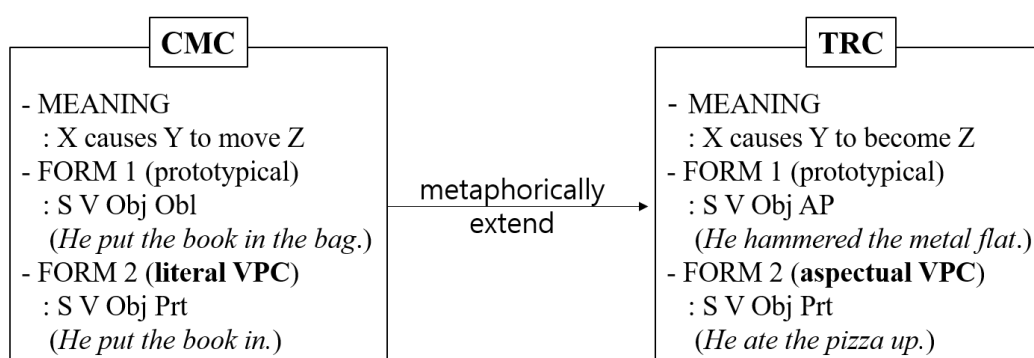
investigation was consistent with this result that TRC was not fully acquired even by the advanced learners in Korea and CMC followed. In addition, it was revealed that Korean EFL learners presented different processing compared to the English speakers when processing CMC and TRC (Kim, Ko, & Yang, 2020; Sung, 2019). Therefore, an effective and systematic approach to CMC and TRC learning in Korean EFL setting is required.

Notably, Goldberg (2015) provided one of the linguistic analyses regarding a lexicalized form of CMC and TRC, verb particle construction (hereafter, VPC;¹ e.g., *She picked the coin up*). Goldberg examined VPC as a construction, a form-meaning correspondence which functions as a primary unit to build language ranging from morphemes of words to complex sentence structures (Fillmore, 1985, 1988; Goldberg, 1995, 2006). Goldberg notes that literal VPC (e.g., *She put the book in*), as a construction, inherits functional and formal properties from CMC bearing semantic and syntactic resemblance. She further notes that the meanings of aspectual VPC (e.g., *She turned the TV on*) are metaphorically extended from the literal VPC (e.g., *She put her hand up*). The object of the literal VPC undergoes the change of the location (i.e., *Her hand moved to the upper position*), whereas the object of the aspectual VPC experiences the change of the state (i.e., *The TV became on*). This implies that aspectual VPC inherits linguistic properties from TRC since both denote the change of the state (Goldberg, 2015; Sung, 2018). In other words, literal VPC is one of the lexicalized forms of CMC and aspectual VPC is one of the

¹ In the present study, intransitive VPC was not on the focus and only transitive VPC was studied. Thus, VPC refers to transitive verb-particle construction, henceforth.

lexicalized structures of TRC. The relationship of VPC, CMC and TRC can be presented as in Figure 1.1.

Figure 1.1. The Relationship of VPC, CMC and TRC



As illustrated in Figure 1.1., VPC is related with CMC and TRC. More specifically, literal VPC is a form of CMC, while aspectual VPC is a form of TRC. CMC, with the constructional meaning [X causes Y to move Z], has the prototypical form [S V Obj Obl] as well as another form, literal VPC. Note that both forms, [S V Obj Obl] and [S V Obj Prt], are similar to each other in which the only difference appears in the last argument (i.e., Obl vs. Prt). Likewise, TRC, with the constructional meaning [X causes Y to become Z], has two forms: the prototypical form [S V Obj AP] and the aspectual VPC form [S V Obj Prt]. Again, the two forms are similar with each other with the only difference appearing in the last argument (i.e., AP vs. Prt). Hereafter in this study, FORM 1(S V Obj Obl) of CMC is referred to as the prototypical CMC and FORM 1 (S V Obj AP) of TRC is called the prototypical TRC. Given that CMC metaphorically extends to TRC, it can be

concluded that literal VPC can be metaphorically extended to TRC because it is a form of CMC; given that TRC is metaphorically extended from CMC, it can be concluded that aspectual VPC is metaphorically extended from CMC because it is a form of TRC (Goldberg, 2015; Sung, 2018). That is, VPC is linked to CMC and TRC. More specifically, literal VPC is more related to the prototypical CMC, while aspectual VPC is to the prototypical TRC.

This systematic linkage of CMC, TRC, and VPC can also be found in the developmental patterns of first language acquisition. Children whose first language is English depend heavily on the sole particles at a very early age in communication with their caregivers (Bloom, 1973; Choi & Bowerman, 1991; Gopnik, 1980; Tomasello, 1987). For example, they say *out* when they want to go outside, *up* when to ask caregivers to pick them up, or *down* when to sit down. Dependency on particles is naturally extended to VPC (e.g., *Pour it in*), verb preposition combinations (i.e., CMC), and verb resultant phrases (i.e., TRC) as they grow (Bloom, 1973; Choi & Bowerman, 1991; Gopnik, 1980; Tomasello, 1987). Their early emphasis on the particle leads to the *child's play* in acquiring VPC, CMC, and TRC, which is conducive to the successful acquisition of their first language in that it is closely associated with the essential concepts in languages (Tomasello, 1987). Thus the present study aims to improve the constructional knowledge of CMC and TRC of Korean EFL learners through VPC instruction.

Despite the systematic linguistic relation among CMC, TRC, and VPC, little effort for applying such linguistic analysis has been made in acquisition of CMC and TRC through VPC teaching. Sung's (2018) study, however, provides a novel

teaching method, applying the linguistic analysis to teaching VPC. He showed that learning VPC in a construction grammar framework promoted the better acquisition of VPC than particle centered or lexical instructions. Notably, he found out that the learning of VPC affected the learning of unlearned constructions, the prototypical CMC (S V Obj Obl) and the prototypical TRC (S V Obj AP). This effect is not unexpected if we consider the relation of VPC with CMC and TRC, as illustrated in Figure 1.1. He contends the effect is due to the close relation between VPC, CMC and TRC, suggesting that the construction grammar framework facilitates the learning of related constructions as well as the targeted constructions.

Sung's (2018) study, however, has some limitations. His experiment did not carefully consider the two divisions of VPC, i.e., literal VPC and aspectual VPC. Recall that literal VPC is more closely related to CMC while aspectual VPC is closer to TRC. If we consider the linguistic proximity, it is possible that (1) learning literal VPC affects learning the prototypical CMC more greatly than the prototypical TRC and that (2) learning aspectual VPC affects learning the prototypical TRC more than the prototypical CMC. The current study addresses this issue.

Based on the relationships of CMC and TRC with VPC, the current study explores whether learning a particular VPC (i.e., either literal or aspectual) facilitates learning the prototypical CMC and/or the prototypical TRC. In other words, it aims to investigate the transferability of learning literal VPC or aspectual VPC to learning the prototypical CMC and/or the prototypical TRC in a construction grammar-based instructional framework.

The present study poses the following research questions:

1. Does construction grammar-based instruction of literal VPC improve Korean EFL learners' comprehension and production of the prototypical CMC?
 - 1-1. How different is the processing of CMC depending on the learners' level?

2. Does construction grammar-based instruction of aspectual VPC improve Korean EFL learners' comprehension and production of the prototypical TRC?
 - 2-1. How different is the processing of TRC depending on the learners' level?

1.2. Organization of the Thesis

This thesis is organized into five chapters. Chapter 1 introduces the purpose and research questions of the current study. Chapter 2 provides a review of the theoretical background of construction grammar, the target constructions, i.e., CMC and TRC, the meaning and the default structure of VPC, and its relationship with CMC and TRC. Chapter 3 describes the research methods, including participants, procedures, instructions, test items, and analysis of the data. Chapter 4 reports the results of the study, followed by discussions on the central issues of the present study's findings. Chapter 5 summarizes the major findings and concludes the study with pedagogical implications, limitations, and suggestions for future research.

CHAPTER 2. LITERATURE REVIEW

The present study explores the generalizability of learning literal or aspectual VPC to learning of the prototypical CMC or TRC in a construction grammar-based instructional framework. Accordingly, the first section presents a review of the theoretical background of the present study focusing on construction grammar and briefs previous research on construction learning in first and second language acquisition. The second section reviews the semantic feature and the default structure of VPC, and the relationship with other English argument structure constructions (i.e., CMC and TRC).

2.1. Construction Grammar as a Theoretical Background

2.1.1. Construction Grammar

The present study is on the basis of the central tenet of construction grammar (Goldberg, 1995; 2006; 2013). In the constructionist framework (e.g., Bages & MacWhinney, 1987; Ellis, 1998, 2003; Goldberg, 1995, 2006; Langacker, 1987; Robinson & Ellis, 2008), construction is the primary unit of the linguistic organization which is a form-meaning pairing that exists independently of a particular verb or lexical item (Goldberg, 1995, 1999, 2006). According to Goldberg

(1995), the construction is defined as below.

C is a CONSTRUCTION iff C is a pairing of form and function such that some aspect of the form or some aspect of the function is not strictly predictable from C's component parts.

(Goldberg, 1995, p. 199)

The constructionist frame provides a more comprehensive and effective view on language. In the construction grammar, seemingly idiosyncratic patterns of a language can be explained by setting the language as constructions which are organic connections of self-reliant meanings and forms. That is, if the meaning of a sentence should be predicted and analyzed in a verb-centered framework, extended meanings that are used in a range of constructions are not accounted for (Bencini & Goldberg, 2000). To illustrate, to explain the sentence *He sneezed the napkin off that table*, construction grammar does away with the hassle of adding new meaning to the intransitive verb *sneeze*. Instead, it is comprehended in a constructional approach as 'X causes Y to move Z by sneezing.' In short, by setting a particular construction in which the sentence structure itself is associated with meaning and the overall meaning is not deducted directly from the lexical items, we can avoid setting new meaning to individual lexis (Goldberg, 1995, 2006).

In the constructionist framework, language learning is learning constructions that vary in size and complexity, from morphemes of words to sentence structures. In other words, all correspondences of form and semantic, pragmatic, or discourse

functions are included in constructions involving morphemes, idioms, partially lexically filled, and fully filled general patterns (Goldberg, 2006).

Table 2.1. Various Sizes and Complexities of Constructions

Construction	Example
Morpheme	pre-, -ing
Word	<i>avocado, anaconda, and</i>
Complex word	<i>daredevil, shoo-in</i>
Complex word (partially filled)	[N-s] (for regular plurals)
Idiom (filled)	<i>going great guns, give the Devil his due</i>
Idiom (partially filled)	<i>jog <someone's> memory</i>
Covariational – Conditional	<i>the more you think, the less you understand</i>
Ditransitive	<i>he gave her a fish taco</i>
Passive	<i>the armadillo was hit by a car</i>

(Adapted from Goldberg, 2006, p.5)

Among the variety of sizes and complexities of constructions, Goldberg (1995) maintains that there is “a special subclass of constructions that provides the basic means of clausal expression in a language” (p. 3). They are called argument structure constructions (hereafter, ASCs), and they directly contribute to the overall meaning of the sentence (Bencini & Goldberg, 2000). Table 2.2. presents some of the representative English ASCs.

Table 2.2. English Argument Structure Constructions

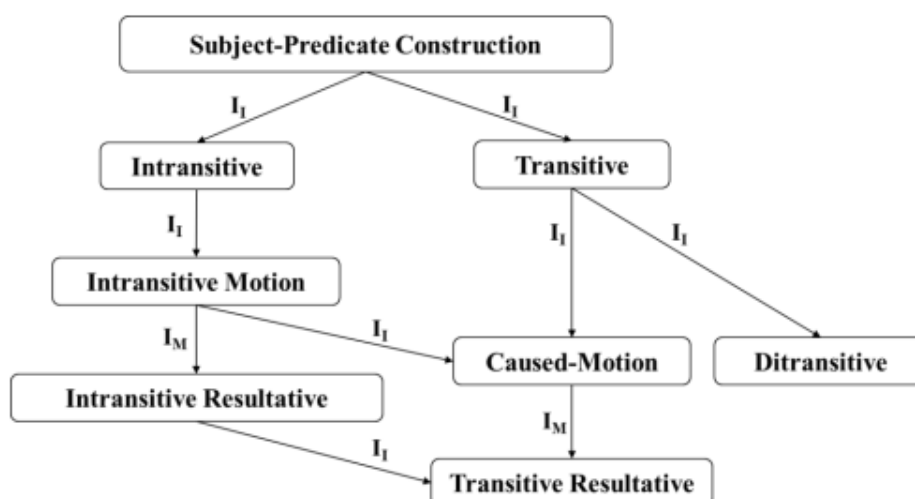
Type	Form	Meaning and Example
Intransitive-motion	Sub V Obl	X moves Y <i>The fly buzzed into the room.</i>
Transitive	Sub V Obj	X acts on Y <i>The man pushed her.</i>
Caused-motion	Sub V Obj Obl	X causes Y to move Z <i>Pat sneezed the foam off the cappuccino.</i>
Ditransitive	Sub V Obj1 Obj2	X causes Y to receive Z <i>She faxed him a letter.</i>
Resultative	Sub V Obj RP	X causes Y to become Z <i>She kissed him unconscious.</i>

(Adapted from Goldberg, 1995)

Goldberg (1995) notes that “the basic clause types of language form an interrelated network, with semantic structures paired with particular forms in as general a way as possible” (p.5). Put in another way, ASCs are interconnected to one another by inheritance links in a logical and meaningful fashion (Littlemore, 2009). Figure 2.1. shows the hierarchical network of ASCs. All ASCs, which have inherent information of their own, are associated with each other in super- and sub-node fashions. In Figure 2.1., constructions are linked through instance links (I_I) and metaphorical extension links (I_M): I_I links are posited “if and only if one construction is a more fully specified version of the other” (Goldberg, 1995, p.79) and I_M links

“when the constructions are found to be related by a metaphorical mapping” (Goldberg, 1995, p.81). For example, CMC is an instance of the intransitive motion construction since CMC is a special case of the intransitive motion and its meaning, ‘X causes Y to move Z,’ includes the other, ‘X moves Z.’ Meanwhile, TRC is a metaphorical extension (I_M) of CMC because the semantics of the former (‘X causes Y to become Z,’ i.e., a change of state) is mapped on the semantics of the latter (a change of location) metaphorically (Goldberg, 1995).

Figure 2.1. Hierarchical Network of ASCs



(Adapted from Goldberg, 1995; Sung, 2018, p.20)

This interconnection among ASCs is extended to VPC since VPC directly or indirectly inherits many linguistic properties from CMC and TRC (Goldberg, 2015; Sung, 2018). The functional and formal properties of CMC and TRC are further examined in the following sections.

2.1.2. Caused-Motion Construction

CMC is defined as [Sub V Obj Obl] in which the main verb should not be stative, and OBL is a directional phrase (Goldberg, 1995). The basic meaning of CMC is “The causer argument directly causes the theme argument to move along a path designated by the directional phrase: that is, X causes Y to move Z” (Goldberg, 1995, p. 152).

Pustejovsky (1991) suggests that the main verbs in CMC or TRC are lexically transitive, and they are combined with independent prepositional phrases (PPs) which are related to its event structure. He also argues that PP in CMC or adjectival phrase (AP) in TRC is adjunct. However, Goldberg (1995) claims that in English, there exist caused-motion expressions that contain verbs which are not used in transitive constructions at all, and PP in CMC should be a complement to receive a causative interpretation.

- (1) a. Fred sneezed the napkin off the table.
b. *Fred sneezed the napkin.

(Adapted from Goldberg, 1995, p.156)

Verbs that do not independently license direct objects can sometimes occur in CMC as in (1). The direct object in (1a) is licensed by construction, not by a verb. This shows that CMC itself has a corresponding meaning (i.e., X causes Y to move Z) independently of the individual words in it, and the verbs used in this construction

are not necessarily causative transitive verbs since the construction posits the causative semantics.

- (2) a. Joe kicked the wall.
 b. Joe kicked the dog into the bathroom.

(Adapted from Goldberg, 1995, p.153)

The verb *kick* does not have the causative meaning as in (2a). However, if it is used in CMC as in (2b), it has a causal interpretation. This implies that PP in CMC is not optional (i.e., adjunct) but obligatory (i.e., complement). If it is an adjunct, the construction does not have causative semantics as in (2a). Thus PP in CMC is a complement that constitutes the construction.

Table 2.3. Dimensions of Variations in Caused-Motion Construction

Dimensions of Variations in Caused-Motion Construction		Examples
Verbal caused-motion construction		<i>Pat put the ball on the table.</i>
Constructional caused-motion construction	Selected	<i>Bill chopped the onions onto the plate.</i>
	Unselected	<i>The critics laughed the play off the stage.</i>

(Adapted from Goldberg & Jackendoff, 2004; Lee, 2019)

Goldberg and Jackendoff (2004) divide CMC into two categories: verbal CMC

and constructional CMC. Verbal CMC has inherently a caused-motion semantics, such as *put* in “*She put the puppy on the yard.*” In the constructional CMC, on the other hand, the main verb is a ‘heavy verb’ such as *sneeze* in (1a). The constructional CMC is divided into two categories depending on the verbs that are used in it: selected CMC when the main verb selects the direct object and unselected CMC if the object is not properly selected by the main verb.

2.1.3. Transitive Resultative Construction

Goldberg (1995) defines TRC as following: [Sub V Obj RP] meaning X causes Y to become Z. TRC is a metaphorical extension link of CMC since the semantic of CMC which is the change of location, is extended to the change of state in TRC.

(3) a. Pat loaded hay onto the truck.

(Change of location: CMC)

b. Terry pushed the door shut.

(Change of state: TRC)

(Adapted from Goldberg, 1995)

TRC has numerous syntactic and semantic variations. According to Goldberg and Jackendoff (2004), TRC can be divided into two types: verbal TRC and constructional TRC as was the case with CMC. The former contains the inherently resultative verb, which is semantically light. Verbs such as *make* and *drive* are

involved in this category. While the latter uses mostly the dynamic verb, and the meanings of the verbs carry the means to the semantics of the construction. For example, *kick* in *The boy kicked the door open* is used as a means of opening the door. Thus the sentence can be paraphrased as *The boy opened the door by kicking*.

Table 2.4. Variations of Transitive Resultative Construction

Variations of Transitive Resultative Construction		Examples
Verbal TRC		<i>Jessica made him tired.</i>
Constructional TRC	Selected	<i>Willy watered the plants flat.</i>
	Unselected	<i>Dave drank the pub dry.</i>

(Adapted from Goldberg & Jackendoff, 2004; Sung & Yang, 2016)

Constructional TRC can be divided into two variations: selected TRC when the main verb licenses the direct object and unselected TRC if the main verb is a transitive but the direct object is not selected by the main verb but by the construction. The categorization and the example sentences are presented in Table 2.4.

2.1.4. Construction Acquisition

2.1.4.1. Construction Acquisition in L1

English speakers tend to count on the familiar forms in which particular verbs are used when they speak ASCs in their early years (Baker, 1979; Bowerman, 1982; Tomasello, 1992). However, as the number of input increases, productivity and generalization are inferred by the frequency of the particular verbs that are used in the ASCs. Detailed verb-specific knowledge on the type frequency is categorized into constructional knowledge through abstraction (Goldberg, 2006).

Goldberg (2006) argues that generalization through abstraction based on the input of the instances is the essential attribute of language learning. Without the generalization, ASCs would be arbitrary and diverse verb to verb. However, semantically similar verbs have a tendency to appear in the same ASCs. More typically, verbs that are related more closely semantically are used in the same ASCs (Goldberg, 1995). This is why children overgeneralize the novel verbs to the constructions in which the semantically similar verbs are used. Speakers in the first language acquisition discover the similarity based on the individual instances and categorize and generalize them on the basis of the exemplar that presents each category. This generalization decides the productivity based on the input and the speakers facilitate or refuse to use the construction hypothesizing the generalized knowledge (Goldberg, 2006). Thus in the constructionist framework, the input is one of the most critical factors in learning constructions (Bybee, 2011; Goldberg, Casenhiser, & Sethuraman, 2004; Tomasello, 2003, 2006).

According to the corpus analysis of mother talk and children's speech by Goldberg et al. (2004), "the meanings of the most frequent verbs used in particular argument structure constructions bear a striking resemblance to the meanings

independently posited for those argument structure constructions” (p. 298). Table 2.5. shows the most frequent verbs for each ASCs.

Table 2.5. Frequent Verbs for ASCs

ASC	Verb	Shared Meaning
Intransitive motion	<i>go</i>	X moves Y
Caused-motion	<i>put</i>	X causes Y to move Z
Ditransitive	<i>give</i>	X causes Y to receive Z
Resultative	<i>make</i>	X causes Y to become Z

(Adapted from Goldberg et al., 2004; Sung, 2012)

Goldberg et al. (2004) concluded that the high frequency of the prototypical verb of each ASC might be conducive to children’s acquisition of ASCs. The result of Casenhiser and Goldberg (2005) is in line with these findings. They investigated the form-meaning mapping of native English speakers and found out that high frequency of a single verb in each construction (i.e., skewed input) promoted learning of a novel ASC.

Meanwhile, it was revealed that TRC was the least acquired construction among the other ASCs through the sorting test conducted to the speakers of English as their first language (Bencini & Goldberg, 2000). Bencini and Goldberg experimented sentence sorting tests, in which they asked the participants to sort sentences according to their overall meaning. The stimuli sentences consisted of 16

sentences containing four verbs (*throw, take, get, and slice*) and four instances of each of the transitive, ditransitive, CMC, and TRC. The results indicated that ditransitive construction was the easiest to identify, followed by CMC, transitive construction, and TRC. They noted that transitive construction was not hard to identify, but rather it is very universal and flexible since its meaning varies extensively depending on the type of the verb that is used in this construction. TRC was the hardest to identify, and they contend that TRC and CMC are closely related since sometimes they are assumed to be the instances of the same construction. Thus, the difficulty of acquiring TRC may have an effect on the learning of CMC due to their interconnections, and construction learning should take into consideration the organic relationships of constructions.

Notably, it was found out that the early use of VPC by L1 speakers plays a pivotal role in acquiring CMC and TRC. Choi and Bowerman (1991), who focused on how children learn to express motion events, found out that children whose first language is English overuse particles at a very early age and extend it to VPC and verb prepositional phrase (PP) as they get older. Particles like *in, out, down, up, on, off, back, and away* play a key role in the early speech of children learning English, and later they are combined with verbs to express motion (i.e., VPC). VPC is the most common form indicating a motion event in adult speech, which becomes salient input to children and leads children's productive use of VPC. In English, there are three ways to express motion events: motion + manner (e.g., *slide, roll, bounce*), motion + cause (e.g., *push, throw, kick*), and motion + deixis (e.g., *come, go, take, bring*). They are, in turn, combined with particles or PPs to indicate the

path. Therefore, the use of particles from their early speech naturally leads to acquiring two forms of CMC: literal VPC and prototypical CMC (i.e., the combination of a verb and PP).

The acquisition of CMC with the help of the use of particles is closely concerned with the acquisition of TRC. As aforementioned, TRC is the metaphorical extension of CMC and they are closely related to each other (Bencini & Goldberg, 2000; Goldberg, 1995). Even some researchers regard them two instances of one category; CMC is a locative resultative and TRC is a state resultative (Goldberg & Jackendoff, 2004). Due to their interconnections, the acquisition of one construction has an effect on the acquisition of the other (Goldberg, 1999). Therefore, it can be said that the use of particles and VPCs helps internalize the constructional use of CMC, and consequently, the acquisition of prototypical CMC and TRC.

2.1.4.2. Construction Acquisition in L2

In the first language acquisition, skewed input with high-frequency verbs facilitates learning ASCs (Casenhiser & Goldberg, 2005; Ellis & Ferreira-Junior, 2009; Goldberg, Casenhiser, & Sethuraman, 2004). L2 context, however, puts a different complexion on language learning than in first language learning context. Therefore, re-investigation on ASC acquisition is the requisite process before applying the findings from the first and second language acquisition to the L2 context.

In this regard, the input types of the verb frequency and distribution have been reexamined (Kim, 2012; Lee, 2019; Year & Gordon, 2009). Year and Gordon (2009) examined the learning of the ditransitive construction of Korean secondary school students and found out that the balanced input of the verb promoted the use of the ditransitive construction. Kim (2012) conducted a similar investigation on learning RC to the Korean secondary students and came to the same conclusion that the balanced input appeared to have a more facilitative effect. Clearly, the different learning experience of L2 context requires different types of input distribution from the one in the first language acquisition context.

Meanwhile, the developmental patterns of Korean EFL learners' English ASCs were explored through several studies, and it was found out that TRC and CMC are the hardest constructions to acquire. Lee and Kim (2011) conducted a translation test for 65 Korean EFL learners. In this study, the participants were given 40 sentences with eight different English constructions: intransitive-unergative, intransitive-unaccusative, intransitive-motion, intransitive-resultative, transitive, ditransitive, CMC, and TRC. They found out that TRC was the most difficult construction to acquire, which was followed by CMC. Kim et al.'s (2013) investigation was consistent with this result. They explored the developmental patterns through sorting and translation tasks. They asked participants to translate the given sentences into Korean and sort them into four groups according to their overall meanings. There were 16 sentences containing four verbs (*take, cut, throw,* and nonce verbs) in four constructions (CMC, TRC, ditransitive, and transitive constructions). It was revealed that constructional knowledge develops as their

exposure to English extends, but TRC was not fully acquired even by the learners of advanced level. TRC, followed by CMC.

The difficulties in acquiring TRC and CMC by Korean EFL learners may derive from the negative transfer from their L1. The Korean language has different distributions of CMC from English in that the process event related to the path is expressed in a single verb, and the process event related to manner is described as a serial verb with the process information as an adjunct (Sung, 2019). Thus, Korean EFL learners presented different processing compared to the English speakers when processing CMC with intransitive manner verbs as in *She laughed him out of the room*. This is the same as the case of TRC. Korean RC has different semantic and syntactic properties from English largely due to the adverbial status of the resultative phrase of the Korean language (Kim, Ko, & Yang, 2020). In Kim et al. (2020)'s study, the Korean participants considered the English resultative phrase as an adjunct and showed different processing than the native speakers of English. In a nut shell, CMC and TRC are found to be the hardest constructions to acquire for EFL learners due to the L1 transfer as well as the intrinsic complexities of the constructions themselves.

2.1.5. Construction Learning and Teaching in L2

Construction involves paring of basic propositional meaning with surface form so that the intended meaning is syntactically realized (Goldberg, 1995; Yang, Kim, & Sung, 2014). Thus language instruction based on constructional ideas is expected

to have facilitative effects on producing sentential utterances (Yang, Kim, & Sung, 2014). Construction learning through this construction grammar-based instruction, in fact, has proved to be effective through various previous research.

Rah (2014) verified the effects of construction grammar-based instruction of ASCs. He inspected the construction grammar-based instructional effects on language production by Korean college learners of English. In his research, it was revealed that construction grammar-based instruction had a greater effect on learning ASCs. To be more specific, networked construction grammar-based instruction promoted better performance in the delayed post-test as well as the immediate post-test compared to the non-constructional instruction or the non-networked construction grammar-based instruction.

Instructional effects of CMC and TRC were also inspected in the construction grammar framework. Sung (2012) examined the effects of instructional treatments on Korean secondary school students' use of TRC. He found out that TRC, which is known as the hardest construction to acquire, was learnable and construction grammar-based instruction was more effective than verb-centered instruction in learning TRC.

As to CMC learning, Lee (2019) explored the effects of different types of an input frequency distribution by Korean EFL middle school students. She divided the participants into three groups and provided three different types of input: skewed input, balanced input, and reversely-skewed input. It was revealed that the reversely-skewed input of the verb was found to be the most effective among other input types. Furthermore, she found out that learning CMC had facilitative effects on learning

uninstructed construction, TRC, which suggests that both constructions are closely related with each other and learning one construction triggers the acquisition of the other.

Meanwhile, Sung (2018) explored the effectiveness of construction-based instruction of VPC to Korean secondary school students and found out that construction grammar-based instruction proved to be more effective than the particle-centered or lexical instructions, especially in learning aspectual VPC and other marked ASCs such as CMC and TRC. To sum up, construction grammar-based instruction of English ASCs proved to have facilitative effects on the production and comprehension of the target language. Yet, the instructional treatments of the various types of constructions other than ASCs need to be examined, and learning of what construction triggers learning of other constructions should be identified further.

2.2. Verb-Particle Construction

2.2.1. The Semantic Features of VPC

VPC is one of the key linguistic aspects of English but is often avoided by ESL/EFL teachers as well as students (You, 2001; Yasuda, 2010). ESL/EFL learners tend to choose a single-word verb instead of VPC, which brings about misunderstanding or unnatural utterances (Kweon, 2006; Liao & Fukuya, 2004).

The difficulty of mastering VPC is due to its semantic complexity (Armstrong, 2004), and there have been plenty of analyses on the semantic features of VPC.

Celce-Murcia and Larson-Freeman (1999) divided the meanings of VPC into three categories. The first category is a literal VPC, which is a combination of a verb and a directional particle. Its meaning is fully compositional (Jackendoff, 2002) since the particles reserve their prepositional meanings as in *sit down*, *stand up*, or *throw away*. Armstrong (2004) notes that literal VPC is not stored in the mental lexicon due to its compositionality.

The second category is aspectual VPC, in which the meanings of particles are aspectual (figurative). The meanings of aspectual VPC are not as transparent as literal VPCs but not idiomatic either. According to Armstrong (2004), the verb of aspectual VPC holds the literal meanings, while the particles do not. The particles in aspectual VPC “contribute consistent aspectual meanings to the matrix verbs” (Celce-Murcia & Larson-Freeman, 1991, p. 432) and, the aspectual VPC can be subdivided into a few semantic classes depending on the contribution of the particle’s meaning: inceptive (e.g., *start up*), continuative (e.g., *play along*), iterative (e.g., *write over*), and completive (e.g., *cut off*).

The last category is idiomatic VPC, which is sometimes called non-compositional VPC (ex: *run up the bill*). The situation seems hopeless since it is considered impossible to figure out the meaning of idiomatic VPC by adding the meaning of the particle to the verb. However, the abstract, idiomatic senses do not emerge at random (Neagu, 2007). They develop systematically: the non-compositional meaning is extended from literal VPC, the most basic semantic

subtype of VPC. Therefore, literal VPC is the source of the formation of aspectual, non-compositional VPC, and the meaning of idiomatic VPC can be understood with this literal background (Claridge, 2000; Rodriguez-Puente, 2012). To illustrate, ‘*pass away*’ originally depicted physical movement which was a literal VPC, was extended to metaphorical movement and was further specialized to mean ‘movement toward death.’ Moreover, Pelli’s (1976) statistical analysis of 14,021 VPCs has shown that the vast majority rely at least on in part the literal or aspectual meaning of the particle. Thus, the focus of instruction of VPC to ESL/ELF learners should be literal and aspectual VPCs, which can be extended to idiomatic VPC afterward.

2.2.2. The Default Structure of VPC

Regarding the order of particles and objects in VPC, Gries and Stefanowitsch (2004) conducted the corpus-based analysis. They hypothesized the degree of topicality, the length of the direct object, and the degree of idiomaticity of VPC would determine the order. In a sentence with the order of [Verb + Particle + Object], the object would be non-topical and/or long or verb particle combination would be idiomatic. In contrast, in the [Verb + Object + Particle] order, the object would be topical and/or short and the verb particle combination would be non-idiomatic. Based on the corpus data analysis, Gries and Stefanowitsch concluded that idiomaticity could solely explain the order. VPCs in [Verb + Particle + Object] form are mostly idiomatic VPCs whereas VPCs in [Verb + Object + Particle] form are

predominantly non-idiomatic VPCs where the particle denotes a spatial goal or a result (Gries & Stefanowitsch, 2004). Figure 2.2. shows VPCs with high frequency for each form. As the semantic features of VPC develop from literal to idiomatic, the initial and core meaning of VPC is literal or directional. Therefore the default structure of VPC should be [Verb + Object + Particle], and its meaning denotes either caused-motion or resultative.

Figure 2.2. Distinctive Collexemes for Different Structures

V Prt Obj (N=1,251)		V Obj Prt (N=1,192)	
<i>Collexeme</i>	<i>Distinctiveness</i>	<i>Collexeme</i>	<i>Distinctiveness</i>
carry out (49:1)	9.10E-14	get back (0:18)	2.30E-06
find out (49:5)	3.83E-10	get out (2:21)	1.91E-05
point out (43:3)	4.42E-10	play back (1:12)	0.0013
set up (42:8)	1.06E-06	turn off (2:14)	0.0015
take on (37:7)	4.60E-06	ring up (3:16)	0.0015
build up (18:1)	5.44E-05	get on (0:7)	0.0065
take up (35:9)	8.76E-05	get together (0:7)	0.0065
give up (18:3)	0.0010	get in (4:15)	0.0070
work out (20:4)	0.0011	let down (0:6)	0.0134
set out (10:0)	0.0012	get down (0:5)	0.0275
bring about (10:1)	0.0072	have back (0:5)	0.0275
bring out (12:2)	0.0081	have on (0:5)	0.0275
make out (7:0)	0.0092	play forward (0:5)	0.0275
wipe out (6:0)	0.0179	play out (0:5)	0.0275
play down (6:0)	0.0179	trace back (0:5)	0.0275
cut down (6:0)	0.0179	turn round (0:5)	0.0275
fill in (13:4)	0.0304	phone up (1:7)	0.0300
top up (5:0)	0.0351	send back (1:7)	0.0300
lay down (9:2)	0.0387	take off (4:12)	0.0306
rule out (13:5)	0.0586	take out (15:26)	0.0413

(Adapted from Gries and Stefanowitsch, 2004)

The findings from Gries and Stefanowitsch's study (2004) are consistent with Goldberg's definition of VPC. Goldberg (2015) defines VPS as construction and suggests it inherits many linguistic properties from CMC via a default inheritance

hierarchy. She argues that particles in VPC are comparable to prepositional phrases in CMC since every particle has a locative sense. Many verbs that are used in CMC to express a location or path can also select particles. The default ordering of both constructions is the same as in [Verb + Object + Particle/PP], but particles move to postverbal position when the object is particularly long, or the verb and the particle form a tight semantic bond (i.e., idiomatic meaning) (Goldberg, 2015).

Likewise, Ramchand and Svenonius (2002) contend that [Verb + Object + Particle] is the default form of VPC, arguing that there is an ‘obvious parallelism’ between particles and prepositional phrases. Also, children whose first language is English have a tendency to use [Verb + Object + Particle] more often than [Verb + Particle + Object] in their earliest utterances (Diessel & Tomasello, 2005). Therefore, it is only natural and reasonable to set the default structure of VPC as [Verb + Object + Particle] rather than [Verb + Particle + Object].

2.2.3. The Relationship with CMC and TRC

Goldberg (2015) argues that VPC inherits functional and formal properties from prototypical CMC, confirming the default structure of both forms as [V + O + P/PP]. Prototypical TRC also has the same structure that [V + O + AP]. The default form of the three constructions is [S + V + O + X], and the only difference is the last argument; particles in VPC, PPs in prototypical CMC, and AP in prototypical TRC. This signifies that they are closely associated constructions since a difference of form causes a difference in meaning (Golarch, 2004).

Having the same structural form in common, all of them have the same semantics of causation. As the name implies, caused-motion construction (CMC) has a constructional meaning of causation (X causes Y to move Z), thus it does not permit stative verb as its main verb (Goldberg, 1995). Likewise, TRC, which is a metaphorical extension of CMC, has the constructional meaning of ‘X causes Y to become Z’ and inevitably connotes causation (Goldberg, 1995, 1999). VPC also has a constructional meaning of causation. According to Bolinger (1971), particles of VPC have their core meanings, which are motion-through-location and terminus or result. The former corresponds to the directional meaning and the latter to aspectual (Armstrong 2004), which are literal VPC and aspectual VPC, respectively, in Celce-Murcia and Larson-Freeman’s term. He contends that stative verbs would not occur if they are not compatible with the two features of the core meanings of particles: motion and result. That is why stative verbs such as ‘*know*,’ ‘*hope*,’ or ‘*resemble*’ are not found in VPC. When stative verbs are used in VPC, their senses become non-stative (e.g., *Please hear me out*, *Why don’t you see me off*). This suggests that VPC is a construction that has a constructional meaning of causation thus does not permit stative senses of their matrix verbs. After all, VPC, prototypical CMC, and TRC share the same constructional meaning, which is *causation*.

When seen closely enough, meanwhile, literal VPC and prototypical CMC both denote the change of location (Goldberg, 1995, 1999; Sung, 2018). Therefore, the prototypical CMC and literal VPC can be used interchangeably (Jackendoff, 2002). For instance, *Beth tossed/took/put/carried the food {up/in/away/back}* can take the place of *Beth tossed/took/put/carried the food (right) {up the stairs/into the house}*.

In these sentences, particles are the verbs' arguments, and any verb that takes directional PP can take directional particle vicariously, and the meaning is clear and literal (Jackendoff, 2002). In other words, the prototypical CMC, which embodies PP, can be expressed by VPC, and therefore it is assumed that learning literal VPC is conducive to learning the prototypical CMC, which is expected to bear high productivity.

Aspectual VPC and prototypical TRC share the same constructional meaning, which is the change of state. In TRC, "arguments potentially undergoes a change of state as a result of the action denoted by the verb" (Goldberg, 1995, p. 180).

(4) He hammered the metal flat.

(Change of state)

(Adapted from Goldberg, 1995, p. 182)

For example, the metal in (4) underwent a change of state and became flat by hammering. Likewise, particles in aspectual VPC denote the change of state as a result of the action or motion of the verbs (Armstrong, 2004). Especially VPCs that exhibit various word orders have this resultative semantics (Armstrong, 2004; Ramchand & Sveninuous, 2002). According to Ramchand & Sveninuous (2002), VPCs can have various orders only if the object is a figure, in which particles are not the bare head, but some invisible abstract ground element is included. It is this ground element that stipulates the result state nature of the particle.

- (5) a. I got the stain off
b. I got off the stain.
c. I got the stain off the shirt

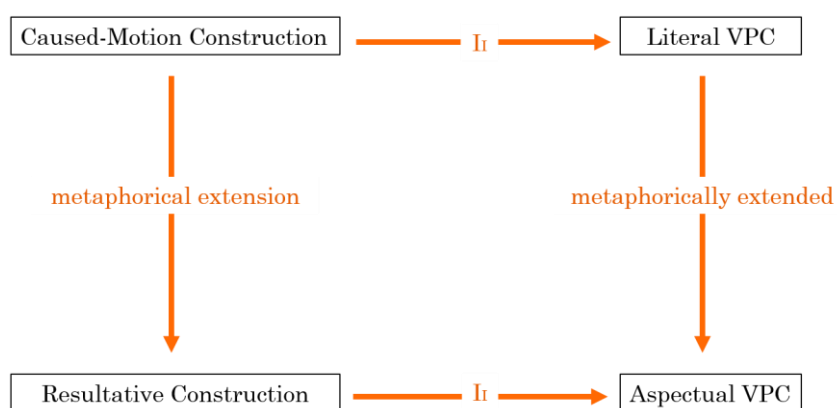
(Adapted from Olson, 2013)

In (5a) and (5b), *get off* in these example sentences can be used as [Verb + Object + Particle] or [Verb + Particle + Object], and *off* is not bare head as can be seen in (5c). Thus, *off* in (5a) and (5b) has an invisible abstract ground element (the shirt) and it designates the resultant state. In other words, *the stain* in (5) underwent the change of state and became gone. Therefore learning aspectual VPC is likely to facilitate the acquisition of prototypical TRC since they share the same constructional meaning and last arguments of both constructions designate result state.

VPCs, prototypical CMC, and TRC are congruently interlinked with one another. Literal VPC is used to represent the meaning of CMC and aspectual VPC is adopted to express TRC. The connection between VPC, and CMC and TRC can be found in the relationship between literal VPC versus aspectual VPC and CMC versus TRC. Literal VPC is the most basic semantic subtype of VPC and is the source for forming the meanings of aspectual VPC (Claridge, 2000). That is, it can be said that the meanings of aspectual VPC are derived from the ones of literal VPC (Brinton, 1988). In other words, aspectual VPC is a metaphorical extension of literal VPC (Lakoff & Johnson, 1980; Goldberg, 2015). Likewise, TRC is analyzed as a metaphorical extension of the central sense of CMC (Goldberg, 1995). Their

relationship can be represented as in figure 2.3.

Figure 2.3. The Relationship between VPCs, CMC and TRC



(Adapted from Sung, 2018)

To sum up, literal VPC is a subtype (instance) of CMC and aspectual VPC is a subcategory of TRC. This approach provides a more comprehensive and systematic view on VPC and implications to EFL learners: Each construction does not exist independently but is connected systematically, and learning one construction can facilitate the acquisition of other connected constructions (Goldberg, 1995; Sung, 2018; Lee, 2019).

Despite literal VPC being the core meaning, it was rarely the sole subject of the VPC instruction. Mostly, the effects of instruction of aspectual VPC were studied in a range of framework focusing on particles. The cognitive approach to learning particles in aspectual VPC has been employed in ESL/EFL contexts (Jang, 2014; Kim, 2019; Ko, 2018; White, 2012; Yasuda, 2010). In the previous studies, figurative meanings of particles in aspectual VPC were presented in a cognitive

linguistics framework aided by metaphor, which was turned out to be more effective in learning aspectual VPC compared to memorizing VPC as a whole.

However, it was revealed that native English speakers first depend on the construction itself as well as contextual and discourse factors when processing the literal or non-literal meaning of a language (Giora, 2002). This implies that, regardless of the transparency of the meanings of VPC, the VPC instruction can be effective within a construction-grammarians framework, so that learners process VPC as a construction before accessing literal or non-literal meaning.

Previous research has mostly covered the effects of instruction of VPC solely or learning the constructions CMC and TRC separately, not focusing on their linguistic relationships between VPC and the prototypical CMC or TRC. Therefore the present study aims to explore the effects of learning each type of VPC (i.e., literal or aspectual) on learning the prototypical CMC and the prototypical TRC in the framework of construction grammar, noting that literal VPC and the prototypical CMC or aspectual VPC and the prototypical TRC are not separate, but linguistically connected (Goldberg, 2015; Sung, 2018).

CHAPTER 3. METHODOLOGY

This chapter deals with the methods used in the main study. The first section describes the participants, and the second section presents the target forms in instruction and test tools. The third section reviews the procedures and the instruments employed in this study. The final section contains the methods of scoring and analysis.

3.1. Participants

A total of seventy-five 10th graders from four intact classes in a public high school participated in the main study in the fall semester of 2017. They had been learning English as a foreign language since their 3rd grade in elementary schools. None of them had been abroad for English learning purposes. The school is located in the rural area of Asan in Chungnam province in Korea, and their general English proficiencies were middle to middle-low (Most of their grades of the nationwide scholastic aptitude test score were ranged from 4 to 7 on a scale of 9: higher score goes to the lower grade). The participants were divided into two groups according to the type of instruction they would be given: a literal VPC and an aspectual VPC instruction groups. There were 37 students (Male = 15, Female = 22) in the literal VPC group, and 38 (Male = 13, Female = 25) in the aspectual VPC group.

Table 3.1. One-Way ANOVA Results in Pre-test

	Task	Group	M	SD	F	Sig.
C	Picture	Literal VPC	10.14	8.20	.14	.77
	Description	Aspectual VPC	8.82	8.67		
M	E-to-K	Literal VPC	13.38	4.78	1.79	.19
	Translation	Aspectual VPC	11.76	5.39		
T	Picture	Literal VPC	4.30	5.50	1.50	.23
	Description	Aspectual VPC	3.00	3.49		
R	E-to-K	Literal VPC	8.03	5.05	.18	.67
	Translation	Aspectual VPC	7.50	5.57		
C						

**p < .05*

The learners' initial ability to comprehend and produce prototypical CMC and TRC was measured by the pre-test, and the two instructed groups were homogeneous as the difference between the two groups was not statistically significant in any of the two constructions, which was shown by one-way ANOVA (see Table 3.1.). In short, if any differences appeared in the learners' performance after the pre-test, it would be ascribed to the instructional treatments.

3.2. Target Form

The present study explores the generalizability of construction grammar-based

learning of VPC to the learning of prototypical CMC and TRC. While VPCs can be divided into three types, i.e., literal, aspectual, and idiomatic VPCs (Celce-Murcia & Larson-Freeman, 1999), the present study focused on literal and aspectual VPCs because of their semantic similarity between the prototypical CMC and the prototypical TRC. The meaning of literal VPC can be interpreted as ‘the object is affected by the force by the subject to the direction the particle represents and by the manner the verb denotes’ (Armstrong, 2004). Therefore, verb and PP combination (i.e., the prototypical CMC) and literal VPC can be used interchangeably in most cases (Jackendoff, 2002).

Meanwhile, verbs in aspectual VPC are action or motion verbs, and they accompany particles that denote termination or result (Armstrong, 2004). Likewise, in the prototypical TRC, the postverbal complement means the endpoint of an event (Goldberg, 1995). They both have constructional meaning that causing something/someone to become some state. Thus, the literal and the aspectual VPCs categorized by Celce-Murcia and Larson-Freeman (1999) were chosen as teaching materials, and the test items in pre- and post-tests were targeting the prototypical CMC and the prototypical TRC in English.

Table 3.2. presents the verbs and the example sentences that were used as test items. The same verbs and sentence structures were used in the pre- and post-tests, but the nominal words were changed in the post-test. For example, the sentence *Tom threw the key onto the roof* in the pre-test was changed into *John threw the book onto the desk* in the post-test.

Table 3.2. Target Forms of Prototypical CMC

Type	Verb	Example Sentence	Source
Path	Hit	<i>Tom hit the ball across the road.</i>	Adapted from Goldberg (1995); Goldberg, Casenhiser, & Sethuraman (2004); Ellis, N. C., & Ferreira Junior, F. (2009); Rah (2014)
	Throw	<i>Tom threw the key onto the roof.</i>	
	Kick	<i>Sam kicked the ball to Jane.</i>	
	Take	<i>Kim took the rose into the house.</i>	
	Put	<i>Peter put the pencil on the desk.</i>	
	Send	<i>Sam sent the letter to New Zealand.</i>	
Transitive	Push	<i>He pushed Tom into the pool.</i>	
	Roll	<i>Sue rolled the ball into the garden.</i>	
	Load	<i>Joe loaded the hay onto the truck.</i>	
	Spray	<i>She sprayed the paint onto the wall.</i>	
	Pull	<i>He pulled the boy out of the water.</i>	
	Slice	<i>Jane sliced the ham onto the plate.</i>	
Intransitive	Sneeze	<i>Billy sneezed the tissue off the table.</i>	

The prototypical TRC in the pre and post-tests, meanwhile, did not involve the verbal resultatives in which the verbs have inherently resultative semantics (i.e., *make* and *drive*) to increase the test validity. All the sentences used in the tests were constructional resultatives which combine a constructional event with a verbal event

(Goldberg & Jackendoff, 2004).² In other words, to process the prototypical TRC in the tests, constructional knowledge was required.

Table 3.3. Target Forms of Prototypical TRC

Type	Verb	Example Sentence	Source
Transitive	Kick	<i>The boy kicked the door open.</i>	Adapted from Boas (2003); Goldberg (1995); Kim, Ko, & Yang (2020); Rah (2014); Sung & Yang (2016)
	Wipe	<i>The woman wiped the table clean.</i>	
	Slice	<i>She sliced the potato thin.</i>	
	Paint	<i>The man painted the house red.</i>	
	Beat	<i>Charlie beat Peter black and blue.</i>	
	Shot	<i>The robber shot the police officer dead.</i>	
	Cut	<i>He cut the bag open.</i>	
	Hit	<i>The fan hit him unconscious.</i>	
	Shake	<i>Jack shook her awake.</i>	
	Nail	<i>He nailed the window shut.</i>	
	Scrub	<i>Jane scrubbed the pot shiny.</i>	
	Rub	<i>The lady rubbed her hands warm.</i>	
	hammer	<i>Sam hammered the metal flat.</i>	

² Goldberg and Jackendoff (2004) argue that the constructional resultative is a combination of a constructional event and a verbal event as followed.

- Sentence : Willy watered the plants flat.
- Constructional event (Resultative) : WILLY CAUSED [PLANTS BECOME FLAT]
- Verbal event (MEANS) : WILLY WATER PLANTS

Intransitive	Run	<i>He ran his shoes threadbare.</i>
--------------	-----	-------------------------------------

Table 3.3. shows the verbs and the example sentences that were used as test items in the pre- and post-tests. All the target sentences were constructional resultatives and two types of TRC sentences were used; the sentences involving transitive type verbs (*kick, wipe, slice, paint, beat, shot, and cut* in picture description task and *hit, shake, nail, scrub, rub, and hammer* in English-to-Korean translation task), and intransitive manner type verb (*run* in English-to-Korean translation task). Even though the stimuli in the pre- and post-tests were different from each other, they were paired since they used the same verbs and structures as in *She sliced the potato thin* in the pre-test and *The cook sliced the onion thin* in the post-test.

3.3. Procedure

The experiment consisted of a pre-test, an instruction, and a post-test session, and was conducted over four English classes in the second semester of 2017. In the first class, a pre-test of a comprehension and a production task was administered. In the second and third classes, different instructional treatments were conducted for each group, followed by a VPC test. In the final class, a post-test of the same types of tasks was conducted. The pre-test and the post-test adopted comprehension and production tasks to assess students' use of the prototypical CMC and TRC. Each test session lasted for approximately 45 minutes. The instruction session was

comprised of two lessons, and each lesson took 25 minutes. Before the post-test, a test of VPC was administered and it took the students 25 minutes to finish it. Table 3.4 summarizes the experimental procedure.

Table 3.4. Experimental Procedure

Period	Procedure	Time Allotment
1	Pre-test	45 minutes
2	Instruction lesson 1	25 minutes
3	Instruction lesson 2	25 minutes
	VPC test	25 minutes
4	Post-test	45 minutes

3.4. Instruction

Two types of construction-based instruction were provided to the two instruction groups. The first type of instruction focused on the constructional form and meaning of literal VPC (e.g., *pick the coin up, take it outside*). The second type of instruction concentrated on the constructional form and the meaning of aspectual VPC (e.g., *eat the pizza up, turn the TV down*). The instruction was composed of two sessions, and each session lasted for 25 minutes. Instrumental media tools, handouts, and MS PowerPoint materials were devised along.

Based on the findings of Gardner and Davies (2007), the most frequently used particles in the BNC (*up, down, out, on, off, back, in*) were selected. For the literal VPC group, the VPC sentences involving *up, down, out, back, off, and in* were provided to the students as input. For the aspectual VPC group, the VPC sentences including particles *up, down, on, and off* were used in instruction. The detailed procedures of instructions for both groups are presented in sections 3.4.1. and 3.4.2., respectively.

3.4.1. Literal VPC Instruction

The literal VPC instruction had two 25-minute lessons, and each lesson had five steps, as shown in Table 3.5. The first lesson was devised to introduce the literal VP as a construction to the students. Therefore the focus of the lesson was not solely on the particles but the sentence as a construction, which is a pairing of a form and meaning. Students were taught that the meaning of a sentence is not just a sum of the meanings of the words in it but decided by a constructional meaning. Thus the constructional frame that is paired with the constructional meaning was provided to the students as presented in Figure 3.1.

Table 3.5. Instructional Procedure of Literal VPC

Lesson	Step	Contents
First Lesson	VP Introduction	Introduction of the form and usage of VP
	Particles	Guessing the meanings of particles with literal meanings
	Introduction of Construction	Pairing form and meaning of literal VPC
	Practice	Dialogue completion and filling in the blanks
	Production	Picture description
Second Lesson	Review	Form and meaning of literal VPC
	Syntactic and semantic pairing of sentences	Dividing the arguments of given sentences in the constructional frame and translating them in Korean
	Particles	Filling in the blanks
	Practice	Describing given sentences with pictures
	Production	Picture description

Figure 3.1. Introduction of Construction

3. 장소.방향의 이동을 나타내는 구동사구문			
X가 Y를 Z로 이동시키다.			
주어(X)	동사	목적어(Y)	첨사(Z)
He	put	his hand	up
She	threw	the trash	out

The second lesson's objective was for the students to comprehend the constructional meaning of the literal VPC and produce it in context. To promote enhancement in the ability to comprehend the literal VPC, the students were asked to present the meaning of the given sentences with drawing (see Figure 3.2.). By drawing the initial and end positions or the direction of the movement, they were expected to acquire the constructional meaning of the literal VPC, which is 'X causes Y to move Z'.

Figure 3.2. Describing Sentences by Drawing

4. 다음의 문장을 그림으로 표현해 봅시다.

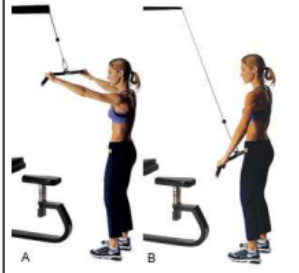
She pulled the bar down.	He lifted the baby up.	She rolled the ball down.
		

Figure 3.3. Picture Description

5. 다음 그림을 구동사를 사용하여 표현하십시오.

	
When the water starts to boil,	To make a Jack-o'-lantern, you need a big, well-ripen pumpkin. First,
-----	-----

Then, they were asked to write sentences that best describe pictures (see Figure 3.3.). Using the pairing of form and meaning frame, students had the opportunity to produce the literal VPC in context.

3.4.2. Aspectual VPC Instruction

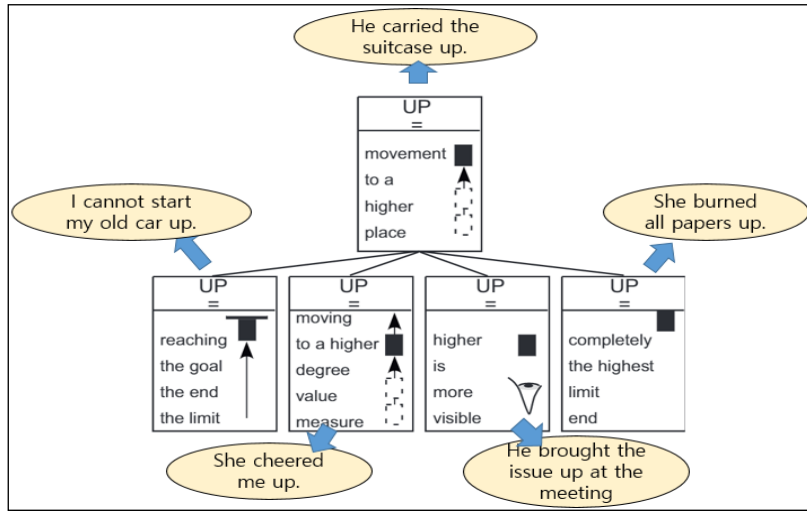
The aspectual VPC instruction group had two 25-minute lessons. The objective of the first lesson was to introduce the constructional form and meaning of the aspectual VPC to the students, and that of the second lesson, to get students accustomed to the constructional use of the aspectual VPC and to encourage them to produce it in context. The instructional procedure is presented in Table 3.6.

As shown in Table 3.6, the overall structure of a lesson in the aspectual VPC instruction was similar to that in the literal VPC instruction. However, in this instruction, the particles had aspectual meanings, and those extended meanings were presented with the Rudzka-Ostyn's (2003) classification. The capturing of the extended meanings of particles was aided with diagrams (see Figure 3.4.), and the students were required to investigate the extended meanings of particles in given sentences (see Figure 3.5.).

Table 3.6. Instructional Procedure of Aspectual VPC

Lesson	Step	Aspectual VPC Instruction
First Lesson	VP Introduction	Introduction of the components and the meanings of VPC
	Particles	Extended meanings of particles: <i>up</i> and <i>down</i>
	Introduction of Construction	Pairing form and meaning of aspectual VPC
	Practice	Dialogue completion and filling in the blanks
	Production	Picture description
	Review	Review of the previous lesson
Second Lesson	Syntactic and semantic pairing of sentences	Dividing the arguments of given sentences in the constructional frame and translating them in Korean
	Particles	Extended meanings of particles: <i>on</i> and <i>off</i>
	Practice	Dialogue completion and Describing given sentences with pictures
	Production	Picture description

Figure 3.4. Presentation Slide Sample of Particle *up*



(Adapted from Rudzka-Ostyn, 2003)

Figure 3.5. Extended Meanings of Particles

4. 첨사의 의미확장

up	<ol style="list-style-type: none"> 1. 위쪽에서의 움직임 2. 목표, 끝, 한계를 목표로 함 3. 높은 가치, 심한 정도로 올라감 4. 더 보기 쉽고, 접근 가능하고, 알려지는 것 5. 완전한 상태, 가장 높은 단계에 이르는 것
down	<ol style="list-style-type: none"> 1. 낮은쪽에서의 움직임 2. 시간적으로 거슬러 올라감 3. 정도, 질, 양, 크기, 가치, 활동성, 힘, 지위에서의 낮아짐 4. 어느 규모에서 목표, 완전함, 한계에 이르는 것

5. 다음의 문장에서 밑줄 친 첨사가 위의 3번에서 어떤 뜻으로 쓰였는지 번호를 쓰시오.

- (1) I cannot start my old car up. ()
- (2) She cheered me up. ()
- (3) He carried the suitcase up. ()
- (4) She burned the papers up. ()
- (5) Keep your head down when I shave your neck. ()
- (6) The force of blast knocked him down. ()
- (7) Why did the teacher put me down in front of other students? ()

Figure 3.6. Syntactic and Semantic Pairing of Sentences

5. 다음의 문장들을 구조에 알맞게 넣고 상태의 변화를 보기와 같이 묘사하시오.
 (1) He turned the radio on. (2) We paid our mortgage off.
 (3) (Suddenly he came up with brilliant ideas and) he wrote them down.

주어(X)	동사	목적어(Y)	첨사(Z)	상태 변화
He	turned	the radio	on	
그는 라디오를 켜다.				

Given the frame of form and meaning pairing and the extended meanings of particles, students were asked to put each argument of the given sentences into the frame and to indicate the change of the state by drawing and translating them in Korean (see Figure 3.6.).

3.5. Tests

In the pre-test, the students' use of the prototypical CMC and TRC was inspected through two tasks: a picture description task (henceforth, PD) and an English-to-Korean translation task (hereafter, EKT). To prevent the students from predicting answers based on the stimuli from the preceding task, the production task (i.e., PD) was conducted before the comprehension task (i.e., EKT).

3.5.1. Picture Description Task

In the PD task, the students were asked to see a picture slide on the screen and write a simple sentence that best describes the picture. Every picture slide was projected on the TV screen for 20 seconds, along with the nominal arguments of the intended sentences.

Figure 3.7. Picture Slide in the Picture Description Task (CMC)

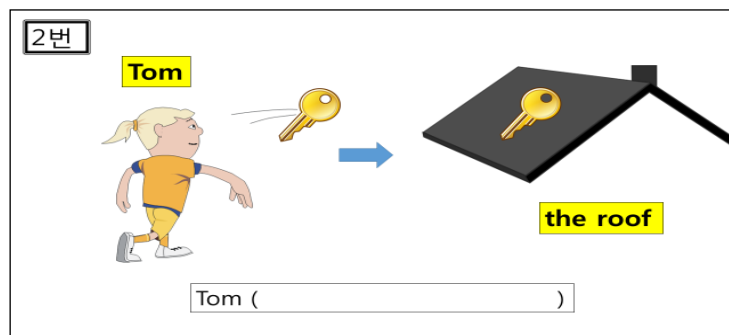
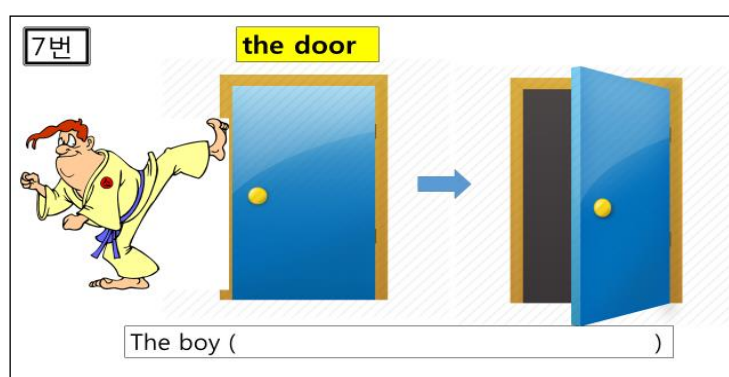


Figure 3.8. Picture Slide in the Picture Description Task (TRC)



A total of 14 picture slides were shown: seven of them depicted caused-motion

events (see Figure 3.7.) and the other seven, resultative events (see Figure 3.8.).

3.5.2. English-to-Korean Translation Task

In the EKT task, the students were given 14 English sentences and asked to translate them into Korean sentences. Seven of the English sentences were the prototypical CMC, and the others were the prototypical TRC. Fifteen minutes were given to complete the task.

The post-test was conducted with the same type of tasks as the pre-test, but their stimuli were different from each other. The PD task employed different picture slides in the same test format used in the pre-test. Every picture slide in the post-test was paired with the slide of the pre-test. For instance, *He tossed the key to his mom* in the post-test was paired with *She tossed the ball to the teacher* in the pre-test. The EKT task was designed in the same way.

3.6. Analysis

In the pre- and post-tests, there were 14 test items each for the PD task and EKT task. In each task, seven of them were testing the prototypical CMC, and the other seven were for the prototypical TRC. For the scoring, two high school English teachers rated the students' answers.

As to the PD task, the answers were marked correct if the target constructions

were used and any information was not missed out on. To illustrate, if a student wrote '*The boy kicked and opened the door*' (see Figure 3.4), it was regarded incorrect since it is not a target construction. Also, it was considered incorrect if a student wrote, '*The boy kicked the door*', as he/she omitted the information of the result (i.e., open). With regard to the EKT task, the students' answers were scored in accordance with the central meaning of the sentence. In both CMC and TRC, the students' answers were considered incorrect if they translated the final arguments as adjuncts (i.e., adverbs or modifiers).

Data from the pre-test and the post-test were analyzed quantitatively using SPSS 18.0. Descriptive statistic information was calculated to present general patterns across different groups and tasks. Two distinct statistical measures were employed for the analysis. First, a paired-samples *t*-test was conducted to examine the mean differences between the pre- and post-tests for each group. Then, one-way ANOVA was used whether there was any significant between-group difference between both tests.

CHAPTER 4. RESULTS AND DISCUSSION

This chapter, which comprises three parts, presents the results and discusses the findings with regard to research questions. Section 4.1 discusses whether comprehending and using of the prototypical CMC by the literal VPC group showed greater improvement compared to those by the aspectual VPC group. Section 4.2 reports in which group there was a significant difference in comprehension and production of the prototypical TRC. Each section is followed by a discussion section.

4.1. Learning the Prototypical CMC

4.1.1. Picture Description Task

4.1.1.1. Results of between-group analysis

To measure the effects of instruction of VPCs on students' production of the prototypical CMC, data of PD task of the two groups were analyzed. Table 4.1. represents the number of participants as well as the mean scores and standard deviations in pre- and post-tests of the instructional groups.

The mean scores of each group increased in the post-test compared to the pre-test. The literal VPC group increased mean scores by 2.91, and the aspectual group increased by 0.5 even though the difference was not as big as in the literal VPC

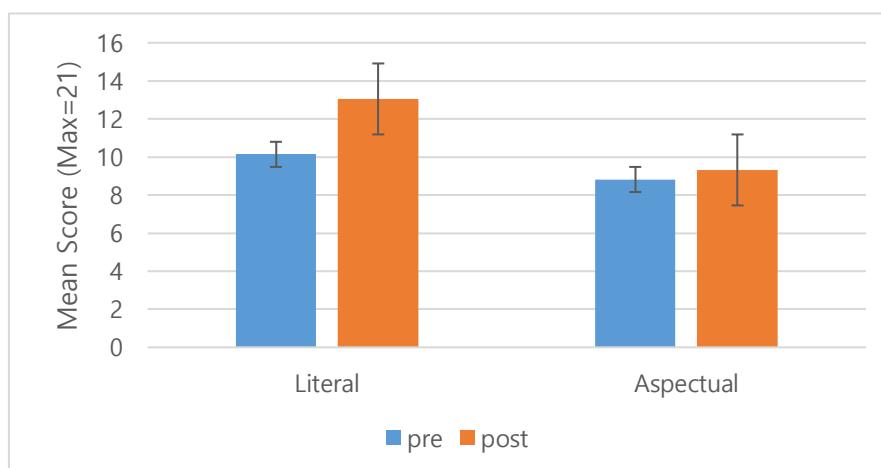
group. With regard to these increases, a series of paired sample *t*-tests were conducted to examine the significance, and the increases of the mean scores of the literal VPC group was statistically significant. However, the increase in the aspectual VPC group was not considerable enough to be significant.

Table 4.1. CMC (PD Task – by Group): Paired Sample *T*-Tests

Group (N)		Mean	SD	<i>T</i>	Sig.(2- tailed)
Literal VPC (37)	pre	10.14	8.20	-3.47	.001**
	post	13.05	7.25		
Aspectual VPC (38)	pre	8.82	8.67	-.436	.666
	post	9.32	7.98		

** $p < .01$

Figure 4.1. CMC (PD Task – by Group): Mean Difference

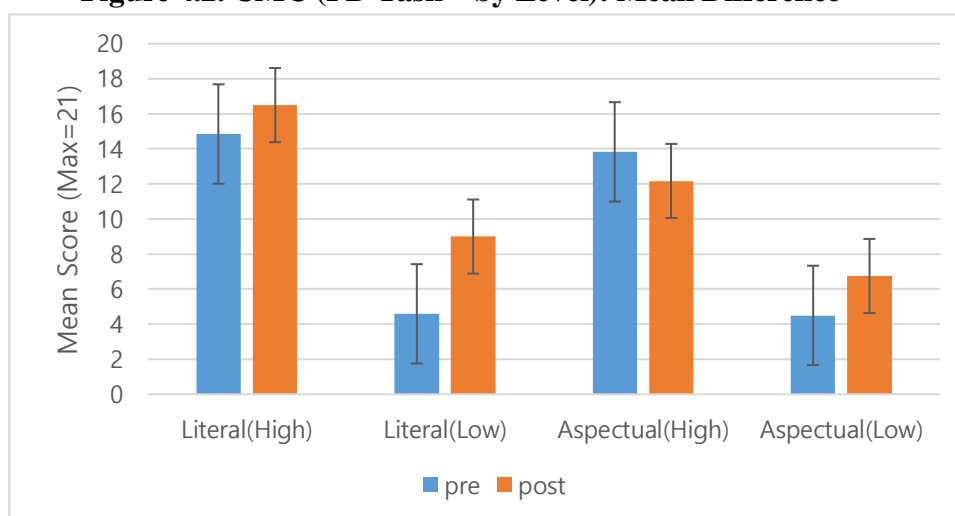


Note. Error bar represents a standard error.

4.1.1.2. Results of between-level analysis

The students in each group were divided into two levels based on the VPC test result.³ The students were assigned to the high level if the scores on the VPC test were 42 points or more, and to the low, if the scores were less than 42 points (There were 28 test items total, and each test item had three points.). Figure 4.2. shows the mean differences of each level in the PD task of the prototypical CMC in both groups.

Figure 4.2. CMC (PD Task – by Level): Mean Difference



Note. Error bar represents a standard error.

³ The present study is to examine whether learning literal VPC or aspectual VPC in a construction-grammarians framework promotes acquiring prototypical CMC and TRC. To be exact, it is hypothesized that if the better the students learn the VPC in a construction grammar framework, the more they acquire the general knowledge about prototypical CMC and TRC. This is why the students were divided into two levels according to the result of VPC test not of the prototypical CMC and TRC test results.

Students from both levels in the literal VPC group increased their mean score. However, low-level students showed greater increases than high-level students in the PD task of prototypical CMC. In the aspectual VPC group, while high-level students did not experience any increase in PD task, low-level students enhanced their production ability by far. In both groups, low-level students' increases were more prominent. Table 4.2. presents the means and standard deviation of each task in the pre- and post-tests according to students' levels.

Table 4.2. CMC (PD Task – by Level): Paired Sample *T*-Tests

Group	Level		Mean	SD	<i>T</i>	Sig.(2-tailed)
(N)	(N)					
Literal VPC (37)	High (20)	pre	14.85	6.85	-1.68	.110
		post	16.50	5.47		
	Low (17)	pre	4.59	5.92	-3.23	.005**
		post	9.00	7.12		
Aspectual VPC (38)	High (18)	pre	13.83	8.24	1.21	.243
		post	12.17	7.8		
	Low (20)	pre	4.5	6.49	-2.12	.048*
		post	6.75	7.41		

* $p < .05$, ** $p < .01$

A series of paired sample *t*-tests were employed for each level to examine the increases, and it was turned out that only in the PD task by the low-level students of

both groups, the increases were significant (literal VPC group: $p < .01$, aspectual VPC group: $p = .048$). Although the high-level students of the literal VPC group scored more in the post-test in the PD task, it was not large enough to be statistically significant. Regarding this, the construction grammar-based instruction of VPC had a positive effect on the production of the prototypical CMC, especially to the low-level students.

4.1.2. English-to-Korean Translation Task

4.1.2.1. Results of between-group analysis

After the PD task, the EKT task, which was to examine comprehension ability by the students, was also administered. The students' overall mean scores were higher than in the PD task even in the pre-test in both groups. Table 4.3. shows the mean scores and standard deviations of the EKT task in the prototypical CMC of both groups.

The mean scores in the pre-test increased in both groups compared to those in the pre-test (by 0.89 in the literal VPC group and 1.82 in the aspectual VPC group). However, as revealed through a series of paired sample *t*-tests, the mean difference between the pre- and the post-tests of the aspectual VPC group was statistically significant ($t = -2.10, p = .043$), but that of the literal VPC group was not. This is the reversed result of the PD task, where the increase of the literal VPC group was only

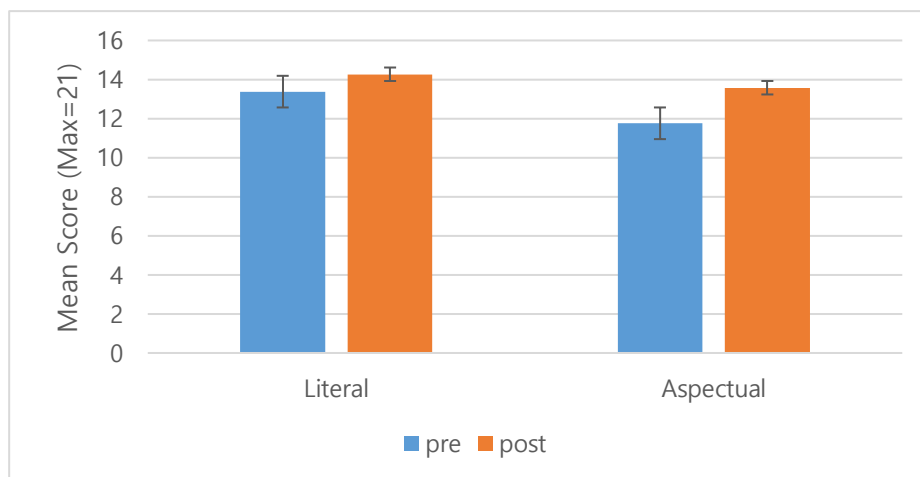
statistically significant.

Table 4.3. CMC (EKT Task – by Group): Paired Sample *T*-Tests

Group (N)		Mean	SD	<i>T</i>	Sig.(2- tailed)
Literal VPC (37)	pre	13.38	4.78	-1.17	.249
	post	14.27	4.97		
Aspectual VPC (38)	pre	11.76	5.64	-2.10	.043*
	post	13.58	5.39		

* $p < .05$

Figure 4.3. CMC (EKT Task – by Group): Mean Difference



Note. Error bar represents a standard error.

4.1.2.2. Results of between-level analysis

To explore the effects of VPC instruction on the comprehension ability of prototypical CMC according to the students' level, the means of each level in both groups were analyzed. Table 4.4. shows the mean scores and standard deviation of each level in both groups.

Table 4.4. CMC (EKT Task – by Level): Paired Sample *T*-Tests

Group	Level		Mean	SD	<i>T</i>	Sig.(2-tailed)
(N)	(N)					
Literal	High	pre	15.60	3.84	-.75	.460
		post	16.35	4.07		
VPC	Low	pre	10.77	4.51	-.88	.393
		post	11.82	4.92		
Aspectual	High	pre	14.67	3.55	-2.25	.038*
		post	16.87	3.87		
VPC	Low	pre	9.15	5.96	-1.06	.304
		post	10.65	4.91		

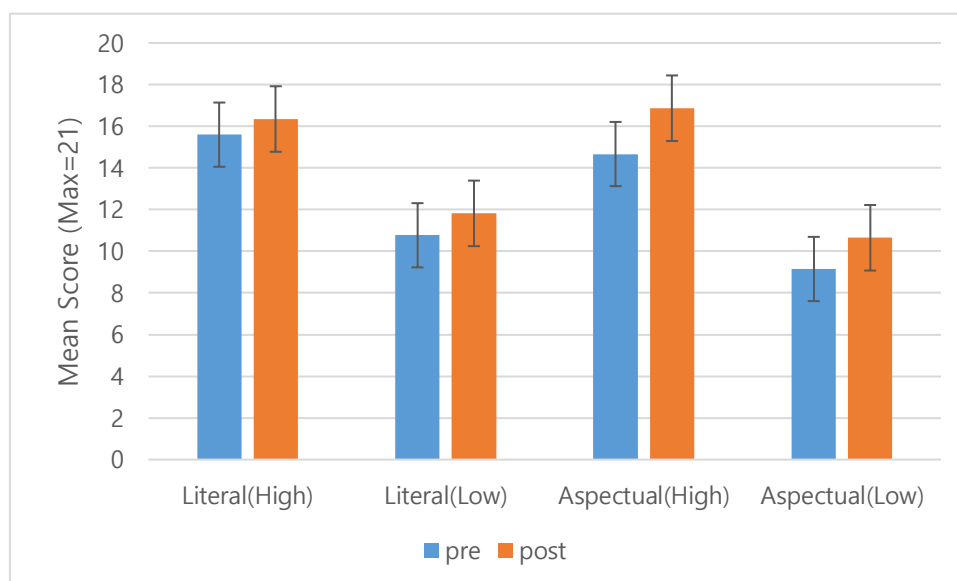
* $p < .05$

The mean scores of each level in both groups were relatively higher compared to those in the PD task even in the pre-test. This was especially the case for the low-

level students; the mean scores of pre-test in two instructed groups were 4.59 and 4.5 respectively in the PD task, but those were 10.77 and 9.15 respectively in the EKT task. This implies that there was less room for improvement than in PD task even to low-level students. The mean scores of low-level students were increased but were not as major as were in the PD task.

A series of paired sample *t*-tests were conducted for each level to investigate the increase, which revealed that only high-level students' increases in the aspectual VPC group had statistical significance ($t = -2.25, p = .038$).

Figure 4.4. CMC (EKT Task – by Level): Mean Difference



Note. Error bar represents a standard error.

In order to examine whether the statistical significance of the differences in the post-test existed between the two instructed groups (i.e., literal and aspectual VPC

groups) in both tasks, one-way ANOVA was conducted.

Table 4.5. One-Way ANOVA Results of CMC Test in Post-test

	Task	Group	M	SD	F	Sig.
CMC	PD	Literal VPC	13.05	7.25	4.50	.037*
		Aspectual VPC	9.32	7.98		
	EKT	Literal VPC	14.27	4.97	.33	.566
		Aspectual VPC	13.58	5.39		

* $p < .05$

As presented in Table 4.5., after the instruction session, literal and aspectual VPC groups showed significant differences in the production task (i.e., PD task). This is due to the fact that the aspectual VPC group did experience an improvement in the post-test of the EKT task, but the improvement was not as considerably big when compared to the literal VPC group. However, in the PD task, the aspectual group did not show a significant change in the post-test while the literal group showed a great improvement in it.

4.1.3. Discussion

The instruction of the literal VPC in a construction grammar framework promoted the acquisition of the prototypical CMC. The results of the post-test in both tasks increased compared to the ones of the pre-test. However, the increase in

the comprehension task did not show statistical significance. Previous research on the construction grammar-based instruction revealed that it had a great effect on improving production ability (Rah, 2014). The results of the present study are harmonious with it, and the effect was especially salient among the low-level participants in the literal VPC group, given that only the results of the PD task (i.e., production task) by low-level students were statistically significant.

The aspectual VPC group, on the other hand, showed improvement solely in comprehension ability. Furthermore, high-level students experienced an enhancement in the comprehension but did not show any improvement in the production ability. The constructional knowledge from the instruction of the aspectual VPC was not transferred to the ability that is required to produce the prototypical CMC by the high-level students. However, the low-level of students' learning of the prototypical CMC displayed rather different results. They enhanced their production abilities through the instruction, but the instructional effect on the comprehension competence was not apparent enough to be observed. Construction grammar-based instruction on the aspectual VPC affected the learning of the prototypical CMC, though the acquisition of the prototypical CMC was not as major as in the literal VPC group.

The difference in the degree of the learning of the prototypical CMC between the two groups stems from the semantic proximity. Literal VPC inherits from the prototypical CMC through a default inheritance hierarchy in that they both denote the change of direction or location, whereas non-local VPC, i.e., aspectual VPC, inherits indirectly from the prototypical CMC since the aspectual VPC depicts the

change of the aspect or state (Goldberg, 1995, 2015). Direct inheritance of the literal VPC from the prototypical CMC renders the constructional knowledge on the literal VPC be transferred to the prototypical CMC without many loads on cognition due to their semantic homogeneity even though they have different forms. Regarding the aspectual VPC, otherwise, it is metaphorically extended from the literal one (Brinton, 1988; Claridge, 2000; Lakoff & Johnson, 1980), which requires different cognitive processing in addition to the different formal structures. This semantic distance caused additional cognitive loads onto the students, and the acquisition of the prototypical CMC by the aspectual VPC group showed a rather disorganized pattern.

It is noteworthy that low-level students in both groups showed greater improvements in production skills. According to Goldberg (1995), construction involves the paring of basic propositional meaning with surface form so that the intended meaning is syntactically realized (Yang, Kim, & Sung, 2014). Therefore VPC instruction based on constructional ideas facilitated producing sentential utterances (Yang, Kim, & Sung, 2014), which are the first requisite to be a fluent speaker to the low-level. This suggests that construction grammar-based instruction promoted acquiring constructional knowledge that can provide low-leveled students of proficiency with a basic yet useful tool for formulating their ideas into English sentences.

4.2. Learning the Prototypical TRC

4.2.1. Picture Description Task

4.2.1.1. Results of between-group analysis

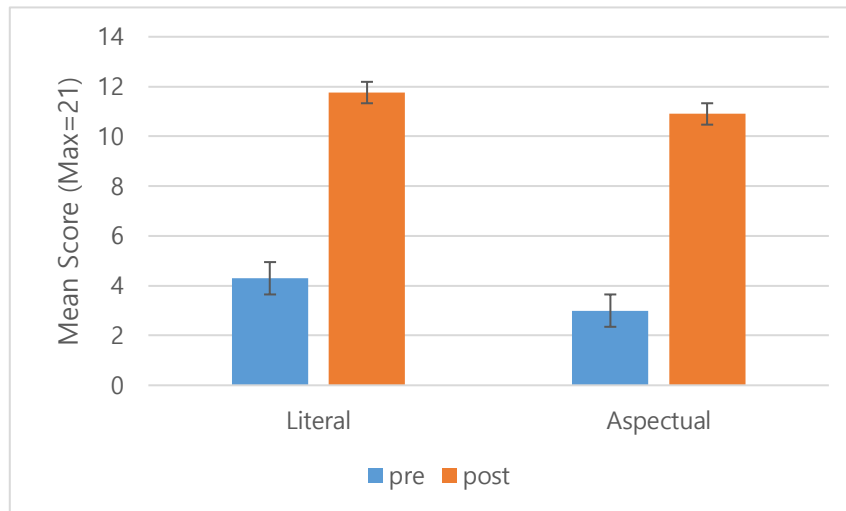
To investigate the instructional effects of VPCs on the production ability of prototypical TRC, data of PD task in both groups were analyzed. Table 4.6. shows the number of participants of each group as well as the mean scores and standard deviations in pre- and post-tests of the PD task.

Table 4.6. TRC (PD Task – by Group): Paired Sample *T*-Tests

Group (N)		Mean	SD	<i>T</i>	Sig.(2- tailed)
Literal VPC (37)	pre	4.30	5.50	-5.21	.000***
	post	11.76	7.12		
Aspectual VPC (38)	pre	3.00	3.49	-6.73.	.000***
	post	10.90	6.89		

*** $p < .00$

Figure 4.5. TRC (PD Task – by Group): Mean Difference



Note. Error bar represents a standard error.

The mean scores of both groups increased greatly in the post-test compared to the pre-test. The literal VPC group increased the mean scores by 7.46 in the post-test and the aspectual VPC group 7.9. These figures are striking when compared to those of PD task of prototypical CMC (the increase was 2.91 in literal VCP group, and 0.5 in aspectual VPC group), but the mean scores of pre-test of PD task of TRC were notably low (4.30 in literal VPC group, and 3 in aspectual VPC group) at the beginning.

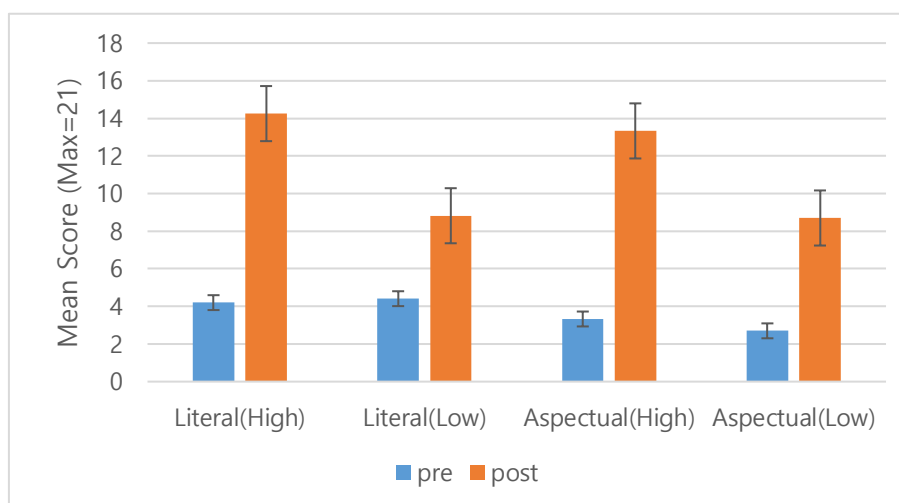
As to the increases, a series of paired *t*-tests were conducted to investigate the significance. The results indicate that there were statistically significant differences in both groups. The construction grammar-based instruction of literal and aspectual VPC improved the production ability of TRC.

4.2.1.2. Results of between-level analysis

The students in each group were divided into two levels based on the VPC test results. The mean scores of each level in both groups were analyzed to inspect the instructional effects according to the levels. Table 4.7. presents the means scores and standard deviations of each level in both groups.

Both groups showed great improvement in the production of prototypical TRC regardless of their levels. High-level students experience an enhancement by 10.05, and low-level students by 4.41 in the literal VPC group. In the aspectual VPC group, the mean scores increased by 10 and 6 respectively in each level.

Figure 4.6. TRC (PD Task – by level): Mean Difference



Note. Error bar represents a standard error.

Table 4.7. TRC (PD Task – by Level): Paired Sample *T*-Tests

Group (N)	Level (N)		Mean	SD	<i>T</i>	Sig.(2- tailed)
Literal VPC (37)	High (20)	pre	4.2	6.63	-4.40	.000***
		post	14.25	7.28		
(37)	Low (17)	pre	4.41	3.99	-3.42	.003**
		post	8.82	5.86		
Aspectual VPC (38)	High (18)	pre	3.33	4.10	-6.08	.000***
		post	13.33	5.84		
(38)	Low (20)	pre	2.70	2.90	-3.79	.001**
		post	8.70	7.15		

* $p < .05$, ** $p < .01$, *** $p < .001$

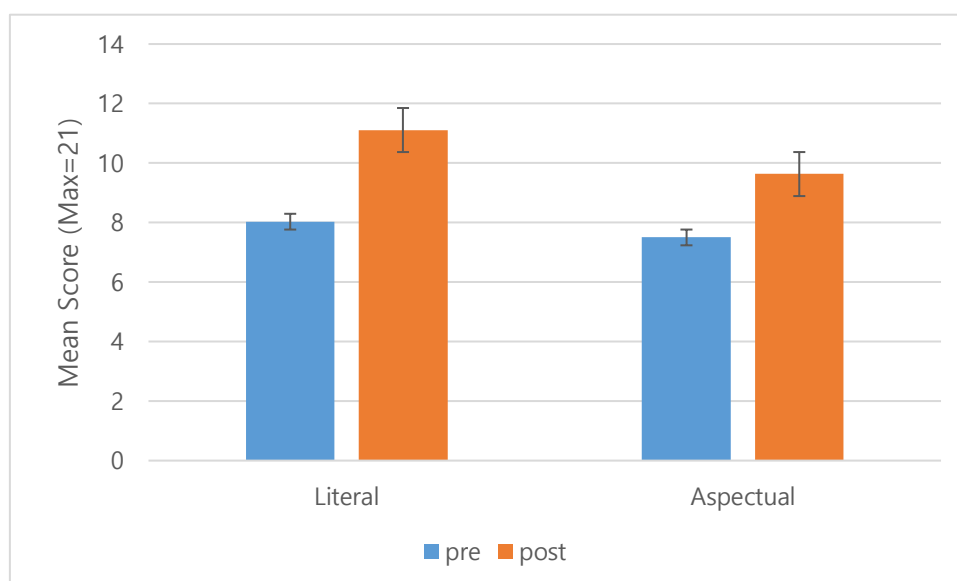
A series of paired *t*-tests were conducted to investigate the significance. The results represent that the increases were statistically significant in each level of both groups. The Instructions were effective in improving the production skills of TRC without distinction of the students' level.

4.2.2. English-to-Korean Translation Task

4.2.2.1. Results of between-group analysis

After the PD task, the EKT task was conducted where the mean scores of the pre-test were relatively higher than the pre-test of PD task since it is a translation test which is familiar to the students. Table 4.8. shows the mean scores and standard deviations of each group.

Figure 4.7. TRC (EKT Task – by group): Mean Difference



Note. Error bar represents a standard error.

Table 4.8. TRC (EKT Task – by Group): Paired Sample *T*-Tests

Group (N)		Mean	SD	<i>T</i>	Sig.(2- tailed)
Literal VPC (37)	pre	8.03	5.05	-5.59	.000***
	post	11.11	5.33		
Aspectual VPC (38)	pre	7.50	5.57	-2.39	.022*
	post	9.63	6.09		

* $p < .05$, ** $p < .01$, *** $p < .001$

The mean scores of both groups were improved in the post-test of the EKT task. The literal VPC group increased the mean score by 3.08 and the aspectual VPC group by 2.13. A series of paired sample *t*-tests analysis revealed that these increases were statistically significant, implying that the literal and aspectual VPC instructions based on construction grammar had a positive effect on the comprehension ability of TRC.

4.2.2.2. Results of between-level analysis

The EKT task of prototypical TRC results was analyzed by students' level in each group. The students' levels were divided by the results of the VPC test and Table 4.9. represents the mean scores and standard deviations of each level in the two instructed groups.

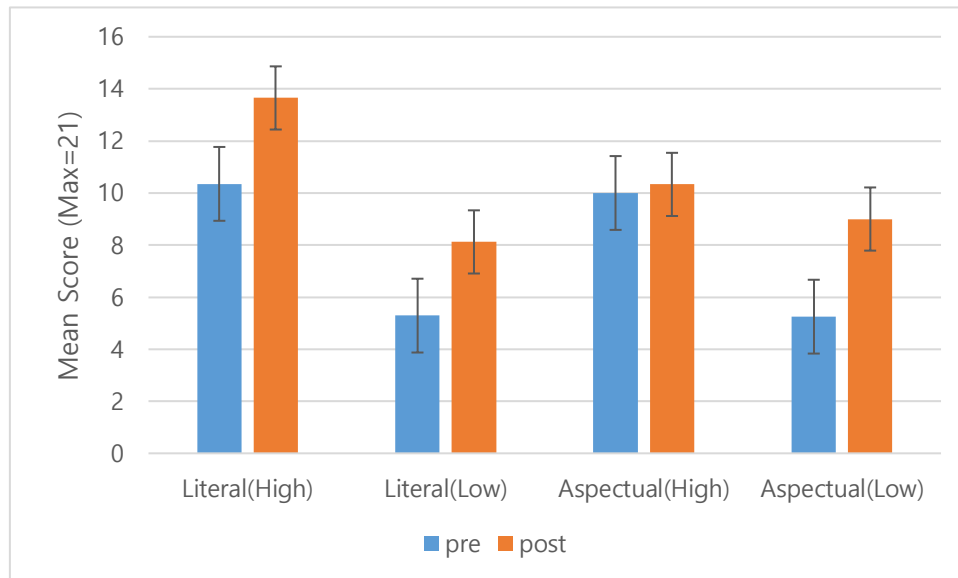
Table 4.9. TRC (EKT Task – by Level): Paired Sample *T*-Tests

Group	Level		Mean	SD	<i>T</i>	Sig.(2-tailed)
(N)	(N)					
Literal	High	pre	10.35	4.61	-4.22	.000***
		post	13.65	4.72		
VPC	Low	pre	5.29	4.18	-3.57	.003**
		post	8.12	4.47		
Aspectual	High	pre	10.00	5.54	-.32	.756
		post	10.33	6.61		
VPC	Low	pre	5.25	4.66	-2.84	.011*
		post	9.00	5.68		

* $p < .05$, ** $p < .01$, *** $p < .001$

Each level in the literal VPC group increased their mean scores in the post-test of EKT of TRC. The high-level students increased mean scores by 3.3 and low-level students by 2.83. In the aspectual VPC group, low-level students also increased the mean scores by 3.75, but the increase of high-level students' was marginal (by 0.33). To examine the significance, a series of paired sample *t*-tests were conducted.

Figure 4.8. TRC (EKT Task – by level): Mean Difference



Note. Error bar represents a standard error.

The result of the analysis presents that the increases in both levels of literal VPC group were statistically significant ($t = -4.22, p < .001$ in high-level/ $t = -3.57, p < .01$ in low-level). However, in aspectual VPC group, only the increase by low-level students were significant statistically ($t = -2.84, p = .011$). This implies that construction grammar-based instruction of literal and aspectual VPC promoted comprehending of prototypical TRC, but was effective particularly to the low-level students.

The means scores in the post-test between the two instructed groups (i.e., literal and aspectual VPC groups) were examined through one-way ANOVA in order to verify the significance (Table 4.12.).

Table 4.10. One-Way ANOVA Results of TRC Test in Pre-test

	Task	Group	M	SD	F	Sig.
CMC	PD	Literal VPC	11.76	7.12	.28	.596
		Aspectual VPC	10.90	6.89		
	EKT	Literal VPC	11.11	5.33	1.25	.268
		Aspectual VPC	9.63	6.09		

The two instructed groups did not show any significant differences in the post-test since after the instruction session; both groups showed great changes in both tasks implying that the instructions had a positive effect on transferring the knowledge of literal or aspectual VPC to the learning of the prototypical TRC.

4.2.3. Discussion

The literal VPC instruction in a construction grammar framework promoted comprehending and producing the prototypical TRC in a given context. The literal VPC group showed marked improvement in both tasks regardless of the proficiency level of the students. It is shown that the students used and understood the prototypical TRC better than the prototypical CMC in both tasks. Even high-level students did not show any improvement in the post-test of the prototypical CMC in both tasks. However, in the post-test of the prototypical TRC, both levels of students

showed enhancement in both tasks.

The reason why they outdid on processing the prototypical TRC stems from the participants' experience of learning and exposure to the prototypical TRC. In the *Curriculum for English Education* (2015), the list of linguistic forms that are needed for communication are provided, of which the 10th linguistic form deals with the [S V NP Complement] presenting the example sentence *They elected him president* (p.204). Therefore, Korean learners of English have little chance to learn and be exposed to TRC in class (Kim, Ko, & Yang; 2020).⁴ This is shown in the results of the pre-test. The mean score of the PD task of the prototypical TRC by the literal VPC group was 4.30, and the mean score of the EKT task was 8.03. These are low figures if compared with those of the prototypical CMC. In the PD and EKT tasks of the prototypical CMC, the mean scores of the pre-test were 10.14 and 13.38, respectively. However, the participants acquired constructional knowledge from the construction grammar-based instruction of literal VPC, which could be used as a scaffold to process constructions, and this effect was more powerful on learning new encounter, the prototypical TRC.

In the case of the aspectual VPC group, the instruction of aspectual VPC based on the construction grammar influences the improvement in learning the prototypical TRC. They experienced an enhancement in using and understanding the prototypical TRC without distinction of the tasks or the level of students except

⁴ After the post-test, a brief survey was conducted to explore the participants' thoughts and opinions on this experiment. In the survey, many of them responded that they are familiar with CMC, but they have not seen RC before.

the EKT task by high-level students. This result is an even more improved one than that of the prototypical CMC. This stems from the semantic similarity between the aspectual VPC and the prototypical TRC. Verbs in aspectual VPC are action or motion verbs, and they accompany particles that denote termination or result (Armstrong, 2004). Likewise, in the prototypical TRC, the postverbal complement means the endpoint of an event. They both have constructional meaning of causing something/someone to become some state. Thus, based on the knowledge that they acquired from the aspectual VPC instruction, the aspectual VPC group processed the prototypical TRC as constructions that have resultative meanings.

Meanwhile, despite the semantic resemblance between prototypical TRC and aspectual VPC, the result of the post-test by the literal VPC group is more enhanced than the aspectual VPC group in the prototypical TRC test. As a matter of fact, the test results by the literal VPC group surpassed the aspectual VPC group in both prototypical CMC and TRC. The difference results from the semantic complexity between literal and aspectual VPC. The literal VPC leaves little burden to process to the learners once the constructional meaning is acquired since the particles in literal VPC have literal meanings such as motion or direction. To illustrate, in the literal VPC, *she picked it up, up* means literally in a direction that is away from the ground. This literal meaning enables the literal VPC to fully exhibit the constructional meaning, facilitating the learners' internalization of the constructional knowledge (Goldberg, 1999).

Senses of <i>UP</i>	position at a high place or moving up to a higher one
	aiming at or reaching a goal, an end, a limit
	moving to a higher degree, value, or measure
	higher up is more visible, accessible, known
	covering an area completely/reaching the highest limit

Adapted from Rudzka-Ostyn, (2003); Ko, (2018)

However, in the aspectual VPC, learners need to explore the meanings of particles other than the constructional meaning since the meanings of particles in aspectual VPC are dependent on the context and figurative. *Up*, for example, have various senses, as shown in the above. Thus to process the sentence *She cleaned her room up*, learners need to know not only the constructional meaning but the extensional meaning of *up* (i.e., covering an area completely/reaching the highest limit). Thus, learners are liable to concentrate more on particles when they learn these sentences, making it a burden to acquire constructional knowledge. In conclusion, the literal VPC group could focus on the constructional structure and meaning without processing additional information, and this contributes to the better acquisition and the transferability of constructional knowledge to other constructions.

CHAPTER 5. CONCLUSION

This chapter describes the conclusion of the current study. The first section summarizes the major findings and presents pedagogical implications. The second section provides the limitations of the present study and suggestions for future research.

5.1. Major Findings and Pedagogical Implications

The present study explored the effects of construction grammar-based instruction of VPC on learning the prototypical CMC and the prototypical TRC by Korean high school learners of English. The first major finding of the current study is that the learning of literal VPC enhanced acquiring the prototypical CMC more efficiently in comparison to the learning of aspectual VPC. The participants of the literal VPC group showed a greater improvement in both production and comprehension of the prototypical CMC leading to notable mean increases. The aspectual VPC group, on the other hand, enhanced the comprehension ability, but this was not consistent in that low level of participants did not show improvement in comprehension but did so in production.

The second major finding is that aspectual VPC learning in a construction grammar framework more facilitated learning the prototypical TRC. The participants in the aspectual VPC group showed a significant advance in both

comprehension and production, resulting in significant mean increases. The literal VPC group experienced an enhancement in the prototypical TRC, too, which proves that constructions do not exist independently of other constructions, but they are connected to each other in a hierarchical network. Thus learning one construction promotes learning other related constructions. Meanwhile, in both groups, the improvements in processing the prototypical TRC were more conspicuous than the prototypical CMC, noting that the mean scores of pre-test of prototypical TRC were much lower than those of prototypical CMC, which suggests TRC was harder to process than CMC and there was much room for improvements.

The findings of the current study offer pedagogical implications on English education in Korea and teaching and learning VPC in EFL settings. The first pedagogical implication is an explicit instruction of VPC in a construction grammar framework. Yang (2008, 2010) and Yang, Kim, and Sung (2014) proposed Educational Grammar Hypothesis and employed Construction Grammar (Goldberg, 1995, 2006) into the instruction suggesting teaching basic English constructions to Korean learners of English. Learning VPC as construction may help the Korean learners process it more efficiently and systematically since it is viewed as a correspondence of form and meaning. Furthermore, VPC, in a construction grammar framework, is connected to other argument structure constructions (ASCs) in a hierarchical network, and thus, learning of VPC fosters acquiring other ASCs (i.e., prototypical CMC and TRC). Therefore, if a construction grammar framework is adopted when learning VPC, it would not only enhance systematic knowledge on VPC but also on prototypical CMC and TRC.

The second pedagogical implication is that constructional knowledge plays a pivotal role in the students' sentence production ability. One of the key competencies that are aimed at in the *National Curriculum for English Education* (2015) is communication competence. However, Korean learners of English have great difficulty producing even basic English sentences, and thus enabling them to formulate their propositional meanings into sentences has been the center of attention in English education in Korea. The construction, which is a form-meaning pairing, provides learners with the basic propositional meaning that the learners want to convey and the syntactic tool that learners put words into. In addition, VPC has a highly productive nature (Darwin & Gray, 1999). Hence constructional knowledge from explicit instruction on VPC is expected to enhance learners' sentence production ability.

5.2. Limitations and Suggestions for Further Research

The present study provides base data on how learning VPC in a construction grammar-based instructional framework affects acquiring other ASCs, i.e., the prototypical CMC and TRC. Identifying the types of VPC (i.e., literal or aspectual VPC) that facilitate learning other constructions will assist the understanding of specification of the linkage of VPC with other ASCs. However, the current study has several limitations related to sample size, task type, the level of the test item, and the effect of retention.

First, the participants of the present study were limited to a small number, and thus, it was not enough to generalize the findings to the EFL population. The fact that some of the prototypical CMC results were not statistically significant might be resulting from the limited number of participants. Future research applying a similar design with a larger sample size would be of benefit.

Second, the production task of the current study was based on the writing performance, rather than speaking performance or the combination of the two, due to the practical constraints. Therefore, further research would support the current study's findings and be valued if speaking performance is added.

Thirdly, the level of some test items of the prototypical CMC was not high enough to assess students' learning of the prototypical CMC, as was in the prototypical TRC. Fourteen verbs were used in the test of the prototypical CMC. Among them, six of them verbal CMC, which were not foreign to the participants. Thus the scores of the prototypical CMC tests were relatively high even in the pre-test. Further studies would contribute to the fuller understanding of the generalizability if the dividing the types of the prototypical CMC test items are weighted toward unselected CMC variation of constructional CMC.

Lastly, the present study was not possible to administer a delayed post-test since the current experiment was conducted at the end of the school year. Future studies could provide a more comprehensive perspective on the generalization of learning VPC in a construction grammar framework if the effects on retention of the instruction are examined through delayed post-tests.

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APPENDICES

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APPENDIX 1. Instruction Materials Samples

1.1. Literal VPC Instruction

UNIT 1.

1. 구동사란?

구동사란 'put your hands up'과 같이 [동사 + 첨사]의 형태로 이루어진 구문을 말합니다. 이들은 다음과 같이 장소나 방향의 이동, 상태의 변화를 나타낼 수 있습니다.

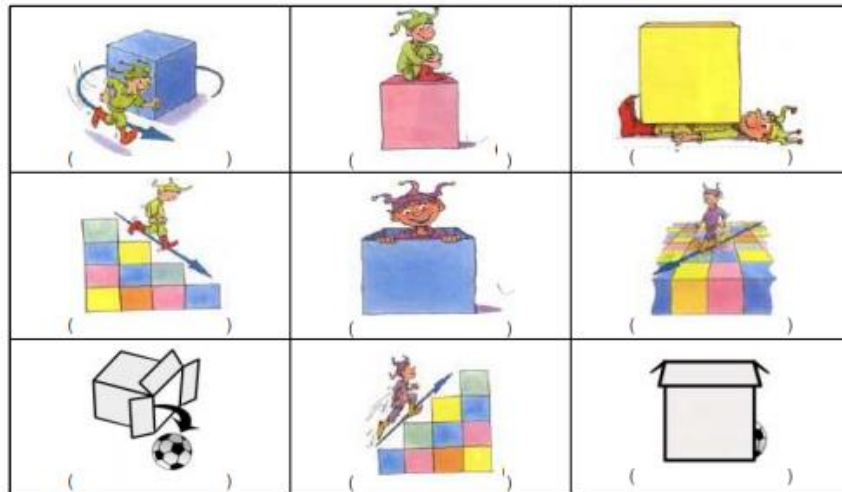
동사	첨사	예문	뜻
put	up	Put your hands up.	손을 위로 들어라. (장소나 방향의 이동)
turn	on	Turn the light on.	불은 켜진(on) 상태로 바꾸어라. (상태의 변화)

우리는 이번 시간에 장소나 방향의 이동을 나타내는 구동사에 대해서 알아보니다.

2. 첨사란?

about, across, along, around, aside, away, by, back, down, in, off, on, over, through, under, up과 같은 것으로 '어떤 뜻을 더하기 위하여 붙이는 말'을 가리킵니다. 그러므로 구동사란 동사에 첨사의 뜻을 더해진 구문을 말합니다.

(문제) 다음의 그림에 알맞은 첨사를 위에서 골라 쓰시오.



3. 장소.방향의 이동을 나타내는 구동사

X가 Y를 Z로 이동시키다.			
주어(X)	동사	목적어(Y)	첨사(Z)
He	put	his hand	up
She	threw	the trash	out

4. 보기에서 알맞은 문장을 골라 각 대화를 완성하십시오.

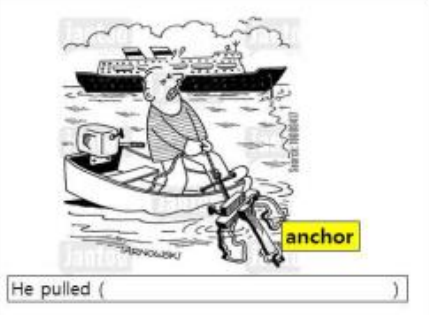

보기	(a) You cannot take it outside. (b) Tom put his towels away. (c) Put your head down. (d) The radar piloted it in.
----	--

		
<p>A: Is this the right position? B: Yes, you must ----</p>	<p>A: How can the plane find the airport in this dark? B: -----</p>	<p>A: Excuse me, ----- B: Oh, I am sorry, but I didn't know that.</p>

5. 다음의 빈칸에 들어갈 알맞은 첨사를 써넣으시오.

- (1) I invited Peter () for a drink but he said he had to rush.
- (2) We threw the ball () a few times in the second half.
- (3) I accidentally deleted a file. Do you have any ideas how to get it ()?

6. 다음 그림을 구동사를 사용하여 표현하십시오.

 <p>He pulled ()</p>	 <p>She ()</p>
--	---

7. 더 알아보시다!

장소·방향의 이동을 나타내는 구동사는 ①의 순서 뿐 아니라 ②의 순서로도 나타낼 수 있습니다. 단, 목적어가 대명사일 경우에는 반드시 ①의 순서로 써야 합니다.

① 주어(X) 동사 목적어(Y) 첨사(Z)	He took the garbage out. He took it out.
② 주어(X) 동사 첨사(Z) 목적어(Y)	He took out the garbage.

UNIT 2.

1. 장소.방향의 이동을 나타내는 구동사



X가 Y를 Z로 이동시키다.			
주어(X)	동사	목적어(Y)	첨사(Z)
He	put	his hand	up
She	threw	the trash	out

2. 다음의 문장을 표의 (a)와 같이 쓰고 우리말로 해석하십시오.

- (a) He picked his pen up.
- (b) She took his book out.
- (c) She put the plug in.
- (d) The soldier put the flag up.

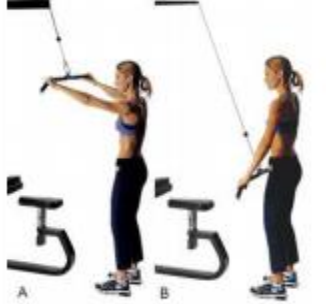
	주어(X)	동사	목적어(Y)	첨사(Z)
(a)	He	picked	his pen	up
	우리말 해석	그는 그의 펜을 집어 들었다.		
(b)				
	우리말 해석			
(c)				
	우리말 해석			
(d)				
	우리말 해석			

3. 보기에서 알맞은 첨사를 사용하여 각 문장을 완성하십시오.

보기	첨사
	down, out, off, on, up

- (1) Andy found out that dust was piled up on his keyboard. So, he brushed it ----- and put the new keyboard protector on the keyboard.
- (2) When the soldier found out the man in the dark was not an enemy, he put his gun -----.
- (3) When the teacher came into the classroom, the students took their books -----.

4. 다음의 문장을 그림으로 표현해 봅시다.

She pulled the bar down.	He lifted the baby up.	She rolled the ball down.
		

5. 다음 그림을 구동사를 사용하여 표현하십시오.

 <p>When the water starts to boil, -----</p>	 <p>To make a Jack-o'-lantern, you need a big, well-ripen pumpkin. First, -----</p>
--	--

6. 장소.방향의 이동을 나타내는 구동사

X가 Y를 Z로 이동시키다.			
주어(X)	동사	목적어(Y)	첨사(Z)
He	put	his hand	up
(해석) 그는 그의 손을 들어 올렸다.			
She	threw	the trash	out
(해석) 그녀는 쓰레기는 내다 버렸다.			
He	kicked	the ball	out
(해석)			
She	took	the flowers	in
(해석)			

APPENDIX 1. Instruction Materials Samples

1.2. Aspectual VPC Instruction

UNIT 1.

1. 구동사란?
 구동사란 'eat the pizza up'과 같이 [동사 + 첨사]의 형태로 이루어진 구문을 말합니다. 이들은 다음과 같이 장소나 방향의 이동, 상태의 변화를 나타낼 수 있습니다.

동사	첨사	예문	뜻
put	up	<u>Put</u> your hands <u>up</u> .	손을 위로 들어라. (장소나 방향의 이동)
eat	up	<u>Eat</u> the pizza <u>up</u> .	피자를 모조리 다 먹어라. (상태의 변화)

우리는 이번 시간에 상태의 변화를 나타내는 구동사에 대해서 알아봅니다.

2. 첨사란?
 about, across, along, around, aside, away, by, back, down, in, off, on, over, through, under, up과 같은 것으로 '어떤 뜻을 더하기 위하여 붙이는 말'을 가리킵니다. 그러므로 구동사란 동사에 첨사의 뜻을 더해진 구문을 말합니다.

3. 상태의 변화를 나타내는 구동사

X가 Y를 Z의 상태가 되도록하다.

주어(X)	동사	목적어(Y)	첨사(Z)
She	cleaned	her room	up
She	cheered	me	up
He	turned	the TV	down
He	turned	the offer	down

4. 첨사의 의미확장

up	1. 위쪽에서의 움직임 2. 목표, 끝, 한계를 목표로 함 3. 높은 가치, 심한 정도로 올라감 4. 더 보기 쉽고, 접근 가능하고, 알려지는 것 5. 완전한 상태, 가장 높은 단계에 이르는 것
down	1. 낮은쪽에서의 움직임 2. 시간적으로 거슬러 올라감 3. 정도, 질, 양, 크기, 가치, 활동성, 힘, 지위에서의 낮아짐 4. 어느 규모에서 목표, 완전함, 한계에 이르는 것

5. 다음의 문장에서 밑줄 친 첨사가 위의 3번에서 어떤 뜻으로 쓰였는지 번호를 쓰시오.



- (1) I cannot start my old car up. ()
- (2) She cheered me up. ()
- (3) He carried the suitcase up. ()
- (4) She burned the papers up. ()
- (5) Keep your head down when I shave your neck. ()
- (6) The force of blast knocked him down. ()
- (7) Why did the teacher put me down in front of other students? ()

6. 보기에서 알맞은 문장을 골라 각 대화를 완성하십시오.

보기	(a) Could you turn the volume up? (b) They had to break the door down. (c) He ate it up. (d) She turned the TV down.
----	---

A: What are you doing? B: I am watching my favorite show on TV. A: That's my favorite too! _____	A: How was your date with John yesterday? B: I was very upset because John and I ordered a pizza together but ____ before he could say knife.	A: Did you hear that two people were trapped in the freezer last night? B: Really? That's terrible. Were they saved? A: Well ___ to escape from there.
--	--	--

7. 다음 그림을 구동사를 사용하여 표현하십시오.

 <p>The woman (_____)</p>	 <p>They decided to (_____)</p>
--	---

UNIT 2.

1. 상태의 변화를 나타내는 구동사 (X가 Y를 Z의 상태가 되도록하다)

- (1) John ate the apple up. (2) She tore the letter up.
 (3) She turned the volume down. (4) He turned the light on/off.

	주어(X)	동사	목적어(Y)	첨사(Z)
(1)	John	ate	the apple	up
	우리말 해석	John은 사과를 다 먹었다.		
(2)	우리말 해석			
(3)	우리말 해석			
(4)	우리말 해석			

2. 첨사의 확장 II

on	off
1. 위에 (면에 접촉한 채)	1. 떨어져 있는, 떨어져 있는
2. 바라보는 방향쪽으로, 이전의 방향대로, 계속해서	2. 힘, 양이 감소하는
3. 접근, 도착하는	3. 종결, 중단, 분리되는
4. 시작, 착수하는	4. 시작, 착수하는

3. 다음 빈칸에 첨사 on, 혹은 off를 넣으시오.

- (1) Switch the kettle ()! Let's have a cup of coffee!
 (2) When Mary came home late, her mother was very angry and told her ().
 (3) We all went to the airport to see her ().
 (4) I'm not sure if this dress is my size. Can I try it ()?

4. 다음의 문맥에 자연스럽게 보기에서 알맞은 문장을 찾아 넣으시오.

보기	(1) the smoke set a fire alarm off (2) the police moved us on (3) when I put it on (4) she cut the things off
----	--

Jim gave me a hat. -----, I felt like a princess.	There were dirty things on her hair. So she took a pair of scissors and -----.	Mr and Mrs Newton and their two children managed to get out through a window when -----.
---	---	---

5. 다음의 문장들을 구조에 알맞게 넣고 상태의 변화를 보기와 같이 묘사하시오.
 (1) He turned the radio on. (2) We paid our mortgage off.
 (3) (Suddenly he came up with brilliant ideas and) he wrote them down.

주어(X)	동사	목적어(Y)	첨사(Z)	상태 변화
He	turned	the radio	on	
그는 라디오를 켜다.				

6. 다음에서 밑줄 그은 문장들을 해석하시오.

- (1) A: Do you know how badly people were injured in the accident?
 B: No I don't. The police moved us on, so I didn't see very much.
 (해석:)
- (2) A: Shall I switch the TV off?
 B: Could you leave it on? I want to watch the news.
 (해석:)
- (3) He hasn't spoken Spanish for ages so he wants to polish it up before his holiday.
 (해석:)

7. 다음의 그림을 구동사를 사용하여 표현하시오.

<p>He was such a dangerous prisoner that they () in a room and put a guard outside.</p>	<p>She tried ().</p>

APPENDIX 2. Testing Materials

2.1. Picture Description

2.1.1. Test Paper

Pre-test

* 화면의 그림을 묘사하세요.
(단, 연결어를 사용하거나 관계대명사절을 사용하지 말고 단문으로 쓰시오.)

1학년 ()반 ()번

1. She sliced_____
2. Tom_____
3. Sam_____
4. He_____
5. Joe_____
6. She sprayed_____
7. The boy kicked_____
8. The woman_____
9. The man_____
10. Charlie_____
11. Tom_____
12. He cut_____
13. He rolled_____
14. The robber shot_____

Post-test

※ 화면의 그림을 묘사하세요.

(단, 연결어를 사용하거나 관계대명사절을 사용하지 말고 단문으로 쓰시오.)

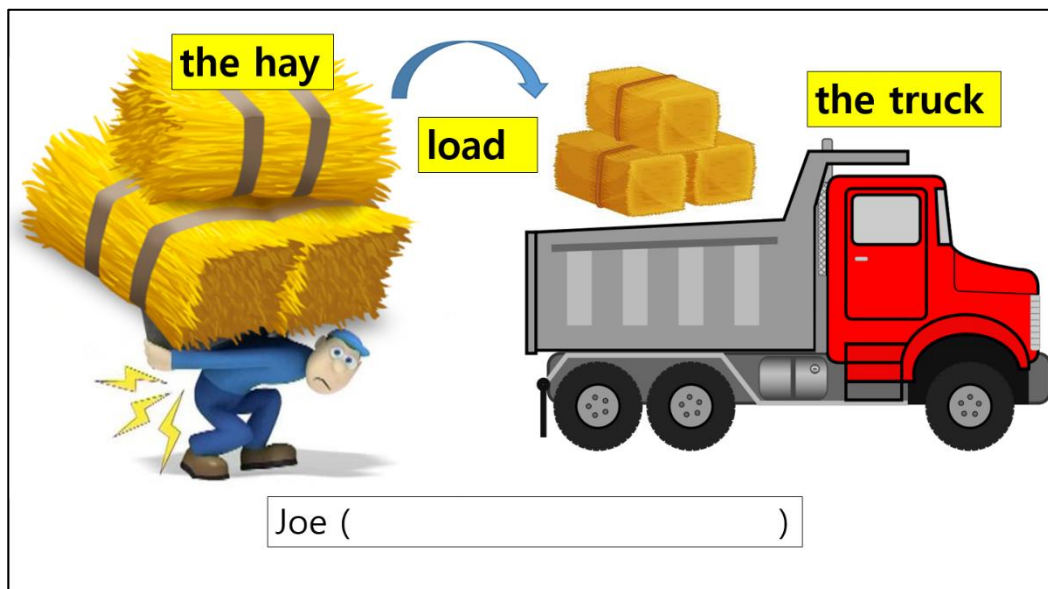
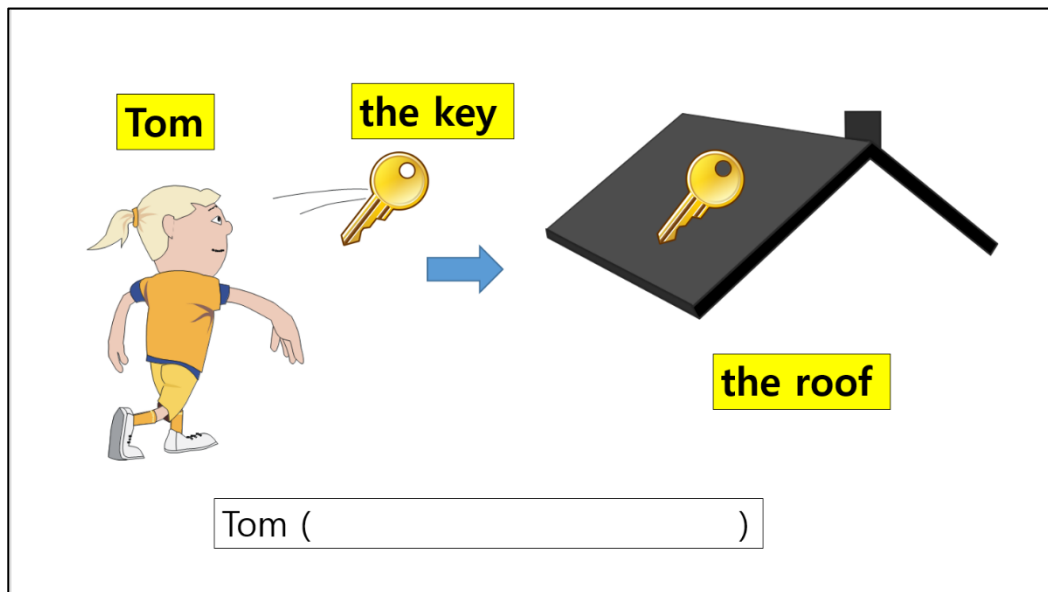
1학년 ()반 ()번

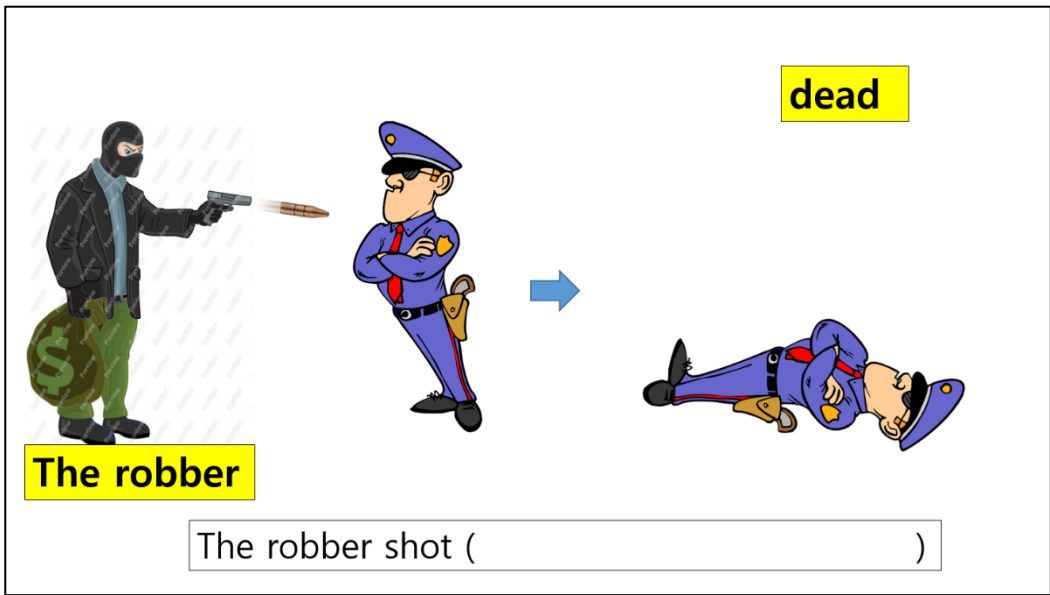
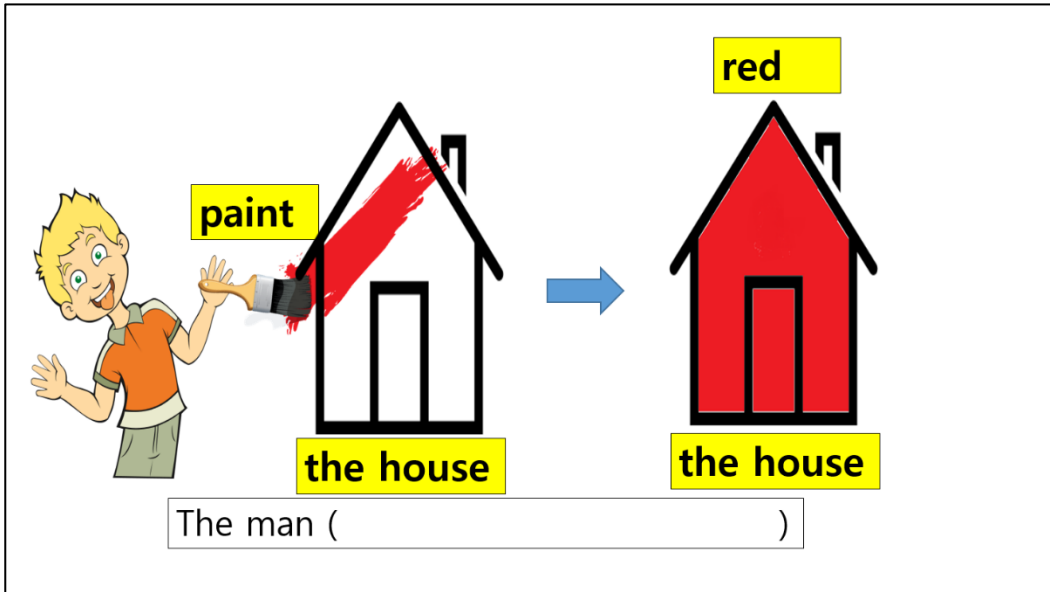
1. John_____
2. Laura_____
3. He_____
4. Joe_____
5. The soldier_____
6. The man_____
7. The cook sliced_____
8. The woman_____
9. Gary_____
10. He_____
11. The policeman shot_____
12. He rolled_____
13. He_____
14. He sprayed_____

APPENDIX 2. Testing Materials

2.1. Picture Description

2.1.2. Picture Slides Samples





APPENDIX 2. Testing Materials

2.2. English-to-Korean Translation

Pre-test

* 다음의 문장을 할 수 있는 한 가장 정확하게 우리말로 바꾸시오.

1학년 ()반 ()번

1. Sam hammered the metal flat.
()
2. Peter put the pencil on the desk.
()
3. He pulled the boy out of the water.
()
4. Sam sent the letter to New Zealand.
()
5. He tossed the key to his mom.
()
6. Jane sliced the ham onto the plate.
()
7. Kim took the rose into the house.
()
8. He nailed the window shut.
()
9. Jack shook her awake.
()
10. Billy sneezed the tissue off the table. (sneeze: 재채기하다)
()
11. The lady rubbed her hands warm.
()
12. He ran his shoes threadbare. (threadbare: 닳은)
()
13. Jane scrubbed the pot shiny.
()
14. The fan hit him unconscious. (unconscious: 무의식인)
()

Post-test

* 다음의 문장을 할 수 있는 한 가장 정확하게 우리말로 바꾸시오.

1학년 ()반 ()번

1. The baseball player hit the umpire unconscious. (umpire: 심판, unconscious: 무의식인)
()
2. Lee took the box into the car.
()
3. Jessi sliced the meat onto the frying pan.
()
4. Mary shook him awake.
()
5. John sneezed the paper off the desk. (sneeze: 재채기하다)
()
6. He pulled the girl out of the water.
()
7. Jenny sent the book to Japan.
()
8. The man nailed the window shut. (nail: 못을 박다)
()
9. Jenny scrubbed the shoe shiny.
()
10. The girl rubbed her hands warm.
()
11. The athlete ran his shoes threadbare. (threadbare: 닳은)
()
12. Brian hammered the metal flat.
()
13. She tossed the ball to the teacher.
()
14. Anna put the fork on the table.
()

APPENDIX 2. Testing Materials

2.3. VPC Test Paper

1학년 반 번

※ 빈칸에 들어갈 첨사를 보기에서 골라 쓰시오.

(보기: off, on, up, down, away, in, out)

1	A: Can you tell me how to use this cosmetic please? B: Sure, you can put some of it on your face and wash it () in 15 minutes.
2	A: Why doesn't this toaster work? B: It helps if you plug it () first!
3	Whenever Sam sees trash on the floor, he picks it ().
4	Don't leave your friend on the doorstep! Ask him ()!
5	The tree was dying so we had to chop it ().
6	A: A button has come off my jacket. B: So, you want me to sew it () again!
7	There is always some toothpaste left in the tube. You should try hard to squeeze it ().
8	As my sister was going to be away for a long time, we all went to the station to see her ().
9	It is freezing outside. Put your gloves ().
10	I'll give you a lift. If you wait on the corner, I will pick you () at 6 o'clock.
11	A: Why is John so irritable these days? B: I think the constant noise wore him ().
12	She has no family responsibility to tie her ().
13	Rachel hadn't been playing so well so they decided to leave her () of the team.
14	I asked the driver to let me () at the end of the road.

※ 다음 문장을 우리말로 해석하시오.

1	John picked the card up. (→)
2	He pulled the bar up. (→)
3	Tom kicked the ball out. (→)
4	You cannot take the papers outside. (→)
5	The man took the poster down. (→)
6	When Jenkins finally arrives, I want you to send him in immediately. (→)
7	Mary cut the peel off. (→)
8	Buying a new car has eaten all my savings up. (saving: 저금) (→)
9	The party was really boring so I suggested some games to liven it up. (→)
10	Originally we had fifty suspects but we narrowed them down to five. (suspect: 용의자) (→)
11	At the road the police waved us on but the car behind us had to stop. (→)
12	Fill this form out in capital letters. (→)
13	Rub the words out on the board. (→)
14	The farmer scared the birds away before they did any damage to the crops. (→)

국 문 초 록

본 연구는 구문문법에 기반한 구동사의 학습이 한국 고등학교 영어학습자들의 원형의 영어사역이동구문과 영어결과구문의 학습에 미치는 영향을 살펴 보았다.

Celce-Murcia와 Larson-Freeman(1999)에 따르면 구동사는 의미적으로 방향이나 장소의 이동을 나타내는 직접구동사와, 상태의 변화를 나타내는 상구동사, 그리고 관용적인 표현을 나타내는 관용구동사로 나눌 수 있다. Goldberg(2015)는 이러한 구동사를 하나의 구문(Construction)으로 간주하고, 형태와 기능상의 자질상속을 바탕으로 직접구동사를 사역이동구문의 한 종류, 상구동사는 결과구문의 한 형태로 정의한다. 따라서 직접구동사나 상구동사의 학습이 각각의 원형구문, 즉, 원형의 사역이동구문과 결과구문의 습득에 미치는 영향을 파악하기 위해 학생들을 두 집단으로 나누었다. 한 그룹에게는 구문문법에 기반하여 직접구동사를 교수하고, 다른 그룹에게는 구문문법에 기반한 상구동사를 교수하였다. 모든 교수 집단은 2차시의 수업과 2번의 평가(사전, 사후)에 참여하였다. 각 평가는 원형의 사역이동구문과 결과구문의 습득을 검사하였으며 학생들은 두 가지의 과업을 수행하였다: 그림 묘사 과업, 문장 해석 과업. 첫 과업은 학생들의 구문 사용을 검사하였고, 두번째 과업은 학생들의 구문 이해를 평가하였다.

실험결과, 구문문법에 기반한 구동사의 학습으로 인한 교수하지 않은 원형의 사역이동구문과 결과구문의 습득과 관련하여 유의미한 현상들이 발견되었다. 첫째, 직접구동사의 학습이 원형의 사역이동구문의 습득을 향상시켰다. 직접구동사 교수그룹은 상구동사 교수그룹보다 원형의 사역이동구문 습득에

더욱 큰 향상을 보였으며 과업의 종류에 관계없이 큰 향상을 보였다. 둘째, 상구동사 교수그룹은 원형의 결과구문 습득에 더욱 큰 향상을 보였다. 상구동사 교수그룹의 학생들은 두 가지 과업 모두에서 유의미한 향상을 보였다. 직접구동사 교수그룹 역시 원형의 결과구문의 습득에 향상을 보였는데 이는 구문이 각각 독립적으로 존재하는 것이 아니고 위계적 그물망안에서 서로 연결되어 있음을 시사한다. 또한, 두 그룹 모두 원형의 결과구문 습득의 향상이 원형의 사역이동구문 습득의 향상보다 더욱 두드러졌다.

이상의 발견에 근거하여, 본 논문은 구문문법에 기반한 구동사의 학습이 언어적 관련도가 깊은 다른 논항구조구문(즉, 원형의 사역이동구문과 결과구문)의 습득에 긍정적인 영향을 미침을 밝히며, 구문문법적 접근이 체계적인 언어의 습득과 더불어 영어의 생산성 향상에 효과적일 수 있다는 가능성을 시사하였다.

주요어: 구문문법, 구동사, 사역이동구문, 결과구문, 논항구조구문

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