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ARTICLE

Conceptualization of Phrasal Verbs with 'Over' by Native and Non-native Speakers: A Cognitive Linguistics Perspective

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ABSTRACT

This comparative study investigates how native and non-native English speakers conceptualize phrasal verbs formed with the preposition *over*. It examines their ability to parse these verbs semantically and syntactically, focusing on metaphor, prototypical meaning, dynamicity, and the spatial relationship between the trajector (TR) and the landmark (LM). In this framework, the TR represents the dynamic action or process metaphorically expressed by the phrasal verb, while the LM refers to the spatial or conceptual location toward which the action is directed. Differences related to language proficiency are also explored. The study employed a test consisting of eight sentences containing phrasal verbs with *over*, administered to two groups of students (30 native and 30 non-native speakers). Participants were asked to illustrate the situations described by the sentences. A qualitative analysis of the drawings enabled a comparison between the groups. Findings reveal a significant correlation between linguistic proficiency and visual conceptualization skills. Native speakers consistently demonstrated greater awareness of dynamic processes and metaphorical meanings, while non-native learners showed relatively more literal interpretations. Moreover, the disparity between groups increased proportionally with the degree of metaphoricity in the phrasal verb. Pedagogically, the results underscore the value of organizing prepositional meanings into systematic cognitive networks, offering a powerful tool for teaching and learning complex multiword expressions.

Keywords: Phrasal Verbs; Cognitive Linguistics; Semantics; Spatial Relations; English Language; Language Proficiency

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ARTICLE INFO

Received: 28 July 2025 | Revised: 11 August 2025 | Accepted: 29 August 2025 | Published Online: 23 October 2025
DOI: https://doi.org/10.30564/fls.v7i11.11298

CITATION

Alsmadi, M., Rayyan, M., Abusalim, N., et al., 2025. Conceptualization of Phrasal Verbs with 'Over' by Native and Non-native Speakers: A Cognitive Linguistics Perspective. Forum for Linguistic Studies. 7(11): 961–979. DOI: https://doi.org/10.30564/fls.v7i11.11298

1. Introduction

1.1. Overview

In the last thirty years, Cognitive Linguistics (hereinafter CL), a promising and emerging paradigm in the field of linguistics, has highlighted that much of what is traditionally considered idiosyncratic or arbitrary in language actually follows systematic principles[1]. CL takes language use as its starting point, considering the context in which lexical elements and grammatical constructions appear[2]. Furthermore, context-based analyses clearly show that speakers' selection of grammatical constructions is guided by semantic factors[3]. This aligns with CL's fundamental principle that syntax and morphology convey meaning and are governed by various cognitive principles, which also manifest in the lexicon[4].

In the realm of language acquisition and CL, phrasal verbs constitute a key area of study, especially regarding how they are conceptualized and interpreted by speakers from diverse linguistic backgrounds[5]. Phrasal verbs have recently attracted attention from linguists due to their status as phraseological units whose meanings are not transparent and cannot be easily inferred[6,7]. They provide an ideal subject for testing theories of language processing and acquisition. Cognitive linguists have engaged in this discussion and shown some interest in phrasal verbs, although their research in this area often stems from a primary focus on prepositions and spatial language.

Cognitive approaches to grammar are theories that link grammatical structures to the mental processes and patterns of human cognition[8,9]. Accordingly, this study integrates these perspectives and draws on them to analyze data obtained from various tests, questionnaires, and other instruments designed to examine how English speakers (both native and non-native) conceptualize the meaning of the preposition 'over'.

1.2. Research Framework

This study is grounded in the framework of Cognitive Linguistics (CL), which views grammar and lexical meaning as reflections of general cognitive processes. From this perspective, language structures, including phrasal verbs, function as conceptual tools for representing and organizing experience.

Conceptualization

According to Langacker[10], conceptualization is an abstract and simplified representation of our knowledge of the "world," which we choose to represent for various reasons. Each concept is expressed through verbal relationships with other concepts and their real-world instances (such as attribute relationships), which are not necessarily hierarchical. Additionally, concepts relate to hierarchical relationships (categorization or the assignment of objects to categories) and can belong to multiple hierarchies simultaneously, thereby removing the exclusively hierarchical aspect of conceptualization[11]. Conceptualization, therefore, can be seen as the development or construction of abstract ideas from our experiences: our conscious or consciousness-accessible (though not necessarily accurate) understanding of the world[10].

Phrasal verbs

Phrasal verbs are widely recognized as a particularly challenging aspect of learning English for learners. In the past, they were often regarded as arbitrary elements of the language, requiring rote memorization for acquisition. In response to this approach, the *Collins COBUILD Dictionary of Phrasal Verbs* adopted its own methodology, typical of dictionaries, by organizing phrasal verbs alphabetically. Each entry provides a detailed definition of the phrasal verb, followed by an example sentence. Additional grammatical information is presented in a separate column on the right margin, explaining the various grammatical contexts in which the phrasal verb can be used. An alternative approach within the LC framework is also available.

Prepositions, by nature, often have multiple related meanings, a concept known as polysemy[12]. According to cognitive semantics, the figurative meanings of prepositions stem from extensions of their spatial meanings through conceptual metaphors[13]. In a pedagogical context, it can be beneficial to direct students' attention to the spatial meanings of prepositions that are most relevant to the process of metaphorization[14].

Aims

Within the framework of CL, which emphasizes the role of mental representations and cognitive processes in language use, this research aims to compare how two groups perceive and interpret the semantic differences conveyed by 'over' in phrasal verbs. By exploring these cognitive

dynamics, the study contributes to a deeper understanding of how linguistic structures are internalized, processed, and used across different linguistic communities. Such insights are crucial both for theoretical linguistics and for practical applications in language teaching and cross-cultural communication.

More specifically, this study seeks to compare how native and non-native speakers perceive, understand, and mentally represent the meanings conveyed by these linguistic constructions. By examining the cognitive processes involved in interpreting phrasal verbs with *over*, the research aims to uncover potential differences in conceptualization between native speakers, who acquire English from birth, and non-native speakers, who learn English as a second language. In particular, this study attempts to answer the following research questions:

1. How do native and non-native speakers of English differ in their conceptualization of phrasal verbs involving the preposition 'over'?
2. How do native and non-native speakers perceive and interpret the spatial relationship between the TR trajectory and LM landmark in phrasal verbs with 'over'?

Hypotheses

H1: *There is a significant correlation between linguistic proficiency and the ability to conceptualize phrasal verbs accurately.*

H2: *There is a significant difference between native and non-native speakers in their awareness of the dynamic and metaphorical meanings of "over."*

H3: *There is a significant difference in conceptualization across levels of metaphorical complexity, with greater differences observed as the complexity increases.*

1.3. Research development

In this study, which examines the behavior of the preposition *over* as a component of numerous English phrasal verbs, we aim to explain its primary meaning. This primary meaning is represented by an abstract figure corresponding to the circumstances of the primary scene (proto-scene), a concept proposed by Evans and Tyler[15,16].

Building on this primary meaning, we explore the various senses of the preposition 'over,' ranging from the simplest to the most complex, and demonstrate how the primary value is implicitly present, in one way or another, across all secondary meanings.

The objective of the present study is to provide a comprehensive and clear account of all elements directly related to the topic, including the overarching principles of cognitive grammar, relevant terminology, English phrasal verbs, and the preposition *over*. Furthermore, we adhere to the spatial condition of the foundational value of this preposition[15–17], and we reflect this in corresponding representations.

Furthermore, we classify the different meanings of the preposition based on the relationship between the Trajectory (TR) and the Landmark (LM), examining both the movement of the TR and the path it follows. To support this classification clearly and effectively, we provide numerous examples.

To investigate how native and non-native English learners conceptualize phrasal verbs, their ability to parse these verbs semantically and syntactically, and various cognitive aspects such as metaphor, prototypical meaning, dynamicity, and spatial relationships (particularly between the TR and the LM), we developed a test consisting of eight sentences containing phrasal verbs formed with the preposition in question. Participants were asked to draw the situation described by each sentence. Subsequently, we conducted a qualitative analysis of the drawings and compared the results between native and non-native English learners.

2. Literature review

2.1. Background information

Cognitive linguistics aims to describe and explain language within the framework of human cognition, grounded in three core principles: it rejects the existence of an autonomous linguistic module in the mind, views grammar as a form of conceptualization, and asserts that linguistic knowledge is derived from language use[18]. Cognitive linguists reject the notion of a specialized linguistic mechanism, in contrast to the formal and computational principles emphasized in generative grammar[19]. While acknowledging potential innate linguistic abilities, cognitive linguists stress that these abilities are intertwined with general cognitive functions.

Langacker emphasizes that cognitive linguistics integrates language with other cognitive systems[10], such as

perception, memory, and categorization, viewing language as an integral component of cognition. This approach diverges from truth-conditional semantics, interpreting meaning through conceptualization and imagistic representations within mental spaces shaped by perception and bodily experiences[20,21]. This perspective aligns with a moderate interpretation of the Sapir-Whorf hypothesis, positing that language and cognition mutually influence each other and are embedded in physical and cultural contexts.

Cognitive linguistics also suggests that cultural and semantic categories are built upon embodied experiences, highlighting the cultural aspect of semantics as crucial to "world knowledge" or "encyclopedic knowledge"[22,23]. This theoretical framework offers valuable insights for language teaching, providing rich conceptual images and intuitive understandings of linguistic structure and usage. Evans and Tyler propose that cognitive linguistics can offer a cohesive[16], pedagogically accessible framework for understanding grammatical constructions and lexical elements, elucidating their systematic variations.

Talmy's influential research on the linguistic representation of diverse conceptual images supports the cognitive grammar perspective, which sees language as fundamentally symbolic, representing specific conceptualizations. Taylor further elucidates the relationship between syntax and semantics within cognitive grammar, emphasizing the symbolic nature of linguistic expressions[24].

Conceptualization, cognition, and metaphoricity have garnered significant attention across various fields, including linguistic relativity, spatial semantics, conceptual metaphor theory, behavioral sciences, and motion-emotion studies. For instance, Khatin-Zadeh, Farsani, and Reali categorize metaphors in motion studies into four main types[25]: motion-based metaphors, static space-based metaphors, static object-based metaphors, and static event-based metaphors. Additionally, embodied metaphors are argued to facilitate mental representations of abstract concepts and provide mental simulations[26].

In cognitive studies, in *Moving Ourselves, Moving Others*, asserts that "sharing of experiences is not only, and not primarily, on a cognitive level, but also (and more fundamentally) on the level of affect, perceptual processes, and conative (action-oriented) engagements"[27]. This indicates that conceptual metaphors are integral to language and thought, suggesting that our thinking and behavior are fundamentally rooted in the use of metaphors in everyday language. Metaphors reflect our perception and understanding of the world, illustrating how our conceptual systems are anchored in our physical experiences.

2.2. The preposition 'over'

The word 'over,' in its schematic sense, expresses a spatial and vertical relationship between two entities. In this relationship, one object is or passes over another object. When in motion, the path that the object travels has an ascending and a descending section[17] (p. 160). Quirk, Greenbaum, Leech, and Svartvik list eight senses of the preposition 'over'[28]:

1. *Position*:
   A lamp hung over the door.
2. *Destination*:
   They throw a blanket over her.
3. Passage:
   They climbed over the wall.
4. *Resultative*:
   At last, we were over the crest of the hill.
5. *Pervasive / static*:
   Leaves lay thick (all) over the ground.
6. *Pervasive / motion*:
   They splashed water (all) over me.
7. *Orientation*:
   They live over the road (on the far side of).
8. *Accompanying circumstances*:
   We discussed it over a glass of wine.

Upon closer examination of these eight senses associated with the preposition 'over,' it becomes evident that the first six examples predominantly share a fundamental interpretation: one entity (TR) is situated at or moving toward a higher level than another entity (LM). Even in the remaining two instances, where over assumes a more metaphorical role, it can still be linked back to this foundational concept. Evans and Tyler argue from a cognitive perspective that the diverse meanings of over ultimately derive from a common underlying concept[15], or "primary scene" (proto scene). This scene involves the preposition establishing a relational framework between two entities, whether spatial (indicating a physical

position) or temporal (indicating a specific moment). Both scenarios can be conceptualized through mental imagery, as shown in **Figure 1** below, which illustrates the primary scene (proto scene) of 'over':

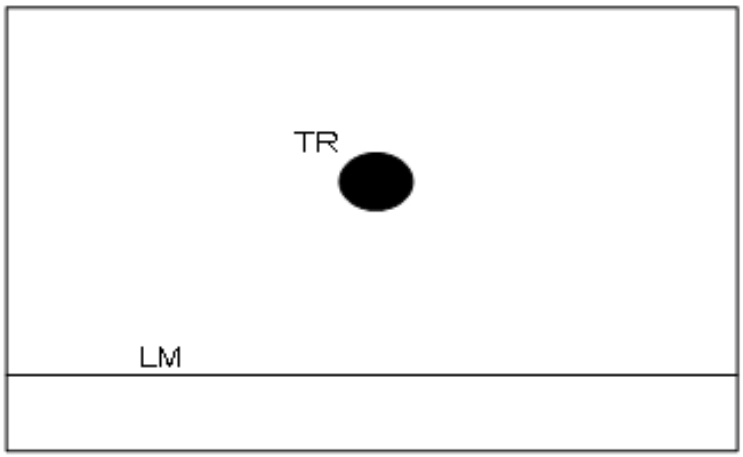

Figure 1. The proto scene of the preposition Over.

Figure 1 above illustrates a static positional sense of over, where a TR object is located vertically above an LM object, typically at a higher position. This interpretation closely aligns with the primary scene of 'over'. This static position can be observed in two distinct configurations:

Point A (**Figure 2**): In the prototypical configuration described as "point A," the TR object is positioned on the LM and is in contact with it. For example, the sentence *"The cup is over the table"* clearly expresses this sense of 'over' at point A. From this situation, the meaning of the phrasal verb *put over* has emerged: "to speak clearly about an idea so that everyone understands it well." This sense originally comes from the idea of placing something in a high place and on top of something else so that it can be seen clearly. Therefore, placing the object on the LM makes it more visible or understandable to others:

- Example: "*The president put the issue of the taxes over*."

From this configuration also arises the meaning 'focus, strive or suffer' explained by Tyler and Evans as in the phrase[29]:

- Example: "*The committee agonized over the decision."*

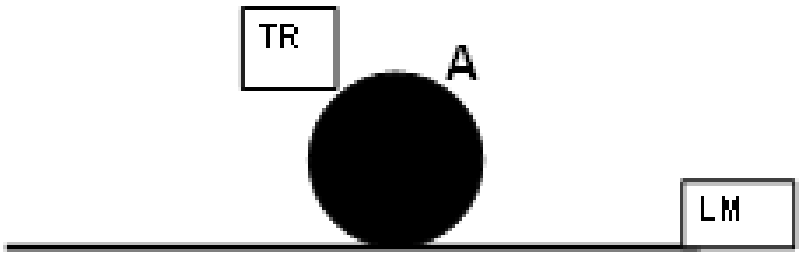

Figure 2. The meaning of Over, point A.

Point B (**Figure 3**): In the prototype configuration referred to as "point B," the TR object is positioned at a higher level than the LM object, without any contact between them. This static arrangement can resemble scenarios such as "*The picture is hanging over the sofa*" and "*Shouldn´t we cut down this branch that is hanging over the driveway?*". Alternatively, it can denote a fixed position located higher than another object, even if the two are not vertically aligned, as in the sentence "*Over us we see the snowy summit."*

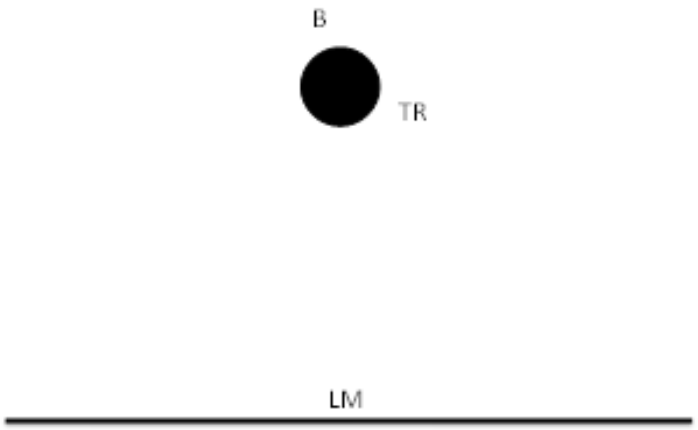

Figure 3. The meaning of Over, point B.

'Over' can also denote the perspective from which the movement associated with a process is observed, both physically and mentally. This viewpoint can be approached by the speaker in various ways: focusing on the initial phase, the final phase, or the upward and downward movement of the TR. In its dynamic sense, the preposition over can thus convey different types of processes [29].

Process AB (**Figure 4**): In the prototypical "AB process" configuration, the TR moves from a lower level to a higher level and remains there, as exemplified in the previously discussed example: "The cat jumped over the fence and stayed there." It is important to note that the process represented in this sentence differs from the action depicted in the example itself (the cat jumping over the fence). In the latter case, the cat leaps from the ground to the fence and remains there; here, the fence (LM1) serves as the primary reference point relative to the TR (the cat), while the ground remains as LM2 (secondary).

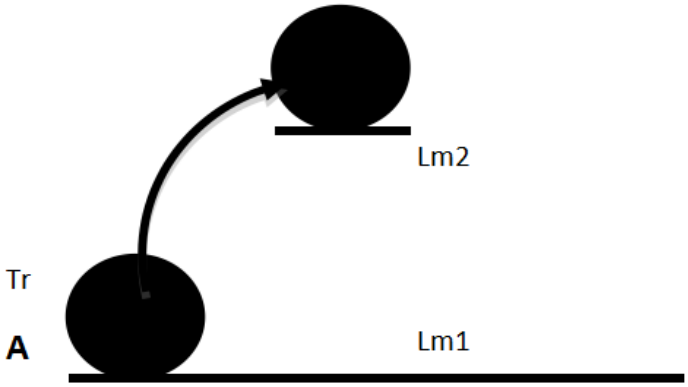

Figure 4. The meaning of Over, process AB.

From this configuration, phrasal verbs with 'over' can be explained, such as:

Pull over: "If the police pull someone who is driving a car over, they order him to drive the car to the side of the road and stop." For instance, "The police pulled us over to the side of the road and searched the car."

This phrasal construction can be related back to the primary scene of the over when considering the necessary actions to stop a typical vehicle. This includes applying the handbrake, which mirrors the upward movement involved in Process AB of over. Alternatively, reflecting on historical contexts when horses were a primary mode of transport, stopping a horse required pulling on the bridle, a motion akin to the action of stopping a vehicle today. It is plausible that this historical practice influenced the modern expression "pull over," forming the basis of its meaning.

Process ABC (**Figure 5**): This represents the most common process conveyed by over, illustrating the natural movement of a TR above an LM (LM1). Tyler and Evans distinguish this process from the previously discussed AB process [29]. The previously examined example allows for two interpretations, depending on the process being expressed. In that example, an AB process is depicted ("The cat jumps on the fence and stays there"), but it can also be used to denote the ABC process, as in the following sentence:

- Example: "The cat jumped over the fence (to the other side)."

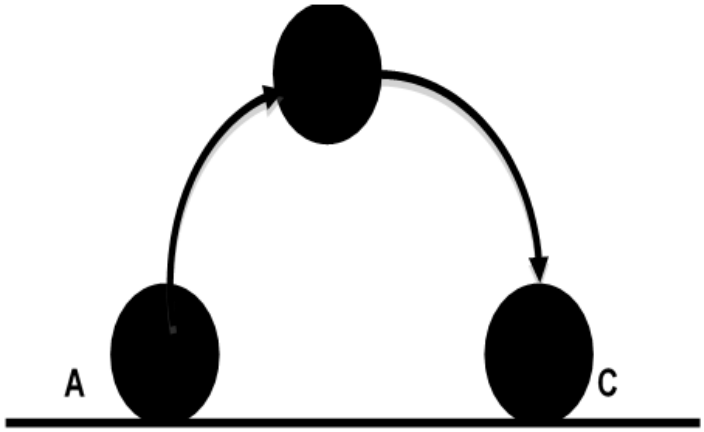

Figure 5. The meaning of Over, Process ABC.

Process BC (**Figure 6**): The BC process is not a clearly separate process from the ABC process. It corresponds to cases in which a TR, being in a high position, moves down or falls to end up on the LM in contact with it. This configuration is clearly expressed by the phrasal verb *fall over*, whose meaning represents something that moves from a higher place to a lower one and remains there:

"The stone fell over the car and crashed the windshield."

Fall over implies that the speaker's focus is on point C in the process. The same meaning is expressed with *fall down*, but in this case, the focus is on point B of the process. This configuration also accounts for the sense of "mirror movement" (reflexive) of *over* proposed by Tyler and Evans [29]:

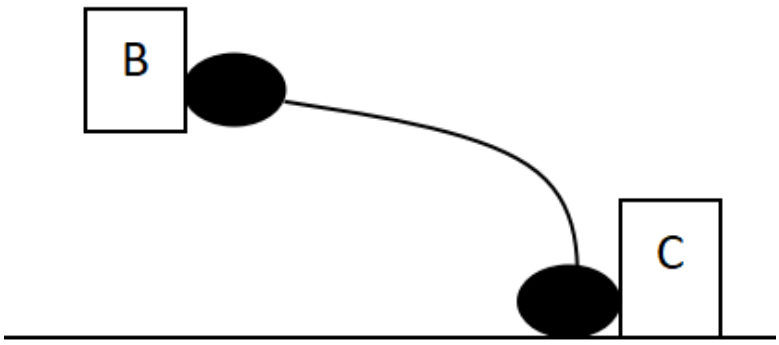

Figure 6. Direction of over: BC process.

Process ABCDE (**Figure 7**): The CDE process represents a repetition of the ABC process. When referring to any process and indicating its repetition, the term *over* is used. This is evident in expressions such as *do over*, which means "to do again; to repeat".

Example: "He asked me to do the homework over."

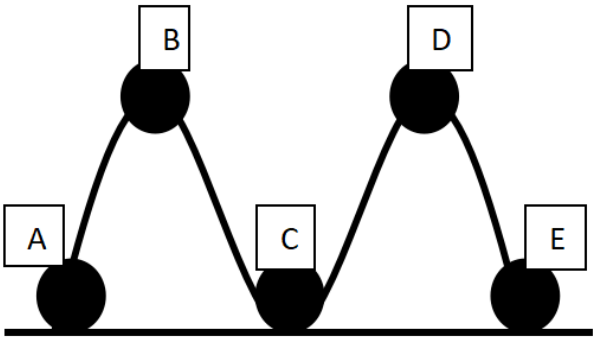

Figure 7. The meaning of over: process ABCDE.

To denote that a process is repeated more than once or an indefinite number of times, typically 'over' is used twice:

Process ACE: In the prototypical setup of "process ACE," the TR moves horizontally over the LM, making contact with it (**Figure 8**):

Figure 8. Direction of over: ACE process.

Example: "He spread the cloth over the table."

Additionally, the expression "stay over" is used to describe spending the night somewhere instead of returning home or continuing a journey:

Example: "I went to visit my parents and I stayed over."

These examples illustrate how 'over' can denote horizontal movement or temporary accommodation, depending on the context in which it is used.

3. Methodology

3.1. Research Design

This study employed a qualitative research design to explore and compare how native and non-native speakers represent various aspects of the semantic nature of prepositions within phrasal verbs. Specifically, it examined dynamic and static configurations, energetic forces, metaphorical extensions (both positive and negative), as well as the abstraction and prototypicality of prepositional usage.

3.2. Data Analysis

The qualitative analysis involved multiple systematic steps to ensure rigor and replicability: (1) preparing the data by compiling all participant drawings and transcribing any written annotations; (2) coding the drawings according to predefined categories—Trajector (TR) position, Landmark (LM) position, dynamicity, metaphorical extensions, spatial relationships, and the presence of linguistic markers; (3) thematic categorization, where coded elements were grouped into broader conceptual patterns; (4) cross-checking codes by two independent raters, achieving an inter-rater agreement rate of 92%; (5) synthesizing findings to identify similarities and differences between native and non-native groups.

3.3. Research Population

The study sample consisted of 60 students selected from the Modern Language Centre at the University of Granada (MLCUGR). This sample was drawn from a study population of 400 students, ensuring a confidence level of 0.05. The participants were stratified into two groups:

- 30 native speakers of English who are students of the Spanish language at MLCUGR.
- 30 non-native speakers of English with a high level of proficiency in English, also from MLCUGR.

Participant demographics, including group, gender, age range, and proficiency level, are summarized in **Table 1**.

Table 1. Participant Demographics.

Group	Gender (M/F)	Age Range	English Proficiency Level
Native speakers (n = 30)	14/16	20–28	Native
Non-native speakers (n = 30)	13/17	21–30	High proficiency (C1/C2)

3.4. Participants

Participants were selected using stratified random sampling to ensure representation across different linguistic backgrounds and proficiency levels. The sample included both native and non-native English speakers to provide a comprehensive comparison of how these groups interpret and use phrasal verbs containing the preposition 'over'.

3.5. Instrument

Data were collected using a sampling survey approach, in which participants were presented with a test comprising eight sentences that incorporated the preposition 'over' in phrasal verbs. Participants were asked to draw a simple picture depicting the meaning of each sentence within a 10- to 15-minute timeframe. This method enabled a qualitative analysis of how participants conceptualized and interpreted the phrasal verbs.

Figure 9 illustrates the complete experimental sequence followed in this study, from participant recruitment to data analysis. This visual representation clarifies the procedural flow and ensures that the design can be accurately replicated by other researchers. Each step is presented in the order of implementation, showing the transition from preparation (recruitment, consent, and instructions) through the experimental task (sentence presentation and drawing phase) to post-task procedures (collection, coding, and analysis).

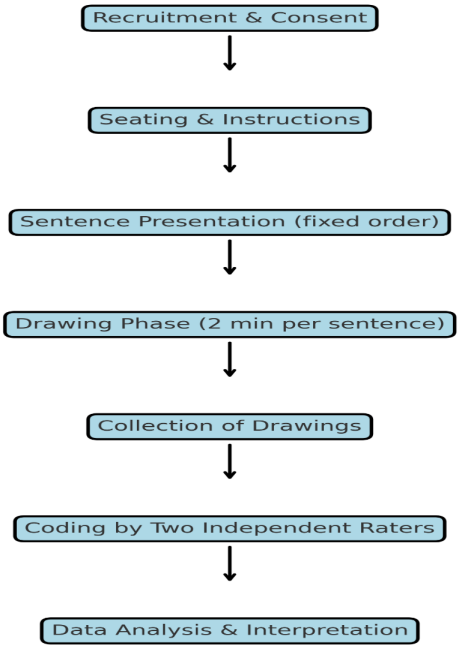

Figure 9. Experimental sequence.

3.6. Validation and Reliability

The test instrument was validated through expert review by three specialists in cognitive linguistics, ensuring alignment with the study's objectives and theoretical framework. Pilot testing was conducted with a sample of 10 students (excluded from the main study) to refine task clarity. Reliability was assessed through inter-rater consensus scoring, with discrepancies resolved through discussion. The final inter-rater reliability was 92%, indicating high consistency.

3.7. Ethical Considerations

All participants provided written informed consent prior to participation. They were assured of anonymity, the right to withdraw at any time, and the confidentiality of their data. The study was approved by the Department of General Linguistics and Literary Theory at the University of Granada (Ref. No. 10481/5534).

4. Results

This section presents the analysis of the eight sentences illustrating the previously described uses of the preposition 'over'. It provides the intended meaning of each specific use, along with the results from both native and non-native speakers.

Test-Analysis 1

Sentence No. 1: The young couple **clashed over** the question whether both should work (**Figure 10**).

General Meaning of the Preposition 'over': being or moving higher than and close to something, or from one side to another[17] (p. 160) (process ABC, **Figure 5**).

Syntactically, *the young couple* is the TR, *the question* is the LM (Landmark), and the dynamic action is included in the phrasal verb *"clash over"*. Cognitively, in terms of verbal language or the conversation between the couple, the conversation itself serves as the TR. The space or air between the couple represents LM, while the dynamic action refers to the movement of sound waves through the air.

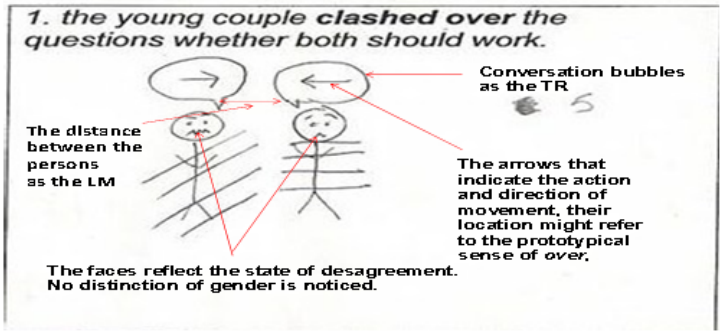

Figure 10. A sample drawing of sentence No: 1.

Analysis of Native Speakers' Drawings:

All native speakers conveyed the general meaning of the sentence, depicting two individuals in a situation of disagreement. Twenty-three of them (77%) distinguished between genders by drawing a couple, while seven did not. In nineteen drawings (63%), speech bubbles were present between the two individuals; in twelve of these (40%), the disagreement was explicitly expressed through verbal language using words such as "yes," "no," "I do not want to," "I cannot," etc. Five drawings included arrows pointing in opposite directions inside the speech bubbles, indicating greater dynamism.

Analysis of Non-native Speakers' Drawings:

Among the non-native students who participated, only fourteen (47%) correctly depicted the couple as a male and a female. Twelve students (40%) represented the couple in disagreement, either through explicit disagreement words (seven students), arrows pointing in opposite directions (two students), or by positioning the couple to indicate conflict (three students). Most students, eighteen (60%), included speech bubbles between the couple, all positioned above them. Additionally, five students (17%) drew arrows pointing in opposite directions, also above the couple. Overall, twenty-three students (77%) successfully conveyed the conventional meaning of the sentence by using speech bubbles and arrows placed above the couple.

To Sum Up:

Analysis of the drawings indicated that native speakers outperformed non-native speakers across all areas. They excelled in both semantic and grammatical analysis, accurately conveying prototypical and abstract meanings, including gender distinctions. Despite these differences, the gap between native and non-native speakers was relatively small, likely due to the familiarity and straightforwardness of the phrasal verbs, even when used metaphorically (cf. Zibin et al. which highlights how non-compositionality affects comprehension

of English metonymical expressions)[30]. Consequently, differences in understanding phrasal verb meanings between native and non-native speakers were somewhat diminished.

Test-Analysis 2

Sentence No. 2: I'm **going over** to Sue´s flat for a chat (**Figure 11**).

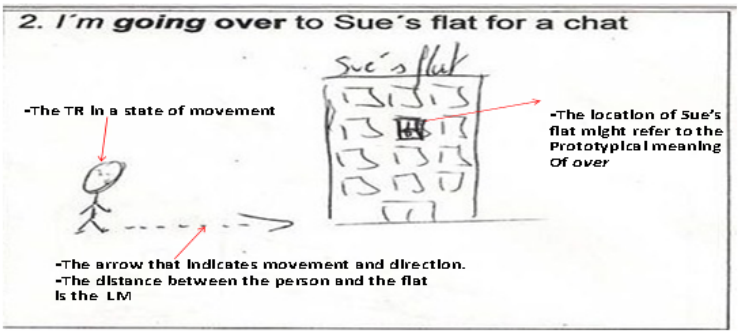

Figure 11. A sample drawing of sentence No: 2.

General meaning of the preposition *over*: crossing a certain distance to get closer.[17] (p. 161). (Process ABC, **Figure 5**).

The schematic meaning conveyed by over in this case involves traveling a certain distance to approach something or someone (ABC process, **Figure 5**)[17]. Here, both the TR and LM are dual, encompassing the space between the speaker (I) and Sue's flat. The phrasal verb expresses a dynamic action.

Analysis of Native Speakers' Drawings:

Among the 30 native students, 25 (83.33%) conveyed the overall meaning of the sentence by depicting movement from one place to another. Of these, only 9 (30% of the total) illustrated movement from a lower to a higher level or from south to north, demonstrating the most accurate understanding of the global meaning of the preposition *over* in this context. A smaller group of 6 students (20%) portrayed Sue's apartment as being high in a building, requiring upward movement to reach it, reflecting a different but prototypical interpretation. Additionally, 20 students (66.66%) depicted a person in motion without specifying the destination, focusing solely on the dynamism expressed in the phrasal verb.

Analysis of Non-native Speakers' Drawings:

Out of the 30 non-native students, 21 (70%) conveyed the overall meaning of the phrasal verb by illustrating movement from point A to point B. Within this group, 9 students (30%) depicted the most prototypical meaning of *over*, indicating movement from a lower to a higher plane or from south to north. Another 6 students (20%) represented Sue's apartment (point B) as being situated at a high point in the building, reflecting consideration of the prototypical meaning of *over*. The remaining 6 students (20%) depicted movement from point A to B without specifying any level differences between the two points.

To Sum Up

The study indicates that native speakers (83.33%) outperformed non-native speakers (70%) in conveying the overall meaning of the sentence, likely reflecting deeper comprehension. However, both groups demonstrated similar understanding of the prototypical meaning of 'over,' with 30% of each group depicting upward movement and 20% representing Sue's apartment at a high point. Native speakers (66.66%) notably excelled in illustrating the global meaning of the phrasal verb as movement from point A to point B without a change in level, likely due to their familiarity with its use. Furthermore, native speakers (40%) surpassed non-native speakers (30%) in effectively conveying the dynamism of the situation.

Test-Analysis 3

Sentence No. 3: The police **swarmed** all **over** the place during the drug raid (**Figure 12**).

General meaning of the preposition *over*: motion viewed as covering completely or even in excess (Process ACE, **Figure 8**)[17] (p. 162).

Major components of the sentence: the police are the TR, "all over the place" is the LM, and the dynamic action is the movement of swarming over the area.

Figure 12. A sample drawing of sentence No: 3.

Analysis of Native Speakers' Drawings:

Examining the third sentence, we observed that the entire group (100%) of native speakers conveyed the general meaning by depicting a police inspection scene. Twenty-two students (73%) demonstrated a deeper semantic analysis, accurately reflecting the exact meaning of the phrasal verb by illustrating a police inspection covering the entire area, indicating a strong grasp of its meaning. Eight students (27%) portrayed additional dynamism by using arrows to indicate the movement of the characters, i.e., the policemen.

Analysis of Non-native Speakers' Drawings:

Seventy percent (21 students) of non-native speakers conveyed the general meaning of the sentence in their drawings, depicting scenes of a police inspection in a specific area. Among them, nine students (30%) demonstrated deeper semantic analysis by providing more detailed illustrations that clearly represented the type of inspection implied in the sentence, covering the entire area. Four students (13%) adopted a more abstract approach, representing the prototypical meaning of the preposition 'over' through arrows indicating movement from a higher level and across the area. An additional six students (20%) emphasized dynamism by depicting movement using arrows.

To Sum Up:

Native speakers generally understood the essence of the sentence better than non-native speakers, as evidenced by the latter's 30% success rate in accurately capturing it. The difference was more pronounced in semantic analysis, likely due to the metaphorical nature of the phrasal verb, which favored native comprehension. However, both groups performed similarly in conveying the abstract meaning of 'over,' with native speakers showing a slight advantage.

Test-Analysis 4

Sentence No. 4: Their pets were underfed while the owners were **overfed (Figure 13)**.

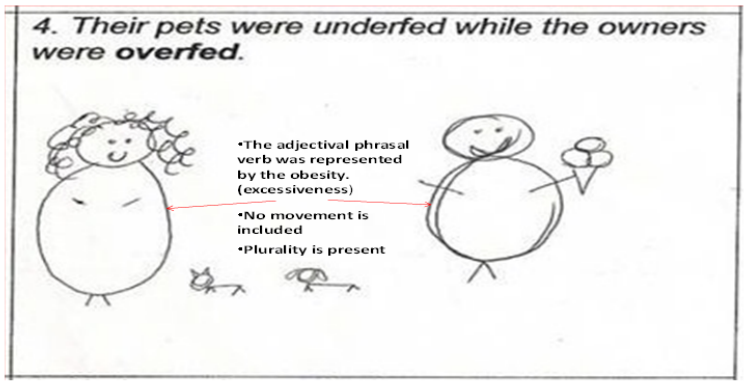

Figure 13. A sample drawing of sentence No: 4.

General meaning of the preposition *over*: a prefix that means excess or beyond the norm (Point A, **Figure 2**; process AB, **Figure 4**)[17] (p. 165).

Major components of the sentence: The TR could be

obesity or excess weight in the owners; the (LM) could also encompass the entire bodies of the owners. There is no dynamic action included.

Analysis of Native Speakers' Drawings:

This sentence describes a situation involving a contradiction of states: an overfed person and an underfed pet. All native speakers clearly depicted this meaning in their drawings, portraying overweight individuals and thin pets, effectively illustrating the adjectives 'overfed' and 'underfed.' Additionally, 60% of the group (18 students) conveyed the sentence's plurality by drawing more than one person and more than one pet. This aspect may reflect the attention paid to grammaticality at this semantic level of testing.

Analysis of Non-native Speakers' Drawings:

Out of the entire group of non-native speakers, twenty-seven students (90%) accurately depicted the situation by illustrating overweight individuals and very thin pets. Only three students (10%) failed to represent the scene accurately, possibly due to misunderstanding the sentence or paying less attention to its meaning. Among the twenty-seven students who depicted the situation correctly, twelve (40%) made a grammatical distinction between singular and plural by drawing more than one person and more than one pet.

To Sum Up:

The sentence has a straightforward and unambiguous meaning that precludes metaphorical interpretations, as reflected in the drawings. Differences between the depictions of the two groups were minimal, with the notable observation that native speakers more frequently represented the concept of plurality compared to non-native speakers.

Test-Analysis 5

Sentence No. 5: I suggest that we **talk** the problem **over** with our friends (**Figure 14**).

General meaning of the preposition over: examining thoroughly from all sides [17] (p. 167). (Process ABC, **Figure 5**).

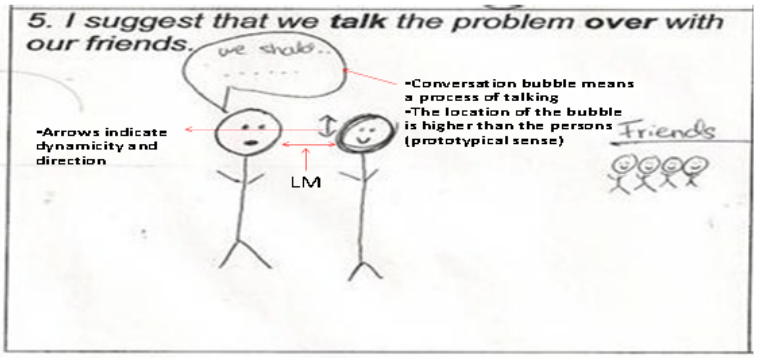

Figure 14. A sample drawing of sentence No: 5.

The preposition 'over' is illustrated here with its general meaning, corresponding to thoroughly examining something from all perspectives (ABC process; **Figure 5**) [17] (p. 167). Syntactically, 'we' serves as the TR, and 'the problem' as the LM, with a secondary LM associated with 'our friends.' Conceptually, the TR refers to the points of discussion regarding the problem. The dynamism is depicted in the conversation among the group of friends, illustrating the movement of words through the air between speakers.

Analysis of Native Speakers' Drawings:

The entire group of native speakers conveyed the general meaning of the sentence by depicting a group of individuals engaged in conversation. In twenty-seven drawings (90%), speech bubbles were present, effectively demonstrating the meaning of the phrasal verb and its dynamic nature (the movement of verbal language through the air). In the remaining three drawings, individuals appeared to be talking, but there was no explicit depiction of a conversational or dialogue situation. Six drawings (20%) exhibited deeper semantic analysis by illustrating the presence of a problem through verbal language.

Analysis of Non-native Speakers' Drawings:

The entire group of non-native speakers conveyed the general meaning of the sentence, albeit with less emphasis on the phrasal verb's meaning, as only thirteen students (43%) included speech bubbles in their drawings. In nine drawings (30%), individuals were depicted sitting around a table, indicating a discussion about a specific issue. Eight drawings (27%) depicted only individuals, without any indication of a conversational situation.

To Sum Up:

This sentence is not highly metaphorical, resulting in only slight variation in drawings within the same group. Native speakers' drawings were clearer and more expressive than those of non-native speakers. The difference was particularly noticeable in conveying the meaning of the phrasal verb and the dynamics of conversation through the depiction of moving words.

Test–Analysis 6

Sentence No. 6: He **leaned over** the fence to pick up a coin (**Figure 15**).

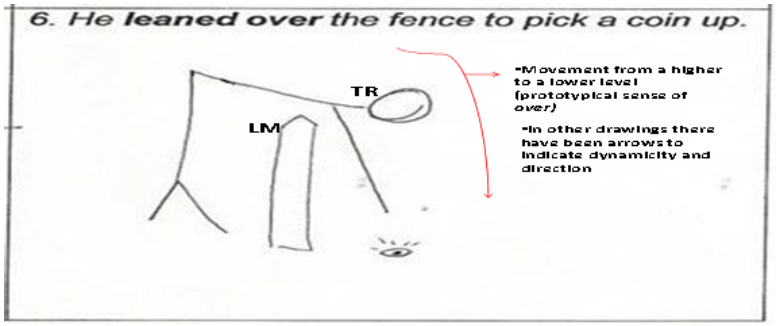

Figure 15. A sample drawing of sentence No: 6.

General meaning of over: reflexive motion or completely bent[17] (p. 168). (Process BC, **Figure 7**).

Major components of the sentence: The TR is the third-person pronoun 'he', and the LM is the fence. The dynamic action involves the reflexive movement inherent in the meaning of the phrasal verb *lean over.*

Analysis of Native Speakers' Drawings:

All native speakers accurately conveyed the general meaning of the sentence through their drawings. Each drawing precisely depicted the reflexive posture or motion, capturing the prototypical meaning of the preposition 'over,' where one part of the body moves over and higher than the other. The dynamic nature was generally conveyed through the posture of the person (the agent). In two drawings (7%), arrows were used to emphasize the dynamic process.

Analysis of Non-native Speakers' Drawings:

Eighty percent (24 students) of the non-native speakers portrayed the general meaning of the sentence by illustrating a person leaning over to pick up a coin, which also aligns with the prototypical meaning of the preposition 'over.' Three of these twenty-four students (10%) used curved arrows to indicate the direction (reflexive) and dynamic nature of the action. The remaining six students (20%) did not clearly depict the situation: some simply drew a standing person without indicating the leaning process, while others drew only the fence, omitting the TR, trajectory, and action, which are essential components of the scene.

To Sum Up:

This sentence involves several elements: a distinct subject (TR) and object (the fence), along with movement from higher to lower (as depicted in **Figure 7**), similar to the ABC process. Its meaning and the phrasal verb are straightforward and literal, resulting in clear, representative drawings with minimal deviation. Differences between groups were minimal due to the narrow scope for interpretation and imagination.

Test-Analysis 7

Sentence No. 7: We **discussed** the problem **over** a glass of wine (**Figure 16**).

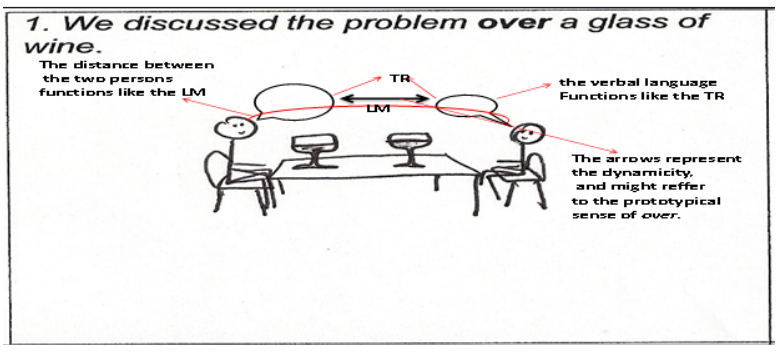

Figure 16. A sample drawing of sentence No: 7.

General meaning of the particle *over*: accompanying circumstances. (Process ABC **Figure 6**).

Major components of the sentence: the discussion represented by verbal language is the (TR); the dynamic verb (*discuss- over)* and the accompanying circumstances represented by *the wine* (LM).

Analysis of Native Speakers' Drawings:

Of the thirty students who completed this task, twenty-six (87%) successfully conveyed the general meaning of the sentence by depicting a scene of people drinking wine. Among these twenty-six drawings, ten (33%) included a discussion among the individuals, primarily represented through conversation bubbles. In all drawings, the focal point was the wine, consistently depicted with glasses and occasionally a wine bottle. Regarding the prototypical meaning of the particle 'over,' six drawings (20%) featured arrows and conversation bubbles illustrating the transmission of information or words via sound waves moving from one end to another.

Analysis of Non-native Speakers' Drawings:

Out of the thirty non-native speakers, twenty-two (73%) portrayed the general scenario of people drinking wine. However, in five of these drawings, the wine was absent, showing only a group of people. In the three other drawings, the wine was present but without any people. Only five drawings incorporated all three key elements (people, conversation, and wine), potentially representing the prototypical meaning of the particle 'over' by depicting the transmission of words over the wine glass. None of the non-native speakers' drawings reflected a literal interpretation of the situation.

To Sum Up:

Although the differences were not stark, native speakers generally achieved better results. Some native speakers' literal interpretations may stem from a strong imagination and a clear understanding of the scenario, as such drawings can vividly evoke the exact situation for viewers. The TR element did not receive adequate attention, likely because it is non-corporeal.

Test-Analysis 8

Sentence No. 8: the police **pulled** us **over** to the side of the road and searched the car (**Figure 17**).

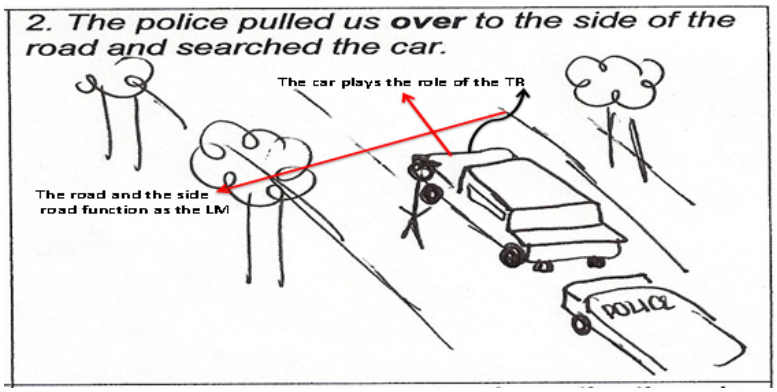

Figure 17. A sample drawing of sentence No: 8.

General meaning of the particle *over*: moving from one side to the other[17] (p. 168). (Process AB, **Figure 5**)

Major components of the sentence: the car is the (TR); the road is the (LM) and the dynamic action is included in the phrasal verb (pull over).

Analysis of Native Speakers' Drawings:

The general meaning of the sentence was expressed by all native speakers through drawings depicting a scene with a car and a policeman. In twenty-nine drawings (97%), a road represented the LM. The prototypical meaning of the particle 'over' and the dynamic nature of the phrasal verb were illustrated in three drawings (10%) using arrows to show the movement of the TR from point A (the middle of the street) to point B (the side of the street) and the route taken. Although students were instructed to focus on the meaning of the phrasal verb, the dynamism of the second action in the sentence, "searching the car by the policeman," was evident in twenty-one drawings (70%), indicating a tendency to prioritize or emphasize this latter action.

Analysis of Non-native Speakers' Drawings:

The general meaning of the sentence, involving the car (TR) and the policeman, was depicted in twenty-six drawings (87%) by non-native speakers. Four drawings appeared to deviate from the context or were minimal representations of the

situation. The road (LM) appeared in twenty-two drawings (73%). Arrows indicating the car's route, potentially conveying the prototypical meaning of the particle 'over' and the dynamic action, were present in five drawings (17%). Similar to the native speakers' drawings, non-native speakers also emphasized the second action of the sentence, depicting the process of searching the car in twenty-one drawings (70%), while the action of pulling the car over (the phrasal verb) was represented in only the aforementioned five drawings.

To Sum Up:

Native speakers demonstrate an advantage in semantic analysis, particularly in conveying the general meaning. However, both groups similarly prioritize depicting the final action, "searching the car," which may be due to its informational or semantic significance, with 'pull over' serving as a preliminary step toward this main action.

5. Discussion

The findings of this study provide empirical support for all three hypotheses and highlight the interdependence of linguistic proficiency, nativeness, and metaphorical complexity in shaping the conceptualization of phrasal verbs with *over*.

The results confirmed a strong correlation between linguistic proficiency and accurate conceptualization. Native speakers consistently produced clearer and more representative illustrations, reflecting superior semantic and syntactic parsing. This supports the Cognitive Linguistics view that meaning is structured through conceptualization [20,21], and that higher proficiency enables learners to access not only literal but also extended metaphorical meanings. The results also align with Tyler and Evans [16,29], who argue that mastery of prototypical senses provides the foundation for accessing metaphorical extensions.

Native speakers demonstrated greater awareness of dynamicity and metaphorical meanings than non-native speakers. Their drawings captured not only static TR-LM relations but also trajectories of movement and abstract extensions (e.g., get over a problem), whereas non-natives often defaulted to literal interpretations. This finding echoes Boers and Demecheleer [14], who observed that L2 learners struggle with non-literal senses of prepositions. It also supports Lakoff and Johnson's Conceptual Metaphor Theory [21,22], which holds that abstract meanings are grounded in spatial schemas, but which non-natives often fail to exploit fully due to limited exposure and metaphorical competence.

Differences between the two groups widened with increasing metaphorical complexity. For frequent or semantically transparent phrasal verbs, group differences were minimal. However, with opaque or abstract uses, native speakers outperformed non-natives, illustrating that complexity amplifies proficiency-related disparities. This finding confirms the hierarchical network model of polysemy [16], according to which less frequent senses are harder to access.

The findings also shed light on the role of lexical transparency and frequency: common phrasal verbs reduced the performance gap, suggesting that repeated exposure helps entrench meanings in learners' mental lexicons. Moreover, the ability to depict dynamism in the drawings reinforces the idea that phrasal verbs encode not only spatial relations but also embodied action, supporting claims of embodied cognition in language processing [26,27].

In summary, this study both confirms and extends prior research in CL and SLA. It confirms earlier findings on the role of proficiency and metaphorical competence [6,14,30], while extending them by demonstrating how visual elicitation tasks reveal differences in conceptualization that are often invisible in traditional comprehension tests. Importantly, the results underscore the explanatory power of the Cognitive Linguistics framework, particularly the TR/LM schema and conceptual metaphor theory, in accounting for how learners acquire and use phrasal verbs.

6. Conclusion

This study investigated how linguistic proficiency influences the conceptualization of phrasal verbs containing the preposition *over* among native and non-native speakers of English. Using a drawing-based task, the research examined participants' semantic and syntactic parsing abilities, as well as their capacity to represent abstract and dynamic meanings. The findings confirmed three main outcomes: (H1) linguistic proficiency was significantly correlated with accurate conceptualization; (H2) native speakers demonstrated greater awareness of dynamic and metaphorical meanings than non-native speakers; and (H3) differences between the groups increased as the metaphorical complexity of the phrasal verbs rose. Furthermore, knowledge of both prototypical and ab-

stract meanings of prepositions emerged as a key factor supporting accurate interpretation and representation.

6.1. Significance of the Study

This research contributes to cognitive linguistics and second language acquisition by providing empirical evidence on how linguistic proficiency shapes the conceptualization of phrasal verbs, a notoriously challenging aspect of English grammar. By combining visual elicitation tasks with a cognitive semantic framework, the study offers a novel methodological approach that bridges linguistic theory and pedagogical practice. The findings not only enrich existing literature on the semantics of prepositions and multiword expressions but also inform teaching strategies in ESL/EFL contexts, particularly in enhancing learners' metaphorical competence. Ultimately, the study benefits researchers by expanding the empirical basis for cognitive linguistic models, supports practitioners in designing more effective instructional materials, and contributes to the broader societal goal of improving intercultural communication through more precise and nuanced language use.

6.2. Limitations

This study has three notable limitations. First, the sample size (n = 60) limits the generalizability of the findings. Second, all participants were drawn from the same academic institution, potentially narrowing cultural and linguistic diversity. Third, differences in drawing competence may have influenced the quality of the visual representations.

6.3. Implications for Future Research

Organizing the meanings of prepositions into coherent networks based on cognitive principles is a powerful tool for understanding their function, particularly in educational settings. Our exploration of the preposition 'over' within phrasal verbs represents a modest yet valuable contribution to this endeavor. Expanding this investigation to other commonly used prepositions could further elucidate how foundational spatial concepts support even abstract meanings. Moreover, such inquiries may offer substantial benefits in ESL classrooms by enriching grammar teaching resources. This approach holds promise for improving comprehension of prepositions, a notoriously complex aspect of English grammar.

Author Contributions

Conceptualization, M.A. and A.R.M.A.; methodology, M.A. and M.R.; formal analysis, M.R. and N.A.; investigation, M.A. and N.A.; resources, M.R.; data curation, M.R. and N.A.; writing—original draft preparation, all authors; writing—review and editing, A.R.M.A. and N.A.; supervision, M.A. All authors have read and agreed to the published version of the manuscript.

Funding

This research received no external funding.

Institutional Review Board Statement

The study was conducted in accordance with the ethical standards of the University of Granada. It was reviewed and approved by the Department of General Linguistics and Literary Theory, University of Granada (Ref. No. 10481/5534).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study. Participants were fully informed of the study's aims and procedures, and they voluntarily agreed to take part. They were assured of confidentiality, anonymity, and their right to withdraw from the study at any stage without penalty.

Data Availability Statement

We agree to share research data.

Acknowledgments

Thank you to The University of Jordan for the great guidance to finish this article.

Conflicts of Interest

The authors declare no conflict of interest.

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