

A Scoping Review of Phrasal Verb Teaching Methods for Adult EFL Learners

成人 EFL 学習者の為の句動詞教授法に関するスコーピングレビュー

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本稿では、第二言語および外国語英語学習者の英熟語習得に関する文献のスコーピングレビューを行う。1996年から2010年にかけて行われた認知言語学的手法に関する以前のレビュー(Boers, 2011)では、比較処理群(イメージスキーマ、身体化された認知、比喩的精緻化を利用して、一見任意に形成された英熟語に意味を与える方法を採用している)の成績が芳しくないことから、認知言語学的手法で英熟語習得を促進する方法の効果が過大評価されていることが判明した。本レビューでは、同じく慣用的な意味をもつ句動詞習得に関する先行研究(2010年~2023年)も含めてレビューし、これまでの研究の妥当性について考察を行う。

キーワード:

Phrasal verbs, conceptual metaphors, retrievals, L2 vocabulary

1. Introduction

Phrasal verbs (PVs) are highly frequent in the English language, yet they are a problematic construct for learners who have typically shown avoidance or underuse when compared to English native speakers (Haugh & Takeuchi, 2022; Strong & Boers, 2019a). While some learners actively avoid PVs, others underuse them as a result of how their L1 is structured typologically which can cause them to sound unnatural in English (Liao & Fukuya, 2004; Spring, 2018). Addressing these issues requires learners to acquire PVs which should be achieved through the most effective methods due to how ubiquitous PVs are, as well as how complicated they can be in terms of idiomacity, form-meaning links, and polysemy (Zhang & Wen, 2019). To investigate this issue, cognitive linguistic inspired methods, such as conceptual metaphors, have been commonly used to teach PVs as well as other types of idiomatic language (Boers, 2011). Their

benefits are noted as providing reason to the ambiguity behind idiomatic particles found in PVs which in turn can produce form-meaning links for learners. These links are inherently strong as conceptual metaphors are usually introduced alongside pictures that activate image schema and dual-coding that can result in deep cognitive processing (Li & Tong, 2020). Although it is fortuitous that metaphorical explanations exist to explain the underlying meanings of PVs, a review on cognitive-semantic informed pedagogy between 1996 and 2010 for idiomatic language, which also included PVs, by Boers (2011) found that many of the methods used in control groups were inadequate for PV acquisition. Boers (2011, p.237) discusses this alongside other shortcomings of the reviewed studies with the following:

“A fourth issue has to do with the ‘ecological validity’ of the choice of comparison treatments. Few of the authors of the studies reviewed here justify their choice of comparison treatment. It is often taken to be representative of what is offhandedly — and perhaps even dismissively — referred to as “the traditional method”, but little evidence is given that the chosen treatment for the comparison group actually mimics a type of instruction that is established practice in language education. Of course, what is established practice differs from one educational setting to the next. Still, one cannot help wondering if the differential results reported in some of the studies are not due to the weakness of the comparison treatment rather than the proclaimed strength of the experimental treatment. In this context it is also worth mentioning that statistical significance is sometimes reached not because the experimental treatment is so effective, but rather because the comparison treatment is so ineffective.”

In Boers (2011) review, four of the 15 studies examined had a focus on PV acquisition. However, since 2010 then there have been numerous papers dedicated to investigating PV acquisition through cognitive linguistic methods as well as other methods of acquisition. Considering the ecological validity of the comparison treatments found in Boers by (2011), it seems appropriate to investigate whether the same trend in the literature is continuing as well as what recommendations can be made for future research.

In this review, we examined published studies that were peer-reviewed on the topic of PV acquisition. The extraction process from databases resulted in a total of 74 articles, of which 15 were found to empirically investigate PV acquisition through pedagogical interventions.

The following research questions guided the search:

1. What methods since 2010 have been investigated to teach PVs?
2. What kinds of comparison treatments are used?

2. Method

Munn et al. (2018) was referenced in the design of this scoping review which indicated the need for a review protocol, a search strategy, and a standardized extraction process. Furthermore, two purposes of the scoping review were established: 1. “To identify the types of available evidence in a given field”, and 2. “To identify and analyse knowledge gaps” (Munn et al., 2018, p.2).

2.1 Literature search

The review began by first listing several search terms which would be used to isolate articles that had a focus on PVs and how they can be taught pedagogically. On October 20th, 2023, the articles were retrieved by keying in the following terms: ‘Teaching phrasal verbs’, ‘phrasal verb acquisition’, and ‘phrasal verb methods’. Furthermore, in accordance with preliminary searches of the literature, ‘conceptual metaphors’ and ‘orientational metaphors’ were also searched for as they have been shown to be popular methods for teaching idioms and PVs (Boers, 2011). The following databases in Table 1. were investigated:

Table 1 *Searched databases*

Arts Premium Collection	IngentaConnect Journals
Cambridge University Press Current Complete Databases searched	JSTOR
DOAJ Directory of Open Access Journals	Linguistics and Language Behavior Literature Online (LION)
Ebook Central Perpetual and DDA	ProQuest Dissertations & Theses Global
eBooks on EBSCOhost	ProQuestion Central
EBSCOhost Academic Search Premier	Research Library
EBSCOhost Communication & Mass Media Complete	ROAD: Directory of Open Access Scholarly Resources
Education Database	Social Science Database
EZB-FREE	Social Science Premium Collection
Gale Academic OneFile	

2.2 Inclusion and exclusion criteria

The review protocol required objectives that would lead to an eligibility criteria for papers to be included or excluded from the search. Studies that were found during the initial scanning of the databases were excluded if they were not (1) focused on second language education, (2)

a peer reviewed article, (3) written in English, (4) investigating adult learners, or (5) did not include PVs as the main stimuli in the study. For example, Chou (2020) and Mohammadi & Mirdehghan (2014) were removed due to their target population including adolescents. Based on the aforementioned scoping procedures and rationale, 74 articles were extracted from the databases in Table 1. These articles were further analyzed to isolate specifically studies that examined PV acquisition through some kind of pedagogical intervention. Subsequently, articles that examined learner knowledge of PVs ($n = 8$), corpus analysis of PV usage ($n = 6$), a focus

Table 2 *PV acquisition studies from 2010 to 2023*

Study	English Level	N=	Testing Method
[CL] Al-Otaibi (2019)	CERF B	51	Gap fill quiz for PV particles
[CL] Ansari (2016)	Intermediate		Gap fill quiz for PV particles
[CL] Farsani, Moinszadeh, & Tavakoli (2012)	Intermediate	56	Cloze passages with PVs to choose from
[CL] Ganji (2011)	Unknown	45	Gap fill quiz for PV particles
[CL] Gao & Zhang (2014)	Advanced	57	Tests of lexical metaphor, grammatical, semantic, and translation competence
[CL] Lu & Sun (2017)	Intermediate and high	120	Multiple choice for PV meanings. Sentences were given for context
[O] Mall-Amiri, Oghyanous, & Zohrehvand (2017)	Intermediate	90	Multiple choice test for non-congruent phrasal verbs
[O] Marashi & Maherinia (2011)	Pre-intermediate	60	Active application of PVs in a spoken task
[O] Nassaji & Tian (2010)	Low-intermediate	26	Collaborative and individual editing and cloze taskposttests
[CL] Spring (2018)	CERF B	72	Gap fill quiz with five possible answers
[O] Strong & Boers (2019a)	Vocabulary Level at the 2,000 word level	140	Dialogue with particle removed
[O] Strong & Boers (2019b)	CERF B	145	Paraphrases with both verb and particle removed
[O] Strong & Leeming (2023)	Intermediate	118	Cued-recall and a multiple-choice test

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on metaphoric teaching for other kinds of idiomatic language ($n = 4$) were removed. Here, we would like to emphasize the large number of studies that were found that focused on linguistic or semantic aspects of PVs ($n = 41$), which has been reported to be a point of confusion for both learners and teachers (Gardner & Davies, 2007). The remaining studies investigated phrasal verb acquisition with a variety of pedagogical methods ($n = 15$) and can be found in Table 2.

Experiment	Control	Experiment better?
Mind maps for particle meanings.	Memorization of PVs with translations.	Yes
Image-schema and elaboration on particles	L1-L2 translations and rote memorization	Yes
Picture-elucidation tasks	Dictionary definitions	Yes, for 3 of 4 tests
Contextualization of sentences with metaphors.	L1-L2 explanations from teacher and rote memorization.	Delayed posttest only
Cognitive linguistic explanations of image-schema with illustrations	Translating sentences and rote memorization	Yes, for immediate and delayed posttests
Polysemous PVs presented with metaphoric illustrations	L1-L2 translations of PVs on a computer with example sentences	No
Visual enhancement for experiment group 1 and auditory enhancement for group 2	Printed materials to study	Yes, for both experiment groups
PV elaboration and guessing using illustrations	PVs taught from a textbook through guessing and translation	Yes
Two cloze tasks and two editing tasks of which were completed either collaboratively or individually	No control group	Collaboration led to greater accuracy. Individual tasks had greater gains in vocabulary
Instructed on particle meanings and studied from a PV checklist	Trial-and-error	Yes
Study a dialogue with PV clarification before errorless retrieval	Trial-and-error and feedback	Yes
Two groups: Retrieval of PVs one by one or in sets of 14	Two groups: Trial-and-error with either immediate or delayed feedback	Yes. No significance found between one by one or sets of 14
Within-subject design for two conditions: trial and error and copy	No control group	Both methods were beneficial.

Study	English Level	N=	Testing Method
[CL] Talebinezhad & Farhadian (2014)	Intermediate	60	PV gap fill quiz with wordbank of PVs
[CL] Yasuda (2010)	CERF B	115	Sentence completion task with particles available in a word bank.

Note. CL = Study utilized cognitive linguistic approaches for PV acquisition
 O = Study examined PV acquisition through other methods

3. Findings and discussion

3.1 Studies using cognitive linguistic methods

Similar to the findings in Boers (2011), much of the literature has continued to focus on contrasting cognitive linguistic approaches to traditional methods. As a result, this scoping review suggests that the reviewed studies may be overestimating the effectiveness of their experimental methods. Of the 15 studies extracted, nine utilized cognitive linguistic approaches as a means to facilitate PV acquisition. These were somewhat varied in approach, but in principle they either used conceptual metaphors to explain PV meanings (Gao & Zhang, 2014; Ganji, 2011; Lu & Sun, 2017; Talebinezhad & Farhadian, 2014; Yasuda, 2010), imagery (Ansari, 2016; Farsani, Moinszadeh & Tavakoli, 2012), or referred to the underlying meanings behind particles directly without using metaphorical elaboration (Al-Otaibi, 2019; Spring, 2018). For example, some of the conceptual metaphors utilized were STORY EVENT as CONTAINER for *leave out the details*, MORE VISIBLE IS UP in *open up* and *show up*, and THEORIES ARE BUILDINGS for *tear down an argument*. Farsani, Moinszadeh and Tavakoli (2012) had an artist draw pictures that progressed from literal to figurative which showed the connection between holding on to something physically in contrast to holding on to something metaphysically, such as in *hold on to a handrail* and *hold on to hope*. Similar, but slightly more direct in their approach, Al-Otaibi (2019) and Spring (2018) had mindmaps and checklists of particles and their alternative meanings.

Six of the nine studies showed significance for the experimental treatment groups. Conversely, no significance was observed for Ganji (2011) at the intermediate posttest stage, one of four experimental groups in Farsani, Moinszadeh and Tavakoli (2012), and there was no significance observed at any stage during Lu and Sun's (2017) study. In Talebinezhad and Farhadian (2014), they had compared two cognitive linguistic methods without the use of a

Experiment	Control	Experiment better?
Tyler and Evans' (2003) Principled Polysemy Theory and Lakoff and Johnson's (1980) Metaphor Awareness.	No control group	Yes
PVs taught through the cognitive approach with a checklist that has PVs categorized by meaning sense	Teacher instructed L1-L2 translations of PVs and rote memorization	Yes

control group; Tyler and Evans' (2003) Principled Polysemy Theory, and Lakoff and Johnson's (1980) Metaphor Awareness, of which Tyler and Evans' approach outperformed. Interestingly, Tyler and Evans (2003) find metaphors vague and inadequate to explain the underlying meanings behind PV particles. Instead, they prefer to use vantage points and contextual inferences to explain particle meanings which is a similar approach found in Al-Otaibi (2019) and Spring (2018) (Talebinezhad & Farhadian, 2014).

By and large, the body of work on cognitive linguistic approaches for PV acquisition are positive. However, as indicated by Boers (2011), a possible reason for the performance of these methods may be due to the inherent inability of the control tasks to facilitate PV acquisition. Excluding Talebinezhad and Farhadian (2014) due to its design, Spring's (2018) study utilized trial-and-error for their control, and all of the other studies had some form of rote memorization. Strong and Boers (2019b) discuss how trial-and-error tasks are ineffective as it is possible for incorrect PV combinations to be committed to memory; "Item analyses revealed that 25% of the incorrect trial-and-error responses were duplicated in the delayed posttest, which suggests that feedback given on trial-and-error responses is often insufficient to supplant an initial response by the correct one in the learners' memory." (p.565-566). In regard to rote memorization, while it can be effective and useful for certain types of vocabulary (Khoi & Sharififar, 2023), PVs are unique in that they are a multiword unit that can be non-compositional. As a result, learners are often left unaware as to what particle goes with what verb to form a particular PV meaning (Yasuda, 2010), which results in a lack of confidence and underuse of PVs (Haugh & Takeuchi, 2023; Liao & Fukuya, 2004). What trial-and-error and rote-memorization tasks lack are the form-meaning links that are generated from cognitive linguistic tasks. As noted by Ellis (2005, p.320), "Explicit, deep, elaborative processing involving semantic and conceptual or imaginal representations allows the rapid consolidation of new vocabulary and other constructions".

3.2 Studies that utilized non-cognitive linguistic methods

From the retrieved studies, six investigated how PVs can be acquired through more generic methods that can be seen being used in most classrooms. For example, Mall-Amiri, Oghyanous and Zohrehvand (2017) examined visual and auditory enhancement in their experimental treatments. For the visual enhancement group, they learned PVs from materials that utilized italics, bolding, highlighting, different font sizes and types, while the auditory enhancement group repeated PVs aloud with the teacher. Both types of enhancement outperformed the rote-memorization control group. However, It is important to note that the PVs taught in this study were literal PVs and not figurative PVs which reduces the need to create form-meaning links as the participants could have joined verbs and particles together which are logical and congruent in meaning. Regarding idiomatic PVs, Marashi and Maherinia (2011), included some in their study, while Nassaji and Tian (2010), Strong and Boers (2019a; 2019b), and Strong and Leeming (2023) exclusively examined PVs with non-compositional meanings. The success of the experiment groups in these studies raises the question as to whether cognitive linguistic methods are the most effective. Furthermore, was it due to their ability to activate deep cognitive processing and generate form-meaning links, or the incapability and inadequacy of the control tasks to facilitate the acquisition of PVs? Nevertheless, the exact same question can be posed to the studies in this section. For example, Strong and Boers (2019b) emphasize that an errorless learning experience can lessen incorrect recalls of PVs, and it is known that spaced retrievals can strengthen retention (Nation, 2013). However, the control groups in these studies still hinder the validity of the results.

4. Conclusion

In a previous review on cognitive linguistic methods for teaching idioms between 1996 and 2010 (Boers, 2011), it was discussed that the poor performance of comparison treatment groups may have led to an overestimation of the ability of the experimental methods to facilitate idiom acquisition. This current review continues the work of Boers (2011) and examined the literature since 2010 to 2023 with a focus on PVs. Cognitive linguistic methods, specifically with a focus on conceptual metaphors, are the most investigated method for PV acquisition. However, other methods that did not use metaphorical elaboration of PV particles also showed some success. Unfortunately, much of the same has been repeated with trial-and-error and rote-memorization tasks being used a control treatment without much justification.

While there are some concerns surrounding the validity of the results in these studies, the

overall summation of the literature appears to indicate that these methods are effective for PV acquisition. However, as the literature up until now appears to have well established that trial-and-error and rote-memorization are inherently poor tasks, future studies would have improved validity from a cross comparison of methods that show some potential for PV acquisition. For example, the visual and auditory enhancement techniques in Mall-Amiri, Oghyanous, and Zohrehvand (2017), or Strong and Boers' (2019a; 2019b) retrieval task could be compared to conceptual metaphors, image schema tasks, or mind mappings of particle meanings. These sorts of comparisons would advance the literature into more nuanced investigations, such as which methods are more effective and which methods are more beneficial for acquiring certain types of PVs.

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