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TEACHING AND LEARNING VERB-PARTICLE CONSTRUCTIONS IN EFL: A COMPARISON BETWEEN MEMORIZATION AND THE COGNITIVE-LINGUISTIC APPROACH

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Abstract

Verb-particle constructions (VPCs) have traditionally been considered a difficult area when learning English as a foreign language, and the traditional teaching method based on memorization has been questioned in recent years. Many researchers have proposed alternative methods grounded on cognitive linguistics, which have been proved more effective. The aim of the present study is to test this effectiveness comparing both approaches dealing with Spanish as first language and English as second language. Contrary to the proposed hypotheses, the results show that the memorization of VPCs is more practical than the cognitive-linguistic approach. However, many factors may have influenced these results, such as the time elapsed between the instruction and the test performance. Memorization seems to work better in the short term, while the cognitive-linguistic approach may be more helpful towards a retention of VPCs in the long term.

Keywords: verb-particle constructions, image schemas, conceptual metaphors, cognitive-linguistic approach, memorization, English prepositions

Resumen

Las construcciones verbales con partícula han sido consideradas tradicionalmente un área difícil en el aprendizaje del inglés como lengua extranjera, y el método tradicional de enseñanza basado en la memorización ha sido cuestionado en los últimos años. Muchos investigadores han propuesto métodos alternativos basados en la lingüística cognitiva, que han demostrado ser más efectivos. El objetivo del presente estudio es poner a prueba esta eficacia comparando ambos enfoques abordando el español como primera lengua y el inglés como segunda lengua. En contra de las hipótesis propuestas, los resultados demuestran que la memorización de las construcciones verbales con partícula es más práctica que el enfoque cognitivista. Sin embargo, muchos factores pueden haber influido en estos resultados, como el tiempo transcurrido entre la instrucción y la realización de la prueba. La memorización parece funcionar mejor a corto plazo, mientras que el enfoque cognitivista podría ser más útil en la retención de las construcciones verbales con partícula a largo plazo.

Palabras clave: construcciones verbales con partícula, esquemas de imagen, metáforas conceptuales, enfoque cognitivista, memorización, preposiciones en inglés

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1. INTRODUCTION

Verb-particle constructions (VPCs) prove to be a problematic aspect in the English vocabulary for students of English as a Foreign Language (EFL). The difficulty of these constructions lies in the apparent unpredictability of their meaning, their high frequency, and the constant creation of new VPCs (Porto Requejo and Pena Díaz, 2008; White, 2012). Traditionally, VPCs have been taught by relying on the constant memorization of these constructions and their definitions; an approach which has been questioned lately (Boers, 2000; Yasuda, 2010; Marashi and Maherinia, 2011; Kövecses and Szabó, 1996). That is the reason why several studies are emerging in recent years, particularly since the publication of Lakoff and Johnson's seminal book *Metaphors We Live By* in 1980. Many researchers (Boers, 2000; Yasuda, 2010; Marashi and Maherinia, 2011; Kövecses and Szabó, 1996) in Cognitive Linguistics (CL) have attempted to demonstrate the usefulness of the application of cognitive-linguistic mechanisms, such as metaphors and image schemas, to the teaching of VPCs.

The aim of this dissertation follows the one of these studies, and its research is partly motivated by the content I studied in the 3rd year of the degree in the course Lengua Inglesa: Linguística Aplicada I. Considering the difficulty of VPCs for English learners, I started to do research on their teaching methods and came across concepts that sounded familiar to me from this course, such as conceptual metaphors. Moreover, the topic of the present study is related to the content included in the course Gramática III, taught in the 2nd year of the degree, which included some aspects about phrasal and prepositional verbs. Thus, there are two main reasons for carrying out this research: a) the difficulty of VPCs for English learners and the motivation to find new and more productive means to teach them, and b) the content studied in the mentioned courses of the degree. The main difference with most previous cognitive-linguistic studies on VPCs is that the goal here is to test the productivity of the cognitive-linguistic approach in comparison with the memorization approach taking Spanish as the first language and English as the second language. As it will be shown in the literature review, these two languages have hardly been studied before.

The dissertation is organized as follows. In section 2, we can find the literature review, which comprises an exploration of metaphors and image schemas, a linguistic approach to the description of VPCs – including the semantics of English prepositions and VPCs themselves –, and an overview of previous studies dealing with the application of CL mechanisms to VPCs instruction. In section 3, the research questions and related hypotheses can be found. These are followed by the methodology of the study, which includes information about the participants and the elicitation of data. The next two sections (4 and 5) consist of the presentation and discussion of the results, and conclusions extracted from the analysis of data. After the bibliography, three appendixes can be found: one covering the list of VPCs used in the study, and the last two including information used in the test upon which this dissertation is based.

2. LITERATURE REVIEW

2.1 Defining cognitive mechanisms: metaphors and image schemas

Traditionally, metaphors have been mostly considered a device belonging to literary language. However, research in CL has questioned that since the 1980s (Lakoff and Johnson, 1980; Swan, 2010). Lakoff and Johnson (1980) stated that metaphors are "pervasive in everyday life" because our conceptual system, language, thought, and action are based on metaphors. Through metaphors, we understand the meaning of abstract or difficult terms, relating them to more concrete and clear concepts (Swan, 2010). Metaphors are constructed according to our physical and cultural background. Therefore, they can be defined as embodied and experiential, being the result of human interaction with the world. More specifically, Evans (2007) defines conceptual metaphors in his cognitive-linguistic glossary as projections which involve the relationship between different conceptual domains: the source domain and the target domain. The former is the concept which defines the structure of the metaphor, and the latter is the concept defined by the metaphor. We project the structure of the source domain onto the target domain in order to understand it. The example that Evans (2007) provides to clarify these terms is the conceptual metaphor LOVE IS A JOURNEY[1]. In this case, the source domain is JOURNEY and the target domain is LOVE. In fact, the elements surrounding the source domain have

[1] Small caps are used in CL to indicate underlying cognitive structures (particularly metaphors and image schemas).

a correlation with the elements of the target domain. In Evan's example, LOVE is related to and defined in terms of a JOURNEY, the traveler is related to the lover, and the vehicle to the love relationship.

Lakoff and Johnson (1980) distinguish between the metaphors in which we understand one concept in terms of another – i.e. conceptual metaphors – and the metaphors that "organize a whole system of concepts with respect to one another" – the so-called orientational metaphors. This specific type of conceptual metaphors arises from our cultural and physical interaction with the world, as they are used to give a spatial orientation to a specific concept. Some examples of these spatial orientations are up-down, front-back, central-peripheral, or in-out. From these spatial orientations, metaphors such as GOOD IS UP or EMOTIONAL IS DOWN emerge.

Similar to metaphors, image schemas are defined as cognitive structures present in everyday life, and they also organize human cognition. The main difference between metaphors and image schemas is that the former can be based on the latter and are contextual, while image schemas are basic and pre-metaphorical. With metaphors, we understand one concept in terms of another, and they have several motivations and implications, while image schemas simply relate one image to another. As Evans (2007) describes them, image schemas are "a relatively abstract conceptual representation that arises directly from our everyday interaction with and observation of the world around us." (Evans, 2007). Humans interact physically and socially with the world, and image schemas are a means to structure the preconceptions resulting from this interaction (Johnson, 1987; Lakoff, 1987, 1989; Gibbs, 1996). In addition, this way of schematizing reality helps us to generalize and understand the world more easily. For instance, a CONTAINER has been identified in the literature as one of the basic image schemas, and, based on that, Sullivan (2017) claims that we recognize both a "tiny brown bottle in the hand, and a huge red house seen in the distance" as containers.

Peña (2000), as cited in Santibáñez (2002), states that there is a hierarchy in image schemas. From the analysis of her corpus, she found out three prominent basic image schemas: CONTAINER, PATH, and PART-WHOLE schemas. Then, from these basic image schemas, sub-schemas emerge, such as the FULL-EMPTY schemas, which belong to the CONTAINER schema. Similar to this classification, Sullivan (2017) suggests that babies

experience containment and movement through their senses from very early ages. Thus, they can understand the world by means of abstractions such as the CONTAINMENT and MOVEMENT image schemas.

In this dissertation, these classifications of the image schemas are considered in relation to the four particles under analysis: *in*, *out*, *up*, and *down*. On the one hand, *in* and *out* can be explained by means of the CONTAINMENT image schema (Lakoff and Johnson, 1980; Porto Requejo and Pena Díaz, 2008; Sullivan, 2017), while *up* and *down* are related to the MOVEMENT or, more specifically, to the UP/DOWN image schema (Swan, 2010). Consequently, both image schemas are presented in detail below.

As regards the CONTAINMENT image schema, we picture in our minds delimited regions (concrete or abstract) which something can enter and exit. Therefore, the most frequent prepositions relating to this image schema are *in* and *out*. Porto Requejo and Pena Díaz (2008) have explored these prepositions in relation to the CONTAINMENT image schema, providing the examples explained below. As these examples show, image schemas underlie the contextual use of language, and, hence, they lie at the core of many conceptual metaphors. In 1., the conceptual metaphor THE BODY IS A CONTAINER underlies. This means that a concrete entity, the human body, is construed as a container, from which organs can exit (1a.), or inside which tears remain (1b.). In 2., the conceptual metaphor that underlies is A BAD HABIT IS A CONTAINER. In this sentence, an abstract entity, a bad habit, is conceptualized as a container that people can enter and exit.

(1) **a.** They *took* his appendix *out*.

b. She wanted to cry but *held in* the tears.

(2) **a.** Mary managed to *get out* of smoking.

According to Porto Requejo and Pena Díaz (2008), the CONTAINMENT image schema is one of the most recurrent ones in the human conceptual system. The reason for that was proposed some years before by Lakoff & Johnson (1980), claiming that we see our own bodies as containers with boundaries and in-out orientation. Because cognition is embodied, we tend to understand other objects in the same way.

The other main image schema that will be studied in this dissertation is the UP/DOWN image schema, which represents vertical spatiality. Like the CONTAINMENT image

schema, embodied cognition underlies this schema, which also shows how our physical experience influences linguistic choices. In this case, we structure the world as having a top and a bottom. Several conceptual metaphors in English[2] are based on this image schema (Lakoff and Johnson, 1980; Swan, 2010). Quantity, evaluation, and power/success are associated with the UP/DOWN image schema, from which the following pairs of metaphors emerge.

(3) **a.** MORE IS UP → Inflation went up. (Swan, 2010)

b. LESS IS DOWN → They knocked the price of beer down over 20p a pint to £1.45. (MacMillan Dictionary, n.d.)

(4) **a.** GOOD IS UP → They will not let him out of hospital until his health has picked up quite a lot. (MacMillan Dictionary, n.d.)

b. BAD IS DOWN → The company plans to shut down four factories and cut 10,000 jobs. (Cambridge Dictionary Online, n.d.)

(5) **a.** POWER IS UP → He's at the peak of his career. (Lakoff and Johnson, 1980)

b. POWERLESSNESS IS DOWN → He's at the bottom of the social hierarchy. (Lakoff and Johnson, 1980)

The physical basis for these pairs of metaphors is explained by Lakoff and Johnson (1980). For (3), they argue that if a substance or an object is put over more quantity of substance or a pile of other objects, the amount increases. The metaphors in (4) and (5) are based more on a cultural rather than on a physical base. For example, the pair in (4) is a major metaphor in our society that creates an *up* orientation to well-being.

2.2 Linguistic approach to verb-particle constructions

2.2.1 The semantics of English prepositions

Since the 1980s, the focus on prepositions has increased in CL (Lakoff, 1987; Brugman, 1988; Taylor, 1993; Tyler and Evans, 2003). They are responsible for the unpredictability of verb-particle constructions (VPCs) because, according to Porto

[2] It is important to remark that these conceptual metaphors are in English because, as Lakoff and Johnson (1980) state, conceptual metaphors are a result of human physical experience and culture, thus, they change from culture to culture.

Requejo and Pena Díaz (2008), prepositions seem to be abstract and arbitrary, while verbs are more transparent.

Traditionally, the meaning of VPCs has been thought to be arbitrary. However, CL has proved that the different senses of a preposition can be linked. Therefore, the different meanings of a phrasal verb would be motivated, and not arbitrary. The cognitive-linguistic approach to VPCs is not only useful for investigating how VPCs are produced and interpreted by speakers, but also for proposing new methodologies for teaching them. As the various senses of a polysemous word can be organized within a conceptual network, the same can be done with prepositions. Cuyckens and Radden (2002) proposed that the nuclear meaning of a preposition is the one relating to the most literal, concrete, or physical sense. Following a radial view of meaning, the more abstract and metaphorical senses of prepositions could be placed outer in the diagram. In the words of the previously mentioned authors, these abstract senses "derive from concrete, spatial senses by means of generalization or specialization of meaning or by metonymic or metaphoric transfer" (Cuyckens and Radden, 2002).

The examples below, which have been extracted from Porto Requejo and Pena Díaz (2008), serve to explain this idea of a network for the organization of the senses of a preposition. The first two sentences (6 and 7) represent the most physical sense of the preposition *in*. However, sentence (6) seems to be more literal, as the space is smaller, and the boundaries are tangible. In sentence (7) the space is broader, and the limits are not tangible, so it seems to be more abstract, though still physical. Lastly, the image schema of CONTAINMENT is embedded in the last two sentences (8 and 9): TROUBLE IS A CONTAINER and LOVE IS A CONTAINER.

(6) I think John is *in* his room.

(7) I think John is *in* the city.

(8) I think John is *in* trouble.

(9) I think John is *in* love.

Tyler and Evans (2003) investigated whether the different meanings of a preposition are accidentally or systematically related. This type of studies is crucial for understanding both the way in which we structure the meanings of any lexical item and

the way in which we structure our own mental lexicon and language. In order to figure out how to represent the multiple senses of a lexical form, they focused on five spatial prepositions: over, up, down, in, and out. These were chosen because of their various meanings and the important role that they play in the process of physical human experience and mental representation. The conclusion that they extracted was that the various meanings of a preposition are not accidental or arbitrary, as traditionally assumed, but motivated by "pragmatic inferencing, context, and background knowledge." Thus, one of the main tenets of CL also underlies the semantic study of prepositions: linguistic choices reflect meaning choices and are determined by our knowledge of the world (Barcelona Sánchez, 1997)

2.2.2 Verb-particle constructions

Verb-particle constructions appear with a high frequency in English language, and they are at the same time an important source in the creation of new constructions. They also have the peculiarity that the same VPCs can have different meanings in different contexts. Therefore, their meaning seems to be accidental, as it has been traditionally thought for the meaning of prepositions. For the particular case of phrasal verbs, *The American Heritage Dictionary of Phrasal Verbs* (2005) defines them as "a combination of an ordinary verb and a preposition or an adverbial particle that has at least one particular meaning that is not predictable from the combined literal meanings of the verb and the preposition or particle". Apparently, this unpredictability is one of the causes for their difficulty for EFL students (White, 2012), together with their high frequency and the constant creation of new VPCs (Porto Requejo and Pena Díaz, 2008; White, 2012).

CL tries to address the latter of those problems: the alleged arbitrariness of the meaning of VPCs. Many scholars have attempted to prove that the individual items that make up an idiomatic expression, such as VPCs, do play a role in the final interpretation of the expression (Lakoff, 1987; Langacker, 1987; Nippold & Taylor, 1995; Dirven, 2001; Neagu, 2007). The result of these studies shows that VPCs can be decomposed and analyzed, and that their various senses are not accidental, but motivated.

These constructions can be studied from the cognitive-linguistic viewpoint, considering that their particles prototypically enclose a spatial meaning that represents the human physical experiences. Therefore, they can be related to orientational metaphors

and image schemas that can ease the learning of these VPCs in English as L2 (Lakoff and Johnson, 1980; Yasuda, 2010; Morgan, 1997). This can be done, as Kurtyka (2001) suggested, through the visualization of these orientational metaphors to understand the metaphorical extensions of a VPC from its more literal sense. Several authors have tried to prove through experimental studies the usefulness of this new cognitive-linguistic method as an alternative to the traditional approach of memorization for teaching and learning VPCs.

2.3 Teaching verb-particle constructions

The traditional approach to the teaching of VPCs in EFL has been to make the students memorize a list and, sometimes, their definitions. Nevertheless, the publication of the book by Lakoff and Johnson (1980) in relation to CL and metaphors meant a turning point in VPCs research and teaching. As a result, a cognitive-linguistic approach has been applied in later years, and it has been proved to be more efficient. Several researchers (Boers, 2000; Yasuda, 2010; Marashi and Maherinia, 2011; Kövecses and Szabó, 1996) have applied cognitive strategies to the teaching of VPCs and compared the two approaches: the traditional (i.e. memorization) vs the cognitive-linguistic one (i.e. metaphors and pictures). All of these studies have a few more points in common, as shown in table 1. These include mostly the topic under study or the research hypotheses. All these authors have analyzed the teaching and learning of VPCs with the aim of demonstrating how efficient explicit or implicit knowledge of metaphors is in comparison to the traditional method of memorization.

Table 1. *Previous studies on the teaching of VPCs*

Study	**Kövecses and Szabó, 1996**	**Boers, 2000**	**Yasuda, 2010**	**Marashi and Maherinia, 2011**
Participants' profile	University students L1: Hungarian L2: English	University students L1: French L2: English	L1: Japanese L2: English	PET students L1: Iranian L2: English
Groups	Control group: traditional approach Experimental group: cognitive-linguistic approach			

Task	Missing particle in a sentence or cloze test	Speaking test: questions to answer with VPCs
Results	Orientational metaphors useful for the comprehension of VPCs[3]	Pictures useful for the speaking production of VPCs

This summary table shows the most relevant details of four previous studies about the teaching of VPCs with the traditional and the cognitive-linguistic approaches. These details include a description of the profile of the participants, the groups in which they have been divided, the type of task they had to complete, and the results. Although the exact age of the participants is not mentioned in any of the articles, we can see that some of them are at university level and others have a B1 level (i.e. PET) in their second language. The first language (L1) of the participants differs from one study to another, but the second language is the same for all of them: English. The division of the groups is similar in all the cases: a control group to apply the traditional approach and an experimental group to put into practice the cognitive-linguistic approach. As for the tasks, three of them consist of filling in gaps in sentences or in a text, and the only one which is different is that of Marashi and Maherinia (2011). They decided to carry out a speaking test, which is consistent with their interest in studying the production of VPCs, and not only their understanding, as it was the case in the rest of the studies. Their task was also different because it included a multiple-choice pre-test to prove that all the VPCs were new to the participants. Similar to this, Yasuda (2010) has mixed previously taught and unknown VPCs in the task. Finally, due to the better results of the experimental groups in the tasks, the four authors have concluded that applying a cognitive-linguistic approach is more productive in the learning and production of VPCs.

The topic and the aim of the study in this dissertation are very similar to the ones in the studies presented in this section. I will compare the traditional and modern cognitive-linguistic approaches to test the usefulness of metaphors and pictures in the teaching and learning of VPCs as opposed to memorization. To do so, the participants will be divided

[3] In the case of Yasuda (2010), orientational metaphors have been useful also for the comprehension of the new VPCs that he included in the task.

into two groups, following the approach of the studies mentioned above. This study also attempts to fill a research gap by including a different variable in the L1 of participants, which is Spanish.

3. RESEARCH QUESTIONS AND HYPOTHESES

In this section, I present the research questions (RQ) and their respective hypotheses based on the data analyzed in the literature review. Given that there are two approaches to teach and learn VPCs, the aim of this dissertation is to explore both, compare them, and see which one is more effective for the comprehension of VPCs. Therefore, research questions in this dissertation are the following ones:

RQ1. Which of the two approaches (memorization vs CL) is more productive when it comes to understanding the meaning of VPCs?

To answer this question, I will compare two groups of participants, applying one teaching approach to each group. If, for example, the experimental group is the one with a higher rate of correctness, it will be assumed that teaching VPCs with metaphors and pictures is more effective. This hypothesis, which will be hypothesis 1, is based on the results obtained in previous studies and summarized in section 2.3 of this dissertation.

RQ2. Which group will have better results regarding the understanding of new VPCs?

Six VPCs have been included in the experimental test which have not been taught to any group of participants. Hypothesis 2 addresses this question, and it is assumed that the experimental group will perform better than the control group, as they could make use of the knowledge that they will have about metaphors to extrapolate them to new VPCs.

RQ3. Which rate of correctness will be higher in each group regarding the interpretation of visual input (i.e. pictures) versus textual input (i.e. sentences)?

Given that CL argues that the meaning of prepositions is based on a conceptual network stemming from a spatial and physical prototypical meaning, it is argued that visuals can help in the understanding and processing of metaphors (White, 2012; Lindstromberg, 1996, 2010). Visuals will be included in the study, and although control participants will be instructed with a list of VPCs and experimental participants with

metaphors and images, I will mix both pictures and sentences in the test. As the answer to question 3, it is hypothesized that the rate of correctness will be higher in the sentences than in the pictures in both groups. This prediction is grounded on the fact that all the participants may be more used to filling in sentences because that is how they may have been traditionally taught, and not so much to interpreting images. Another reason to include this RQ is the current questions about the suitability of written and fill-in-the-gap tests in CL (Piquer Píriz, 2021).

RQ4. Will the years of studying English and the hours of English input per week influence participants' performance in the test?

With this research question, I aim at analyzing whether participants' prior knowledge of English and the time they are exposed to the English language could have an impact on their results. Hypothesis 4 is thus based on the belief that students who have been studying English for a longer period and who are exposed to this language to a higher extent will obtain higher rates of correctness.

4. METHODOLOGY

In this section, I present linguistic information about the participants' profile regarding their background and knowledge of English and the methodology carried out to elicit the data.

4.1 Participants' profile

In order to carry out this study, a total of 42 students from the Centro de Idiomas of the University of Valladolid have been tested. All of them have Spanish as their L1 and English as their L2. These participants were selected because they are all preparing for taking a B2 level exam. Once participants were gathered, they were divided into two groups to compare the two approaches under analysis: a) the control group has 22 students and I have applied the memorization approach with them, while b) the experimental group has 20 students and I have put the cognitive-linguistic approach into practice with them.

In order to obtain information about their knowledge of English, some questions about the number of years they have been studying English and the hours of English input that they receive in a week were asked in the test (see section 4.2). This information was

collected to see whether exposure to the English language could influence in any way their performance in the test. This is related to RQ4, as explained in section 3.

4.2 Collection of data

In order to elicit the data, I prepared some materials previous to the test. First, the list of VPCs to be taught and tested was prepared. To do so, I started with the particles under analysis: *in*, *out*, *up*, and *down*. *In* and *out* are linked to the CONTAINMENT image schema, while *up* and *down* are linked to the UP/DOWN image schema. In order to test how meaning stems from a radial network, two metaphors for each particle were selected for the experiment. Finally, I selected two VPCs related to each metaphor (see 10). Therefore, a total of 8 metaphors and their relation to VPCs have been studied. Once VPCs were selected, the material was completed with a list including the definition of the VPCs extracted from different online dictionaries (see Appendix 1). This list, which did not include information about the image schemas and the metaphors, was the one that the control group received in the session previous to the test.

(10) CONTAINMENT image schema → HOME IS A CONTAINER → get in.

After having completed the list of VPCs, the material for the session with the experimental group was prepared. This included an explanatory Power Point presentation in which metaphors and visuals were used to explain the meaning of VPCs. At the beginning of the presentation, I included an outline with the two image schemas, the four particles, the eight metaphors, and the sixteen VPCs (see figure 1).

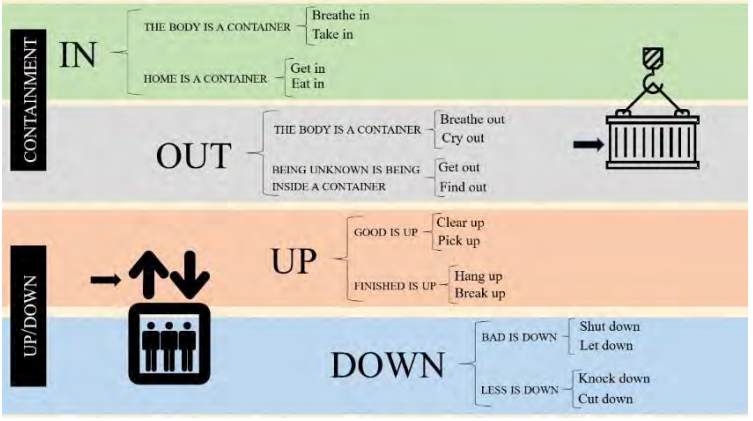

Figure 1. *Outline of the presentation for the experimental group's session*

For training purposes, information about each VPCs was organized following the same order: Firstly, I included the VPC and the related metaphor; secondly, I introduced its definition and one example (see figure 2); lastly, I included a picture with arrows and movement which was aimed at making the image schema underlying the conceptual metaphor visually explicit to ease its understanding to the participants (see figure 3). As mentioned above, the definitions and the examples of the VPCs were taken from online English dictionaries.

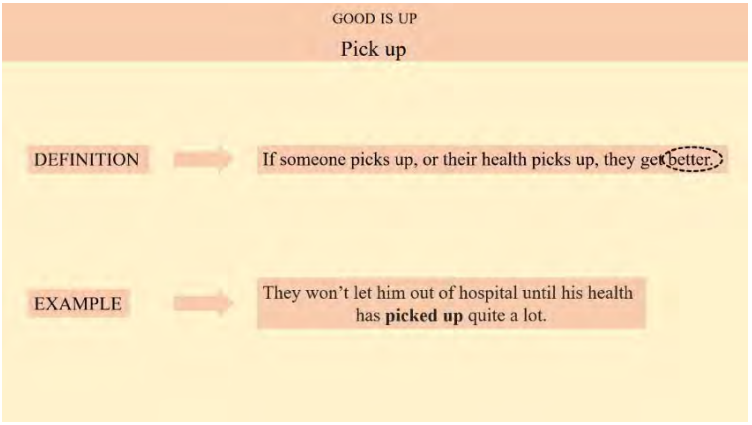

Figure 2. *Example of a slide from the Power Point presentation: definition and example*

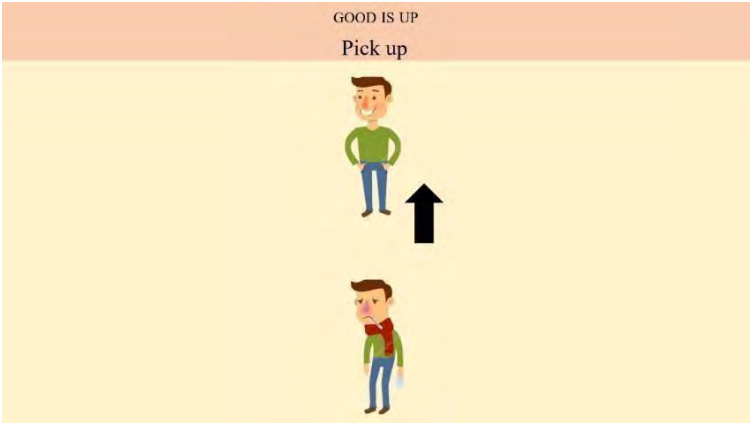

Figure 3. *Example of a slide from the Power Point presentation: picture*

Once the material for both groups was prepared, a test was designed in order to gather the data. Following indications from the ethical committee at the university, this was carried out in Microsoft Forms. The test included four sections: a) questions about the participants' linguistic background (e.g. L1, L2, years studying English, hours of English input per week); b) 10 pictures to be related to one of the VPCs proposed (see

Appendix 2); c) 13 sentences to fill in with the missing particle (see Appendix 3); and, d) a question about the reasoning process they followed in order to decide the answers for the test. This last question was included in order to have information about participants' perceptions that could confirm qualitatively the answers to the RQs. In the case of the experimental group, I also included a question about the extent to which the session on metaphors had been useful for them when completing the test. As regards the sentences in the test, I included 14 sentences with VPCs used in the training session (see 11a.), 6 sentences with new VPCs (see 11. b.), and 3 distractors (see 11c.). The sentences were extracted from online English dictionaries and the British National Corpus (BNC). The pictures in the test were created with Canva, and they are different from the ones in the Power Point presentation, so that the participants in the experimental group did not rely on the memorization of visuals, but on the information about metaphors.

(11) **a.** The rib cage expands as you breath in, and vice versa as you breath___.

b. What you gonna do give_____or keep trying?

c._____and down he bounced, with his brothers.

The preliminary sessions, as well as the test, were carried out at the Centro de Idiomas of the university. For the control group, we read the VPCs and their definitions aloud to make sure that there were no doubts regarding vocabulary. The participants went through the list individually for about 20 minutes. Then, they completed the test. For the experimental group, I explained the conceptual metaphors that underlie VPCs with the Power Point presentation mentioned above. After that, they were asked to take the test.

5. DISCUSSION OF RESULTS

In this section, I present and discuss the results of the test. Each table is aimed at giving an answer to one of the research questions and confirming or rejecting the hypotheses proposed in section 3.

Table 2. *RQ 1: Total rates of correctness and incorrectness in each group*

	CORRECT	INCORRECT
CONTROL	86%	14%
EXPERIMENTAL	69%	31%

Research question 1 deals with the effectiveness of the two approaches under analysis in this paper. That is to say, the question is which of the two groups will perform better, thus suggesting that the approach applied to this group is more productive. As to the groups, I have applied the memorization approach to the control group, and the cognitive-linguistic approach, including metaphors and pictures, to the experimental group. The results show that participants in the control group have perform better with a higher rate of correctness than those of the experimental group (86% vs 69%). Based on previous studies comparing these two approaches, it was hypothesized that the experimental group would have better results. However, as the rate of correctness in the control group is higher than the one in the experimental group, this hypothesis is rejected.

Table 3. *RQ 2: Rate of correctness and incorrectness regarding new VPCs*

	CORRECT	**INCORRECT**
CONTROL	70%	30%
EXPERIMENTAL	57%	43%

The second research question deals with the performance of the two groups regarding VPCs that were not included in the training of any of the groups. It was hypothesized that the participants in the experimental group would obtain better results when dealing with new VPCs because they could extrapolate the meaning of the metaphors they had been taught to new constructions. For example, if they were taught the metaphor GOOD IS UP and the verb *pick up*, they could assume the positive connotation of the particle *up*. Thus, if they found the verb *cheer up*, they could understand that the whole verb has a positive connotation based on the semantics of the preposition. Contrary to this hypothesis, the results show that the rate of correctness is higher in the control group (70%) than in the experimental group (57%). Thus, the second hypothesis is also rejected.

These results can be qualitatively analyzed through the answers to the question about the reasoning process that participants had followed to complete the test. The results of this question are presented in Table 4 below.

Table 4. *Technique used by the participants to complete the test*

CONTROL GROUP	
Memorization of the VPCs and their definitions	41%
Meaning of the particles	27%
What sounded good	14%
Prior knowledge	18%
Other	-
EXPERIMENTAL GROUP	
Memorization of the pictures	45%
Explanation of the metaphors in class	30%
Meaning of the particles	15%
What sounded good	-
Prior knowledge	10%
Other	-

These results show that the participants in the control group have resorted to the memorization of the VPCs and their definitions to a higher extent (41%) than any of the other aspects proposed. In the experimental group, the technique that they have used to a higher extent is the memorization of the pictures (45%). On the contrary, the participants in the control group have chosen the answers based on what sounded better for them to a lesser extent (14%), while no participant in the experimental group has relied on what sounded better. Responses by the participants in the experimental group show that they have relied to a lesser extent on their prior knowledge than on any other technique. In the control group, the reliance on their prior knowledge is of 18%.

Table 5. *RQ 3: Rate of correctness and incorrectness: pictures and sentences*

		CORRECT	**INCORRECT**
PICTURES	**Control**	90%	10%
	Experimental	72%	28%
SENTENCES	**Control**	85%	15%
	Experimental	68%	32%

The third RQ aimed to compare the results in the textual (i.e. sentences) and the visual (i.e. pictures) material in each group to see in which type of exercise participants would perform better. As mentioned in the description of the hypotheses above, I predicted that there would be a higher rate of correctness in the sentences in both groups. For this hypothesis, I argued the low familiarization of the participants with metaphors and pictures in relation to VPCs. They may be more used to filling in texts and sentences due to the type of education they have received. This hypothesis has been proved wrong, as the rate of correctness is higher in the case of the pictures in both groups – control group (90% vs 85%) and experimental group (72% vs 68%). This seems to suggest that, as proposed by previous studies (White, 2012; Linderstrom, 1996, 2010), it is possible to rely on the multimodal nature of communication for teaching purposes. Adopting a diagrammatic representation of image schemas allows for the explanation of lexico-grammatical aspects of a language as it may activate prior experiential spatially-based knowledge.

Table 6. *Rates of correctness and incorrectness: years studying English*

YEARS	CORRECT	INCORRECT
0-4 years	-	-
5-9 years	-	-
10-14 years	72%	28%
More than 15 years	79%	21%

Table 7. *Rates of correctness and incorrectness: hours of English input per week*

HOURS/WEEK	CORRECT	INCORRECT
0-6 hours	77%	23%
7-13 hours	82%	18%
14-20 hours	-	-
More than 20 hours	-	-

For the last research question, I have taken into consideration both the years that the participants have been studying English and the number of hours of L2 input that they receive per week. As explained above, the fourth research question aimed to answer whether exposure to the L2 could influence the participants' performance. The hypothesis

was that the participants that have been studying English for a longer period and that those who receive more hours of English input would obtain better results, as they are supposed to be more familiarized with the English language and perhaps their proficiency is higher. This hypothesis has been confirmed because the rate of correctness increases gradually as exposure to English increases. The participants who have been studying English for 10-14 years have a rate of correctness of 72% in comparison to that of the participants who have been studying English for more than 15 years (79%). The same happens with the hours of English input received per week – the participants who receive 0-6 hours have a rate of correctness of 77%, while the rate of correctness of those who receive 7-13 hours is 82%.

6. CONCLUSION

The central aim of this dissertation about VPCs has been to compare the traditional approach of memorization and the cognitive-linguistic approach that arose in the 1980s. This comparison has intended to reflect on which of these approaches is more productive when teaching and learning English VPCs for L1-Spanish learners. Related to this main goal, specific objectives were established, as summarized in the four research questions and related hypotheses included in section 3. It is the aim of this concluding section to reflect about the possible reasons for the confirmation or rejection of the above-mentioned hypotheses.

The first research question encompasses the whole aim of the present study, as it deals with the effectiveness of the two approaches. In order to analyze their effectiveness, I have focused on the rate of correctness in the groups. I have assumed that the higher the rate of correctness, the higher the productivity in relation to that group. The hypothesis was that the cognitive-linguistic approach would be more productive; thus, the experimental group would obtain better results. However, this hypothesis has been rejected. Nevertheless, the rejection of this hypothesis does not necessarily mean that the traditional approach is more productive than the cognitive-linguistic approach, as there are many other aspects to consider. Previous studies and debates within the CL community (Piquer Píriz, 2021) suggest that the cognitive-linguistic approach is more productive in the long term, as students may need some time to internalize the new concepts and the underlying metaphors. On the contrary, the memorization of a list of

VPCs and their definitions may be more productive in the short term because it is likely that the amount of information stored through memorization decreases gradually as time passes. In this experiment, the test was taken by both groups some minutes after the instruction. Taking into account the long/short-term argument, it can be argued that the control group probably memorized more information, while the experimental group did not have enough time to internalize the meaning of the metaphors and to relate them to the VPCs. Consequently, the rejection of the hypothesis that the experimental group would perform better could be justified. In addition, this argument links to the fact that the Spanish education model has been traditionally based on memorization, and not so much on teaching the underlying cognitive structures. The students in the experimental group would not be very used to learning with metaphors; therefore, they have worse results. However, these participants were asked about the extent to which the training session on metaphors was useful for them to complete the test, and the results show that the average is 4.35 in a 1-to-5 scale.

As regards new VPCs, the hypothesis was that the experimental group would perform better because they could rely on the metaphors that they had been taught to understand the meaning of VPCs that had not been included in the training. This hypothesis has been rejected. Nonetheless, the worse results of the experimental group could be due to the same fact explained for the rejection of the first hypothesis: the low familiarization of the students with the underlying metaphors. This suggests that the meaning of the metaphors may not be completely clear to them and/or that they need more time to be processed before they can be activated to infer the meaning of new VPCs.

Analyzing the results of the question about the technique that participants have used for completing the test, it can be stated that the control group has used the memorization of the VPCs when dealing with the constructions included in the list they had been given. However, they could have used their prior knowledge when dealing with new VPCs. On the contrary, responses to this question seem to show that the experimental group would have memorized the pictures and the metaphors without fully understanding them. Hence, they would not have been able to apply these metaphors to new VPCs.

In the test, I have included both pictures and sentences to mix the two approaches also in the evaluation, and not only in the instruction. The third research question was

aimed at investigating which group would perform better in each type of exercise. My prediction was that all the participants would have a higher rate of correctness in the case of sentences because this is how they have been traditionally tested on VPCs. This hypothesis has been rejected given that both groups have obtained better results in the pictures. One reason for that could be that they have considered the pictures transparent and have found it easy to interpret and relate them because, following hypothesis in CL, they activate prior knowledge. Furthermore, the vocabulary of the sentences could have been difficult for some of the participants because they were not adapted to their knowledge of English. Half of the sentences have been extracted from authentic discourse (the British National Corpus), and the context may have complicated their understanding of the whole sentence and the VPCs (see 12).

(12) So the heart can be taken_____, still pumping, and offered to the god on a plate.

The last aspect to bear in mind has been the years that the participants have been studying English and the hours of English input that they receive per week. The aim with this was to investigate if these aspects had an impact on their results. I hypothesized that the participants studying English for more years and receiving more hour of English input would have better results, assuming that they would have a higher level of English. This has been confirmed, as results show that there is a correlation between higher exposure to English and a higher rate of correctness.

The confirmation of one of the hypotheses proposed in this paper has been useful to observe that there is a correlation between the years and hours of English input received by students and their understanding of VPCs: students who have been studying English for longer and who receive more English input per week have better results than the rest. On the contrary, the rejection of the rest of the hypotheses proposed leads to the conclusion that as this study has been short-term, it fails to demonstrate whether the cognitive-linguistic approach for the instruction of VPCs is productive or not. There are already works on the implementation of the cognitive-linguistic approach to the teaching and learning of VPCs for Spanish learners of English (Martín Gilete, 2020). However, this dissertation shows that this is a wide area of research that would require that longitudinal studies be carried out in the future to get further information on that topic.

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8. APPENDIX

8.1 Appendix 1: list of metaphors, VPCs and definitions

IN

THE BODY IS A CONTAINER

Breathe in: to take air into your lungs through your nose or mouth. (MacMillan)

Take in: if you take something in, you pay attention to it and understand it when you hear it or read it. (Collins)

HOME IS A CONTAINER

Get in: to arrive at one's home or place of work. (Collins)

Eat in: to have a meal at home rather than in a restaurant. (MacMillan)

OUT

THE BODY IS A CONTAINER

Breathe out: to send air out of your lungs through your nose or mouth. (MacMillan)

Cry out: if you cry out, you call out loudly because you are frightened, unhappy, or in pain. (Collins)

BEING UNKNOWN IS BEING INSIDE A CONTAINER

Get out: if news or information gets out, it becomes known. (Collins)

Find out: if you find something out, you learn something that you did not already know, especially by making a deliberate effort to do so. (Collins)

UP

GOOD IS UP

Clear up: to clear up a problem, misunderstanding, or mystery means to settle it or find a satisfactory explanation for it. (Collins)

Pick up: if someone picks up, or their health picks up, they get better. (Collins)

FINISHED IS UP

Hang up : if you hang up or you hang up the phone, you end a phone call. (Collins)

Break up: if you break up with your boyfriend, girlfriend, husband, or wife, your relationship with that person ends. (Collins)

DOWN

BAD IS DOWN

Shut down: if a factory or business shuts down or if someone shuts it down, work there stops or it no longer trades as a business. (Collins)

Let down: if you let someone down, you disappoint them. (Collins)

LESS IS DOWN

Knock down: to knock down a price or amount means to decrease it. (Collins)

Cut down: if you cut down on something or cut down something, you use or do less of it. (Collins)

8.2 Appendix 2: pictures used in the test

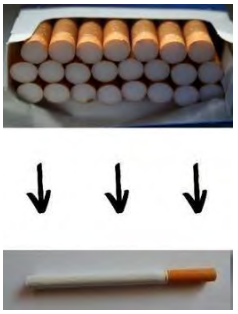
1. Breath in

2. Get down

3. Eat in

4. Pick up

5. Break up

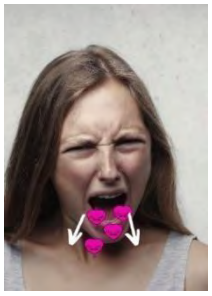


6. Cut down

7. Hang up

8. Knock down

9. Shut down



10. Cry out

8.3 Appendix 3: sentences used in the test

- _____and down he bounced, with his brothers.
- Coastguards had given ____all hope of finding the two divers alive.
- During dinner the confusion was cleared_____: they had mistaken me for Kenny.
- Ferguson then said he would buy the title for the fans he had so badly let_____.
- He has an infection and they had to take_____two of his teeth.
- He would be able to find_____what type of union this is.
- I was relieved to find_____that my problems were due to a genuine disorder.
- I promised to go to the party with Jane and I can't let her_____.
- If you have lung disease, you may find it difficult to breath_____enough carbon dioxide.
- It was an interesting lecture but there was just too much to take_____.
- Local authorities cannot be involved_____trading activities without a specific power to do so.
- No one was buying products, so they decided to knock_____the prices.
- Reading may be slow as the eyes are able to take_____only one short word or a few letters at one glance.
- So the heart can be taken_____, still pumping, and offered to the god on a plate.
- The bus stops just on the next street, so I'll get_____ at midnight.
- The rib cage expands as you breath in, and vice versa as you breath_____.
- The thief had broken_____ through a first-floor window.
- Then he looked_____of the window.
- They didn't have to, but they did clear_____the mess.
- Western and Russian intermediaries often knock_____prices on Russian works of art.
- What you gonna do give_____or keep trying?
- Your key's in the inside, how would you get_____?
- You're the burglar now and you're planning to break_____a house.