



## Metaphor Awareness in Action: A Cognitive Linguistic Approach to Enhancing Comprehension and Production of Phrasal verbs in EFL Learners

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**Abstract:** The present study investigates the effectiveness of a conceptual approach, grounded in cognitive linguistics, in enhancing the comprehension and production of phrasal verbs among Iranian EFL learners of English. To this end, 38 participants (16 males and 22 females) at intermediate levels of language proficiency were randomly assigned to an experimental and a control group, and underwent instruction through the conceptual approach or the traditional method, respectively. A pre-test was administered to assess baseline performance, followed by the intervention and two post-tests (i.e., a cloze test and a story-retelling task) to measure changes in comprehension and production of the phrasal verbs. The cloze test measured differences in phrasal verb comprehension, while the story-retelling task assessed production and accuracy. The mixed between-within-subjects ANOVA (SPANOVA) revealed significant improvement in the experimental group on the post-test. Independent sample t-tests confirmed superior performance in the production and accuracy of phrasal verbs for the experimental group. This suggests that the conceptual approach offers a systematic method for learners to approach phrasal verbs analytically, contrasting with the traditional perception of these elements as non-analyzable. As a practical implication, educators in EFL contexts, are strongly urged to adopt the presented conceptual approach. This innovative pedagogical strategy not only enriches the learning experience but also addresses linguistic challenges associated with phrasal verbs, fostering creativity in the instructional process through situational presentations and orientational metaphors.

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## Introduction

Phrasal verbs, highly frequent and omnipresent in the English language ([Garnier & Schmitt, 2016](#)), constitute an essential element of daily communication ([Kalay & Keçik, 2023](#); [Qarani, 2023](#)). [Gardner and Davies \(2007\)](#) observed the prevalence of a phrasal verb in every 150 words of English text, emphasizing their pervasive nature. The existing lexicon encompasses over 5000 actively used phrasal verbs ([Omidian et al., 2019](#)). Despite their prevalence, learners often encounter challenges in navigating the intricacies of phrasal verbs throughout their language proficiency journey ([Littlemore & Low, 2006](#)). L2 learners tend to shy away from these verbs due to their polysemous nature ([Liao & Fukuya, 2004](#); [Badem & Simsek, 2021](#)), with [Gardner and Davies \(2007\)](#) revealing an average of 5.6 meanings for frequently used phrasal verbs in their corpus-based study.

Compounding the difficulty is the semantic opacity and non-compositionality of phrasal verbs ([Strong & Bores, 2019](#)). Teaching materials often present these verbs in an unsystematic manner, where meanings may appear arbitrary ([Gardner & Davies, 2007](#); [Febriansyah et al., 2024](#)). Consequently, learners may resort to mere memorization, a method criticized by [White \(2012\)](#) for hindering conceptual understanding and application in novel contexts.

From a pedagogical vantage point, there is a notable gap in systematic approaches to teaching phrasal verbs, often perceived as arbitrary and non-analyzable combinations of verbs and particles. Departing from this perspective, the proponents of cognitive pedagogy advocated for the importance of emphasizing metaphor, conceptualization, and symbolism in language teaching. They suggested that language instruction should adopt a cognitive approach

([Lakoff & Johnson, 1980](#); [Langacker, 2002](#)). Additionally, cognitive linguists recommended that educators help students understand the fundamental meaning of a word as its primary meaning, and then introduce other meanings as additional layers of interpretation ([Csábi, 2004](#); [Verspoor & Lowie, 2003](#)). It was also noted that metaphorical meanings are often conveyed through the verb, its particle, or both and the use of metaphorical extension plays a key role in enhancing comprehension of phrasal verbs ([White, 2012](#)). This interest in teaching phrasal verbs using the cognitive approach stemmed from Langacker's work connecting language learning to cognitive processes in the human mind ([Al-Otaibi, 2019](#)). Cognitive linguists believe that linguistic structures are influenced by cognitive processes like

metaphorization, and that our conceptual system is primarily metaphorical. People use expressions involving concrete entities to grasp abstract concepts. Therefore, cognitive linguists utilize concrete objects to comprehend abstract ideas ([Kövecses, 2010](#)). Informed by cognitive linguistics, our study thus endeavors to introduce a conceptual approach to teaching phrasal verbs, anchored in orientational metaphors. The investigation seeks to ascertain whether this approach enhances comprehension and production of phrasal verbs.

## Literature Review

Phrasal verbs are perceived as cohesive units comprising two words—a verb and a particle—acting in tandem ([Larsen-Freeman et al., 2016](#)). The distinction between adverbs and prepositions is crucial in understanding their unique structure. The Heritage Dictionary of Phrasal Verbs (2005) defines them as a fusion of an ordinary verb with a preposition or adverbial particle, incorporating at least one non-literally transparent meaning. Notably, they form an integral part of informal spoken language ([Omidian et al., 2019](#)).

[White \(2012\)](#) categorizes phrasal verbs into three groups based on their range of meanings: (a) literal, where meanings are apparent by examining the verbs and particles (e.g., go out, sit down); (b) non-obvious meanings, though not idiomatic (e.g., eat up, move on); and (c) significantly challenging or nearly impossible to guess semantically (e.g., pull over, fed up). According to Doherty and Kelly (2020), the non-literal nature of phrasal verbs poses greater challenges for learners compared to literal ones, rendering them less favorable for both teachers and learners ([Badem & Simsek, 2021](#)). A key approach to addressing this challenge involves focusing on particles, which play a pivotal role in determining phrasal verb meanings. [Al-Otaibi \(2019\)](#) outlines their roles: (1) maintaining meanings with directional particles (e.g., look up); (2) being influenced by aspectual particles in semi-transparent phrasal verbs (e.g., work on); and (3) adopting an idiomatic role in determining meaning (e.g., make out). [Armstrong \(2004\)](#) emphasizes the substantial impact of particles on phrasal verb meanings, echoing Al-Otaibi's insights.

In the conventional perspective, phrasal verbs are often viewed as arbitrary, non-compositional expressions, neglecting the significance of particles ([Al-Otaibi, 2019](#)). This traditional stance has heavily influenced how textbooks present phrasal verbs to learners, drawing criticism from educators ([Strong & Boers, 2019](#)). The impact is substantial, given the pivotal role of materials in language classrooms globally ([Khojasteh & Reinders, 2013](#)). Study books typically inundate students with lengthy lists of phrasal verbs, accompanied by translations and fill-in-the-blank activities, perpetuating the notion that these

combinations are arbitrary and resist analysis. Consequently, learners grapple with the semantic opacity and non-compositionality of phrasal verbs, perceiving them as non-compositional due to the challenge of deciphering meanings by dissecting components ([White, 2012](#)). For example, understanding why the combination of "carry" and "on" signifies "continue" can be perplexing. Many phrasal verbs are recognized as figurative idioms, leaving learners with the sole recourse of pure memorization ([White, 2012](#)), a method fraught with difficulties when applying knowledge outside textbook contexts ([Veer, 2000](#)). The confusion extends to dictionaries, where the meanings of such verbs diverge significantly from their literal interpretations. This complexity is exacerbated for learners whose native language lacks equivalent verbs ([Yasuda, 2010](#); [Garnier & Schmitt, 2016](#)). Consequently, conventional teaching methods suggest a conceptual analysis approach for learners to navigate the intricacies of phrasal verbs.

In contrast to traditional language teaching methods, the adoption of cognitive linguistic approaches in L2 pedagogy has witnessed significant growth ([White, 2012](#)). Within this paradigm, vocabulary teaching assumes a pivotal role, emphasizing the identification of a word's core meaning and highlighting additional meanings as metaphorical extensions for students ([Cs'abi, 2004](#); [Verspoor & Lowie, 2003](#)). This metaphorical extension proves crucial for a deeper comprehension of phrasal verbs ([White, 2012](#)). Furthermore, the transfer of metaphorical meanings occurs through verbs, particles, or both ([Morgan, 1997](#)). Notably, the importance of mapping spatial relations and metaphorical extensions onto image schemata is underscored, with particles playing a significant role in determining phrasal verb meanings

([Lu & Sun, 2017](#)). Contrary to the conventional perception of particles as arbitrary, cognitive linguistics posit that particles are orientational metaphors systematically stored in the lexicon ([Lakoff & Johnson, 1980](#)). These orientational metaphors, such as up-down, on-off, front-back, and in-out, contribute to human beings' experiences with the world. Additionally, the understanding of particles through orientational metaphors aids in the acquisition of phrasal verbs, leveraging the metaphorical nature of language to comprehend abstract concepts ([Rudzka-Ostyn, 2003](#)).

On an empirical level, several studies have examined the impact of cognitive approaches on teaching phrasal verbs yielding valuable insights. [Kovecses and Szabo \(1996\)](#) pioneered the use of conceptual metaphors as a pedagogical tool, demonstrating its effectiveness in comparison to traditional memorization methods. [Yasuda \(2010\)](#) explored the influence of orientational metaphors on Japanese students' ability to learn phrasal verbs,

revealing the advantages of a cognitive approach. [White \(2012\)](#) employed cognitive linguistics and socio-cultural theory, incorporating creativity in a five-step pedagogical approach, showing modest progress in students' ability to explain phrasal verbs. [Karahan \(2015\)](#) investigated the impact of a cognitive approach on Turkish EFL learners, emphasizing the importance of providing translations with examples. [Lu and Sun \(2017\)](#) focused on orientational metaphors, indicating their positive impact on participants' long-term memory. [DerKhachadourian \(2019\)](#) implemented cognitive linguistics strategies through Google+, showcasing the effectiveness of conceptual mapping in comparison to traditional teaching methods. [Al-Otaibi \(2019\)](#) explored [Rudzka-Ostyn's](#) Model in teaching particles, revealing mixed results on its effectiveness.

In these studies, orientational metaphors and particles played a prominent role, often emphasizing the importance of drawing learners' attention to particle meanings. Recognizing the intertwined nature of particle ambiguity and metaphorical aspects, this study proposes a pedagogical approach that combines metaphoric images with a list of meanings. Going beyond the scope of previous research, which merely focused on retention, this paper aims to introduce a conceptual approach to investigate whether this method aids Iranian EFL learners in comprehending and producing phrasal verbs.

## Research Questions

1. Does implementing a conceptual approach to teaching phrasal verbs facilitate the comprehension of such verbs?
2. How does the conceptual approach affect the rate and accuracy of using phrasal verbs?

## Methodology

### *Design*

This study employed a quantitative research design to investigate the impact of a conceptual approach, informed by cognitive linguistics, on the comprehension and production of phrasal verbs among Iranian learners of English. The study spanned a six-week period and utilized quantitative measures to provide a focused examination of the learners' experiences.

### *Participants*

This study was conducted at a language institute in Mazandaran, located in the northern part of Iran. The selection of this institute was based on its representation of the prevailing approach methods and curriculum adopted by the majority of English language institutes in

the country, aligning with the Common European Framework of Reference (CEFR). After administering the Oxford Placement Test, a total of 38 students (16 males and 22 females) were randomly selected from the intermediate level of language proficiency.

The participants, studying English for general purposes, shared Farsi as their first language, with ages ranging from 17 to 23. The randomly assigned groups consisted of an experimental group (n=19) and a control group (n=19). The control group underwent traditional in-class instruction, receiving a list of phrasal verbs with translations for memorization. In contrast, the experimental group followed the three steps outlined in the proposed conceptual approach. Prior to the study, informed consent was obtained from all participants; ensuring ethical considerations were met throughout the research process.

## **Instruments**

### ***Proficiency Test***

An Oxford Placement Test (OPT) ([Allan, 2004](#)) was administered to both groups to assess the participants' general English proficiency at intermediate levels of language proficiency. The pen-and-paper version, comprising 60 multiple-choice items, was employed to ensure the homogeneity of participants.

### ***Cloze Tests***

To evaluate learners' comprehension of phrasal verbs, a cloze test was conducted. Participants filled in the blanks of a cloze test with given phrasal verbs based on 24 metaphoric pictures created by the researcher, following the pattern proposed by [Rudzka-Ostyn \(2003\)](#). The pictures and the test underwent expert scrutiny, piloting, and reliability checks (Cronbach's alpha,  $r = 0.83$ ). The KR-21 method was also used to estimate the test reliability.

### ***Story Retelling Task***

For eliciting oral production, a picture story-retelling task was developed. Participants listened to a pre-recorded English version of the story, embedding the targeted phrasal verbs, and were shown pictures as incentives. The task, featuring five mandatory contexts for phrasal verb use, underwent expert evaluation, and the story retelling was audio recorded. A pilot with 15 non-participant students ensured task suitability and difficulty; the necessary measures were

taken to ensure that the participants in the pilot resembled the main participants in their level of language proficiency and other related variables.

### ***Target Structure***

The study utilized 24 phrasal verbs selected from "the Phave list" proposed by [Garnier and Schmitt in 2014](#). These phrasal verbs were chosen for their high frequency, making them likely encounters in textbooks. Particles were limited to "up", "off", "down", "out", "back", and "on"—considered the most frequent particles in English based on the same study. Additionally, efforts were made to thematically relate the verbs and particles to provide specific contexts.

### **Treatment**

Informed by cognitive linguistics, this study introduces a conceptual approach focusing on particles as orientational metaphors, dispelling the notion that phrasal verbs are arbitrary combinations. This approach encourages learners to engage their creativity in analyzing particles, drawing from the concept of abstract image schema proposed by [White \(2012\)](#). The three-step approach consists of:

#### **Step 1: Introducing Zone of Activity**

In this initial phase, learners become acquainted with the constituents and functions of phrasal verbs, adopting either a deductive or inductive approach. The key concept introduced is the "zone of activity", denoting an area of shared experience, conscious action, and awareness ([White, 2012](#)). Learners receive a curated list of particle meanings, derived from "Word Power" ([Rudzka-Ostyn, 2003](#)). Metaphoric pictures coupled with their respective zones of activities serve as stimuli for learners to visualize potential metaphorical extensions, encouraging creative engagement.

#### **Step 2: Comprehension Activity**

Moving beyond theoretical groundwork, learners engage in a comprehension activity involving twenty-four metaphoric pictures contextualized within dialogues. The dialogues provide contextual clues, alleviating the potential complexity of phrasal verb comprehension. Learners are tasked with the challenging yet essential process of matching phrasal verbs to the appropriate pictures within specific contexts. This activity aims to evoke personal

organizing or judgment as learners independently establish relationships between phrasal verbs and visual stimuli.

### Step 3: Production Activity

A week following the comprehension activity, learners are oriented to the production phase. This stage involves a narrative-focused activity where learners are presented with a story comprising grammatically correct yet atypical sentences. The objective is to reconstruct the narrative using the acquired phrasal verbs. The distributed nature of this memory work aligns with [Thornbury's \(2002\)](#) belief in spaced learning for effective vocabulary acquisition.

This comprehensive approach integrates cognitive linguistics principles, metaphorical extensions, and practical activities to enhance learners' understanding and production of phrasal verbs.

### Procedure

The study spanned six weeks, beginning with a pre-test one week prior to a three-week instructional phase on phrasal verbs for both experimental and control groups. The careful implementation of the conceptual approach's steps included regular comprehension checks to ensure simplicity, following [Kalay and Keçik's \(2023\)](#) emphasis. The experimental group started with the introduction of the "zone of activity", acquainting learners with phrasal verb components and functions. Subsequently, they connected contextualized phrasal verbs to metaphoric pictures in a 15-minute comprehension activity. The final step, labeled the production activity, involved learners generating phrasal verbs. In contrast, the control group received a list of phrasal verbs with Persian equivalence for memorization. Instruction for both groups predominantly occurred in the pupils' native language to enhance effectiveness and comprehension. Two post-tests (i.e., the cloze test and the story-retelling task) were given to the participants immediately after the intervention.

### Data Analysis

To address the first research question, a mixed between-within-subjects ANOVA (SPANOVA) was employed, upon checking all the assumptions of this statistical test, to compare scores between the two groups. As outlined by [Tabachnick and Fidell \(2013\)](#), this statistical approach allows for the examination of variability both between and within subjects, combining aspects of regular ANOVAs and repeated measure ANOVAs. This method is advantageous for identifying potential interaction effects between independent variables and time. The between-subjects factor consisted of the instructional methods



(conceptual approach vs. traditional teaching), while the within-subjects factor involved two time intervals (pre-test and post-test), with participants' cloze test scores serving as the dependent variable.

Regarding the analysis of phrasal verb production, a complete transcription of audio-recorded data was undertaken. Subsequently, two coders evaluated both the attempted use of phrasal verbs (RPV) and their accuracy (APV). Intercoder reliability, assessed through Kappa statistics ( $K=.89$ ,  $P<.005$ ), was considered. Following this, a series of independent sample t-tests were conducted to explore significant differences between the two groups in terms of the rate and accuracy of phrasal verb usage.

## Results

A summary of the descriptive analysis of group performances on each testing occasion is provided in Table 1.

**Table 1.** Descriptive Statistics of the Pre-test and Post-test

	Group	N	Mean	SD
Pretest	Experimental	19	8.89	2.74
	Control	19	9.31	1.94
	Total	38	9.10	2.35
Post-test	Experimental	19	18.52	2.06
	Control	19	10.36	
	Total	38	14.44	4.75

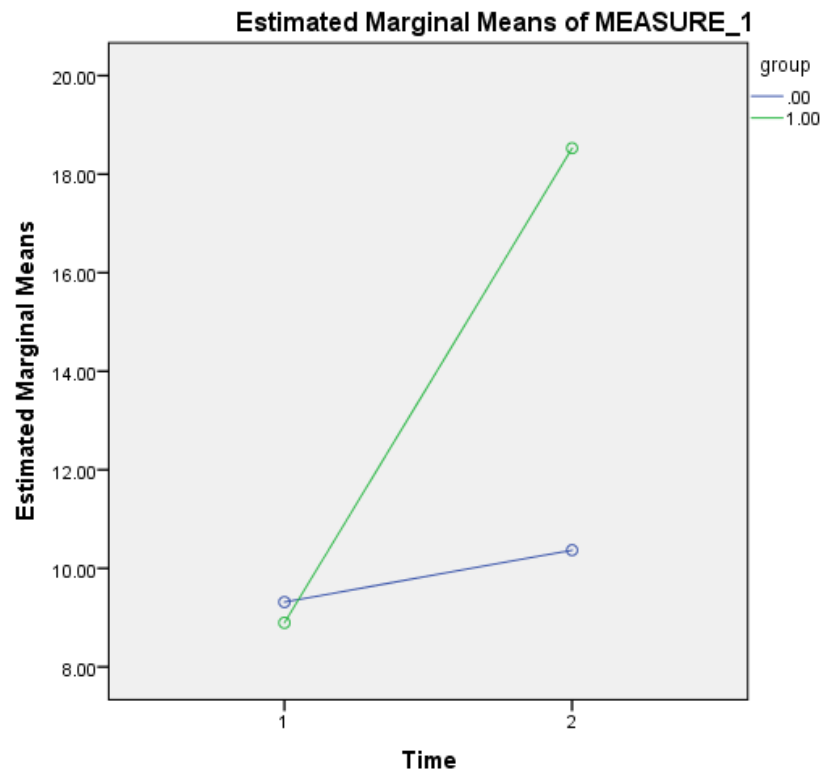
Table 1 provides information on the number of participants and compares their performance in the pre-test and the post-test. As indicated, both groups started the term with very similar means on their pre-test ( $\bar{X}_{EX} = 8.89$ ,  $\bar{X}_{CG} 9.31$ ). However, by the time of the post-test, a distance was maintained between the experimental group and the control group ( $\bar{X}_{EX}=18.52$ ,  $\bar{X}_{CG}=10.36$ ). The performance of both groups proved to be improved in the post-test.

**Table 2.** Multivariate Tests of Main and Interaction Effects

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Time	Pillai's Trace	.924	436.845	1.000	36.000	.000	.924
	Wilks' Lambda	.076	436.845	1.000	36.000	.000	.924
	Hotelling's Trace	12.135	436.845	1.000	36.000	.000	.924
	Roy's Largest Root	12.135	436.845	1.000	36.000	.000	.924
Time * group	Pillai's Trace	.887	281.650	1.000	36.000	.000	.887
	Wilks' Lambda	.113	281.650	1.000	36.000	.000	.887
	Hotelling's Trace	7.824	281.650	1.000	36.000	.000	.887
	Roy's Largest Root	7.824	281.650	1.000	36.000	.000	.887

Moving on to Table 2, the interaction effect in time\*group was the first item that was checked. Despite the fact that multivariate tests produced by SPSS syntax are very similar, the result of Wilks' Lambda is reported as it is the most common one. As Table 2 depicts, there was a significant effect for the interaction between the two independent variables on the dependent variable with a large effect size;  $F(1,36)=281, p <.001, \eta^2=.887$ , which means the grouping condition had an effect on participants' performance in regards with the cloze test, however, through the levels of the other independent variable which was time. That is, the students' ability to answer the cloze test was influenced by the type of interaction they engaged in according to different time periods and the change was not similar for both groups. When the interaction effect turns out to be significant in factorial ANOVA, the result of the main effect is likely to be tricky and less revealing which should be interpreted with caution ([Pallant, 2013](#)). However, as Table 2 portrays, the main effect can be considered significant with a large size effect.  $F(1,36) = 436.84, p <.001, \eta^2=.924$ .

According to [Pallant \(2013\)](#), when the interaction effect is significant, it is necessary to consult the profile plot to be able to interpret the result. As it is depicted in Figure 2 and Table 1, although there was not much difference between the means of the two groups at the beginning ( $\bar{X}_{EX} = 8.89, \bar{X}_{CG} 9.31$ ), the experimental group outperformed the control group significantly in the post-test ( $\bar{X}_{EX} = 18.52, \bar{X}_{CG} = 10.36$ ). While both groups improved after receiving the treatments, this improvement is far more for the experimental group compared to the control group. This plot is shown in Figure 1.



**Figure 1.** Profile Plot of the Main and Interaction Effects

Table 3 provides information on tests of between-subjects effects. The sig value is .000 which is less than the alpha level of .05; therefore, we conclude that the main effect is significant. There was a significant difference in the performance of the experimental and control groups.

**Table 3.** Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	10539.803	1	10539.803	1263.225	.000	.972	1263.225	1.000
group	284.329	1	284.329	34.078	.000	.486	34.078	1.000
Error	300.368	36	8.344					

Table 4 presents descriptive information with regards to participants' performance on story retelling task in terms of the rate of phrasal verbs (RPV) and accuracy of phrasal verbs (APV). As it is shown, the experimental group performed better than the control group in the terms of rate of phrasal verbs ( $\bar{X}_{EX} = 3.63$ ,  $\bar{X}_{CG} = 1.78$ ) and also the accuracy of phrasal verbs ( $\bar{X}_{EX} = 2.73$ ,  $\bar{X}_{CG} = 1.1$ ). The highest number of attempts to use phrasal verbs was 5 out of 7

for the experimental group and 3 for the control group. However, the highest number of accurate uses of phrasal verbs was 4 for the experimental group and 3 for the control group.

**Table 4.** Average Accuracy and Rate Score

Measures		N	Min	Max	Mean	SD
APV	Experimental	19	1	4	2.73	0.99
	Control	19	0	3	1.1	0.13
RPV	Experimental	19	2	5	3.63	1.34
	Control	19	1	3	1.78	0.85

Table 5 provides information with regards to the result of a series of independent samples t-tests indicating that there was a significant difference between the experimental group

( $M = 2.63$ ,  $SD = 1.34$ ) and the control group ( $M = 1.78$ ,  $SD = 0.85$ );  $t(36) = 2.3$ ,  $p = 0.02$  regarding the number of phrasal verbs used by students in story retelling task.

**Table 5.** Independent samples t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
APV	7.30	.010	6.228	36	.000	1.63158	.26199
RVP	2.83	.101	3.41	36	.001	3.94	1.65

The analyses also showed that there was a significant difference between the experimental group ( $M = 2.73$ ,  $SD = 0.99$ ) and the control group ( $M = 1.1$ ,  $SD = 0.13$ );  $t(36) = 6.22$ ,  $p = 0.01$ ) in terms of the accuracy of phrasal verbs used by students in the same activity.

## Discussion, Conclusion, and Implications

In this research, the primary objective was to scrutinize the impact of a conceptual approach on the comprehension and production of phrasal verbs. The utilization of mixed between-within-subjects analysis of variance (SPANOVA) was pivotal in unraveling the efficacy of the proposed method. The outcomes of this statistical analysis unveiled a noteworthy pattern – while both the experimental and control groups demonstrated improvement in comprehension, the experimental group displayed substantial progress.

Implementing the conceptual approach with the experimental group, in stark contrast to the traditional approach with the control group, translated into superior post-test scores for the experimental group, distinctly outpacing the control group. This dichotomy was particularly pronounced in the realm of phrasal verb production, as indicated by independent sample t-tests, where the experimental group exhibited not only a higher rate but also greater accuracy in utilizing phrasal verbs.

The superior post-test scores achieved by the experimental group can be attributed to several key factors. Primarily, the creative engagement fostered by the conceptual approach empowered these students to employ abstract image schemas for analyzing particle meanings, a critical source of ambiguity in phrasal verbs according to [White \(2012\)](#). In contrast, the control group struggled without the benefit of the image schema informed by cognitive linguistics, impacting their ability to comprehend particle meanings negatively. The incorporation of metaphoric images and specific activities not only inspired learners in the experimental group to envision metaphorical extensions but also encouraged creative engagement.

On an empirical level, the comprehension activity within the conceptual approach prompted individuals to utilize organizational skills and judgment, independently connecting phrasal verbs with visual cues, leading to enhanced comprehension and usage. The conceptual approach's guidelines on the true nature of particles as orientational metaphors significantly aided in the analyzable comprehension and production of phrasal verbs, setting it apart from the control group's memorization-based approach, which reinforced the misconception that phrasal verbs were non-analyzable.

The production activity, informed by principles of cognitive linguistics, metaphorical extensions, and practical engagement, served as a cognitively demanding task igniting learners' curiosity—an acknowledged facilitator for vocabulary acquisition according to [Thornbury \(2002\)](#). This activity played a pivotal role in the experimental group's substantial improvement in both the frequency and accuracy of phrasal verbs produced.

Contextual significance cannot be understated in this comparison. The experimental group's exposure to relevant cues and contexts, reinforced by pictures aiding memorization, provided a distinct advantage. It aligns with the widely accepted belief that words acquired within specific contexts are more likely to be learned effectively than those learned in isolation. The environmental context in which a word is introduced plays a crucial role in establishing connections and associations in the learner's memory. Overall, these multifaceted

factors collectively contribute to the notable performance difference observed between the experimental and control groups.

The adeptness demonstrated by the experimental group in interpreting particle meanings within the introduced "zone of activity" not only aligns with [White's \(2012\)](#) emphasis on image schema exposure but also opens avenues for considering the cognitive mechanisms involved in metaphor processing among young learners. This expanded perspective highlights the potential cognitive benefits of metaphor-oriented instruction, shedding light on how learners engage with and internalize abstract linguistic concepts through metaphorical representations. Drawing an extended parallel with [Yasuda's \(2010\)](#) study, which emphasized the positive impact of teaching orientational metaphors on students' comprehension of phrasal verbs, our research contributes to the discourse by offering specific insights into the nuanced ways in which metaphor awareness can enhance language learning outcomes.

Moreover, our study's alignment with [Rudzka-Ostyn's \(2003\)](#) assertion regarding particles as a primary source of ambiguity in phrasal verbs provides a foundation for addressing pedagogical challenges related to particle meanings. The discussion extends beyond mere acknowledgment of ambiguity to explore effective strategies for disambiguation, recognizing the instructional significance of explicitly addressing particle meanings. This heightened focus on particle disambiguation contributes practical insights for language educators, equipping them with valuable tools to enhance clarity and comprehension in phrasal verb instruction.

Furthermore, by corroborating [Lu and Sun's \(2017\)](#) findings on the benefits of a cognitive approach in learning phrasal verbs, our study not only reinforces the cognitive linguistic perspective but also advances the field by examining production aspects, including frequency and accuracy. This expansion into production facets provides a comprehensive understanding of the cognitive processes involved in both comprehension and active use of phrasal verbs.

The implications of these findings extend to practical considerations for educators, learners, and material developers. Despite initial skepticism regarding its effectiveness, the conceptual approach offers multifaceted advantages. Firstly, it empowers students to comprehend particle meanings through the lens of orientational metaphors, introducing a perspective absent in traditional teaching methods. Secondly, learners become cognizant that phrasal verbs are not rigid expressions but possess analyzable components. This realization holds particular significance in EFL contexts like Iran, where the absence of such verbs in the

first language adds an extra layer of complexity. Lastly, the incorporation of situational presentations with pictures emerges as a pedagogical asset, aligning with [Thornbury's \(2002\)](#) advocacy for such strategies. Teachers are, therefore, not only encouraged but also urged to integrate this conceptual approach into their instructional practices, fostering creativity in the learning process.

However, it is crucial to acknowledge that the conceptual approach does not provide a universal remedy for all phrasal verbs, especially those with polysemous nuances. Challenges may persist, but the essence of this approach lies in furnishing learners with a systematic framework to approach phrasal verbs analytically. As far as the limitations are concerned, while the conceptual approach has demonstrated its efficacy in bolstering comprehension and production, a sustained evaluation through a delayed post-test is imperative to gauge the enduring retention of productive academic vocabulary knowledge over time. Additionally, the participants were all sampled from those at intermediate levels of language proficiency. Further research is warranted to examine the efficacy of the conceptual approach when it comes to learners either at incipient or higher levels of L2 language proficiency. Last but not least, this study did not take into account how the learners perceived the conceptual approach. Thus, future qualitative could delve into this aspect.

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The authors declare that they do not have any conflicts of interest.

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