

A Cognitive-Semantic Analysis of Prepositions on and in: A Case Study in Open Educational College / Center of Najaf

Mustafa K. Abduljaleel, Thulfiqar A. Suliman, Basim J. Kadhim, Saad L. Shamkhy, Jabal F. Hassan, Youssra Q. Ali, Taqwa R. Juma'a
General Directorate of Education/ Najaf / Iraq

ABSTRACT: It is believed that English is considered a big problem for non-native learners, especially for Iraqi EFL learners. Prepositions are the core of one of these interference marks. Thus, grammatical prepositions do not use the same rule for each language. Iraqi EFL students based on their native language for translation before producing English language patterns. English language in Iraq is considered a second language. Cognitive linguistics shows a better account while learning English prepositions than traditional methods while acquiring a second language since meaning is crucial in recognizing the correct preposition. This research paper attempts to draw attention to the importance of prepositions' various functions and develop the ability of the students to use prepositions and on correctly in different contexts. This paper is devoted to testing the validity of the following hypotheses: It is hypothesized that using prepositions correctly is difficult for foreign learners. It is assumed that most learners are familiar with the uses of the preposition in rather than the preposition on. This study is restricted to identifying the functions of prepositions in and on producing their uses separately.

Moreover, the practical part is restricted to examining the ability to use the correct preposition of a group of (20) students in different stages in Open Collage of Education/ Center of Najaf. Finally, the test results showed that cognitive linguistics has an important role and significant effectiveness. Cognitive linguistics shows a better account while learning English prepositions than traditional methods while acquiring a second language since meaning is crucial in recognizing the correct preposition. It is a significant way to clarify the meaning.

KEYWORD: Cognitive Linguistics, Cognitive Semantics, Prepositions, The Preposition in, The Preposition on.

1. Introduction

While prepositions are limited in number, they are important because they act as vital markers to the structure of a sentence; they mark special relationships between persons, objects, and locations. Prepositions are often called the biggest small words in English because although they are generally short, they are very important to the sentence's meaning. Using prepositions correctly in English is very difficult and presents several problems for both teachers and learners. Most prepositions, especially the common ones, have several different functions. For example, the preposition 'in,on' has as many as 18 different functions, depending on which dictionary you consult. As vocabulary items in their own right, prepositions can therefore present a major challenge, and it's common for learners of English to ask teachers to explain what a word such as 'at'

means. A misused preposition can significantly differentiate between a clearly stated sentence and a confusing jumble of words. When used properly, however, prepositions provide the glue between parts of a sentence, allowing you to share your scientific research more precisely and professionally. Accordingly, this research paper attempts to investigate the ability of fourth-year students to identify the uses of two selected prepositions, including: *on* and *in*, by giving them a test. Using prepositions correctly is a big challenge Iraqi EFL students face. Tyler and Evans (2003) suggest a new approach for understanding prepositions called cognitive linguistics (CL). Mueller (2016) describes cognitive linguistics as a tool used to treat those difficulties out of studying English prepositions and their semantic networks according to spatial sense, spatial relations, and figurative sense. The cognitive linguistic approach fully investigates English prepositions and other languages (Nasser, 2020; p.494). Moreover, Using prepositions properly is a critical problem faced by Iraqi EFL students. Correctly handling a preposition is not easy because most have different functions, and different prepositions have the same uses. Prepositions are considered the most regularly used linguistic classification in English because they behave as relations between two units, most commonly producing preposition phrases and supposing many semantic functions.

2. Cognitive Linguistics

English language in Iraq is considered a second language. Perfectly using prepositions is one of the big challenges faced by Iraqi EFL students Tyler and Evans (2003) suggest a new approach for understanding prepositions called cognitive linguistics (CL). Mueller (2016) describes cognitive linguistics as a tool used to treat those difficulties in studying English prepositions and their semantic networks according to spatial sense, spatial relations, and figurative sense. The cognitive linguistic approach fully investigates English prepositions and other languages. Tyler and Evans (2003) assert that CL can generate the meaning of prepositions as schematizing the spatial arrangement between two structures, i.e., an abstract concept and a functional element. The position adopted in cognitive linguistics is that there are commonalities in how humans experience and perceive the world and how humans think and use language. This means that all humans share a common conceptualizing capacity. However, these commonalities are no more than constraints, delimiting a range of possibilities. As we have seen, there is striking diversity in the two domains we have surveyed, which shows that the way English speakers think and speak about space and time by no means represents the only way of thinking and speaking about space and time. According to cognitive linguists, language not only reflects conceptual structure but can also give rise to conceptualization. The ways in which different languages 'cut up' and 'label' the world can differentially influence non-linguistic thought and action. It follows that the basic commitments of cognitive linguistics are consonant with a weak version of the Sapir-Whorf hypothesis, a position that some linguists argue is gathering increasing empirical support (Trask, 2007 p.g 101)

This conception of language as symbolic and cognitive in nature underlies specific positions taken by cognitive linguists on several issues such as human categorization and meaning, which are central to any study under this approach. Let us describe them very briefly (Bailey, 1997 p.g 8). This relation between language and experience has led cognitive linguists to study how conceptual structures or cognitive models are reflected in language. As stated in the previous section, for most cognitive linguists, there are no clear boundaries between linguistic knowledge and encyclopedic knowledge; meaning is inherently encyclopedic and therefore, we cannot disassociate strictly denotative aspects from those connotative ones (Cuenca and Hilferty, 1999: 70). Cognitive domains are the proof that we need to show that this disassociation is an artificial one. They are knowledge structures, and mental representations about how the world is organized. As Langacker (1987: 147) points out, they are “context[s] for the characterization of a semantic unit”, that is, coherent knowledge structures that function as contexts, as frames that situate more specific concepts in their right conceptual environment. Let us illustrate this point with one of Langacker" s classic examples: the word *astelehena* "Monday" (Langacker 1987: 147ff p.g 13).

3. Cognitive Semantics

In cognitive linguistics, meaning is defined as conceptualization: "Semantic structure is conceptualization tailored to the specifics of linguistic convention. Semantic analysis therefore requires the explicit characterization of conceptual structure" (Langacker 1987: 99 p.g 91). At first sight, the cognitive view may not seem fundamentally different from other theories that consider meanings to be concepts or conceptual representations. However, as becomes clear from what follows, the cognitive view still differs in important ways, such as its encyclopedic view on meaning and its view that meaning is non-truth conditional (Cuenca and Hilferty, 1999: 70).

As indicated above, conceptual domains are crucial to the meaning of a linguistic item. However, while a conceptual domain provides what Langacker calls the conceptual content of an expression, it only partially defines the meaning of that expression. Crucially, linguistic expressions contribute to how the conceptual content is construed; each linguistic expression or construction imposes its construal. In Langacker" s terms, each expression is said to embody "conventional imagery". We will consider three important dimensions of imagery here: (i) vantage point (and subjectification), (ii) figure/ground (or profile/base) alignment and (iii) level of specificity. Consider the sentences The lamp is above the table and The table is under the lamp; they may refer to the same situation (i.e. their truth conditions would be the same), yet clearly, they each impose their own perspective or vantage point on the scene or, put differently, they frame the situation differently. Given the different conceptual construals, these two sentences are semantically non-equivalent. Herskovits (1986) describes English spatial expressions and introduces three important notions to cognitive semantics: the 'ideal meaning' of a lexical item, the role of conventions in conveying meaning, and the influence of pragmatics on the 'ideal meaning'. Herskovits argues that lexical meanings can be explained in an 'ideal world' and in spatial domains according to points, surfaces, and lines, as well as through different spatial relations, such as inclusion, contact, or intersection (Herskovits, 1986, p.3).

It is possible to bring the conceptualizer onto the scene, e.g. Vanessa is sitting across the table from me, but this is a more objective construal of the scene where, in Langacker" s terms, the conceptualizer is put "on stage". In a subjective construal, the conceptualizer remains off-stage, i.e. not in the focus of observation. The most telling illustration of conceptual imagery is that of the figure/ground (or profile/base) alignment (not unrelated to that of perspective). This insight is taken over from cognitive psychology, which refers to the basic principle of cognitive and perceptual experience by which humans perceive (or cognize) entities as standing out against others. This cognitive ability is often called "attention" and it is not exclusive to language. In visual perception, we can also see something as "standing out" from the background (the very notions of foreground and background when discussing a picture or painting build on this capacity). Similarly, in auditory perception, we can single out a particular sound from a multitude of sounds, such as what your friend is saying to you in a noisy bar, or one particular voice that you can single out from a polyphonic choral piece. Typically, attention is a matter of degree, and some entities possess properties that make them stand out more readily than others; this is often referred to as (cognitive or perceptual) "salience". In order to describe the world around us, speakers utilize 'ideal world' concepts and the deviations from the ideal created by 'bending' and 'stretching' these concepts. This facilitates the mapping of lexical meaning to language usage, and in so doing, explains the polysemy of prepositions. "Her goal is to position the study of linguistic expressions (in particular, spatial expressions) within a broader context of language usage and the conventions associated with communicating goals, beliefs, etc." (Pustejovsky, 1989, p.187)

3. Prepositions

Shepherd, et. al (1990, p.258) define a preposition as a term that reflects the "relationship between persons, things, etc., and other persons, things, places, times, etc. Celce-Murica et. al (1999, p.401) describe prepositions as being 'notoriously difficult to learn'. They further add that prepositions represent a source of

difficulty to professional native speakers, let alone to ESL/EFL learners of English. This is because the meaning of such 'little' words is context-dependent and polysemous. They (p. 402) also state that prepositions are 'free morphemes' that occur before or after nouns. Trask (2007, p.228) defines prepositions as 'the smallish class of words that could be compound to noun phrases. Moreover, he states that prepositions are analyzed cognitively in terms of physical and spatial image schemas. Crystal (2008, p.383) maintains that the term is used in the grammatical classification of words. He adds that prepositions can precede or follow certain types of words, such as noun phrases, adjectives or verbs.

Preposition use is one of the major issues Iraqi EFL students struggle with. The majority of prepositions have multiple purposes, and different prepositions have the same applications, making proper preposition handling challenging. Iraqi EFL students need help to determine the prepositional meaning and appropriately employ them because of this. According to Cele-Murcia (2001), non-native English speakers frequently use the wrong prepositions, omit necessary prepositions, and use extra prepositions that are not necessary. Similar to Alkhotaba (2013), who suggested that Arab ESL students make errors even when appropriately utilizing the prepositions in and on. This demonstrates the purpose and usage of prepositions in English and some of the sites where prepositions are problematic for Iraqi students (Naser,2020; p.495).

3.1. Semantic Analysis of the Preposition *in*

Spatial prepositions, such as *in*, are not only used to express concrete physical relationships. They can also be semantically extended to describe abstract 'non-spatial' meanings. However, appreciation of the role of metaphor effectively diminishes the degree of arbitrariness. Prepositions are extended semantically by unusual combinations with other linguistic items, particularly regarding the types of objects that follow them. The emergence of new, related usage types of English spatial prepositions occurs because they demonstrate a 'degree of flexibility'. This flexibility can be seen through various systematic ways that apply to different prepositional meanings(Lindstromberg, 2010, p.10).

Herskovits (1986, p.149) explained that the ideal meaning of the English preposition requires an "inclusion of a geometric construct in one-, two-, or three-dimensional geometric construct". A preposition is a highly polysemous lexical item with many different but often related meanings. This characteristic is illustrated in the following examples:

- a) The cat is in the box.
- b) The bird is in the tree.
- c) The chair is in the corner.
- d) They're standing in line/a queue for a movie.
- e) Next in line for promotion is Dale Smith.
- f) Candidates will speak in alphabetical order. (Cited in Lindstromberg, 1998, p.71)

In (a), the preposition *in* denotes a relation in which the TR is a physical object completely contained within a bounded LM. This is said to be the 'conceptually prototypical' meaning of the preposition *in*, which describes the meaning children first learn while acquiring their native language (Rice 2003; Richards et al. 2004). In examples (b-f), the preposition *in* is most likely to have secondary literal meanings, where the notion of containment can be applied only loosely. In (c), the boundaries of the LM do not manifest themselves in the kind of concrete physical form characteristic of a prototypical container. In (d) the LM has relatively ill-defined boundaries. Thus, the TR 'the chair' is not enclosed by the LM 'the corner' but is contained in a vaguely delimited area of space nearer the corner than the middle of the room.

It should be noted that the metaphorically extended meanings are different from the secondary meanings. Hence, it can be metaphorically extended whether the literal meaning is prototypical or secondary. In examples (e-f), the preposition in is used when the LM is a line.

3.2. Semantic Analysis of the Preposition on

Prepositions are polysemy elements, the various senses of which develop from prototypical sense, "the semantics of English prepositions are arbitrary." (Tyler, 2011, p.182). Moreover, Evans and Tyler (2006, p. 329) define polysemy as a phenomenon where lexical material has two or more meanings. For example, the cat is on the table; I will meet you on Monday. Each example has different meanings or senses, which are reasonably very related. This means that on shows polysemy. This demonstrates that the different reasons of prepositions are systematically connected rather than arbitrary. (Tyler & Evans, 2003). So that CL view that various senses of prepositions are systematically connected and related to a prototypical sense can help EFL students understand the various senses of prepositions. In addition, students can form conceptual relations between multiple users of a given preposition. Sotiloye et al., (2015) mention that the Proto- Type Approach deals with "teaching words in an explanatory and semantically based manner." This shows that in the case of prepositions, especially the spatial, physical meaning will be the prototype. The preposition on has multiple meanings, while the prototypical meaning is "contact of an object with a line of the surface." In other words, this theory confirms that the polysemous quality of prepositions depends on the analysis of the prototypical meaning. However, all non-prototypical meanings can be connected to the prototype during metaphorical expansion. (Lindstromberg, 1996: p.228). Lindstromberg (1998) suggests that understanding these examples as metaphorical extensions is extremely important. In (40) circumstances are places, in (41-43) emotions are places, and in (44-45) "' linguistic expressions are containers' and 'meaning is a tangible, containable substance' "(Lindstromberg, 1998, p.75). In this way, it becomes evident that "[a]s soon as one gets away from the concrete physical experience and starts talking about abstractions or emotions, metaphorical understanding is the norm" (Lakoff, 1993, Cited in Ching-Yi, 2002, p.11). Evans (2010) listed five different 'state' lexical concepts related to the preposition in. He argued that these lexical concepts arise from the spatial senses encoded by in (see Figure 4-13). Evans (2010) assumed that these

Spatial connections are mainly used with prepositions that clarify a conceptualized spatial connection between a focus element (F) and a locating or ground element (G) (Tyler et al., 2011, p. 184). This connection is called the trajectory (TR) and the landmark (LM) connection by Langacker (2008), which creates abstract spatial views that "presuppose the normal horizontal/ vertical dimensional grid... calculated about the surface of the earth". (Tyler & Evans, 2003, p. 109). In other words, spatial preposition shows 'vertical and lateral movement in space' or it can be adapted to form an abstract connection. For example, the cup of tea is on the desk. The spatial sense in this sentence shows a link between the container (cup) and the desk. This creates other senses that can be explained as the is in the cup. Those connections play an essential role since, without the cup, the tea will drop. Thus, Tyler et al., (2011) argue that the spatial sense contains a secure connection between "the desk and the cup" and "the cup and the tea". The human interactions reply to the sense that "the cup of tea is on the desk" can vary according to the viewer's focus. Therefore, one focuses on the connection between the desk and the cup, while others focus on the connection between the cup and the tea inside the cup. So that, one can conclude that there are no similar advantages figures. Hence Tyler and Evans (2003) assume that the technique a viewer uses to examine the physical vantage items of spatial sense can be identified as a technique that one can clarify due to one's conceptualization.

4. Methodology

This section is concerned with the methodology followed in this study. It gives information about the sample of the study. It also defines the instruments and reports on their validity and reliability. Finally, it illustrates and discusses the data analysis, statistical analysis and the study findings.

| | |
|------------|---|
| 121 | ISSN 2690-9626 (online), Published by "Global Research Network LLC" under Volume: 4 Issue: 5 in May-2023 https://globalresearchnetwork.us/index.php/ajshr |
| | Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/ |

4.1. The Samples

The population of the present study is third and fourth-year students from the Department of English, Open College of Education/ Center of Najaf, during the academic year (2022-2023). The sample was chosen randomly from the abovementioned population, which were (20) students (10 males and 10 females). The reason behind the selection of this sample is to achieve the ultimate objective of the research, which is to examine EFL learners' semantic range on the preposition *in* and *on*. This study is restricted to identifying the functions of prepositions by choosing the correct answer and showing the difference in males' and females' ability to use these prepositions.

4.2. The Instrument of the Study

Written tests were employed in this study to collect reliable data. The researcher constructed a test on March, 5th, 2023 about the different usages of the prepositions *in* and *on*. The test design consists of (10) items collected from different sources, such as English dictionaries and grammar websites, which list several sentences that include prepositions (See appendix).

4.3. Results and Discussion

The following table and diagrams show the results of the investigation as well the comparison between males and females in responding to the test.

Table 1. The Comparison Between Males and Females' Correct Responses

| Gender / Prepositions | in | on | Total | % |
|-----------------------|-----|-----|-------|------|
| Males | 21 | 35 | 56 | 42% |
| Females | 33 | 45 | 78 | 58% |
| Total | 54 | 80 | 134 | 100% |
| % | 41% | 59% | 100% | |

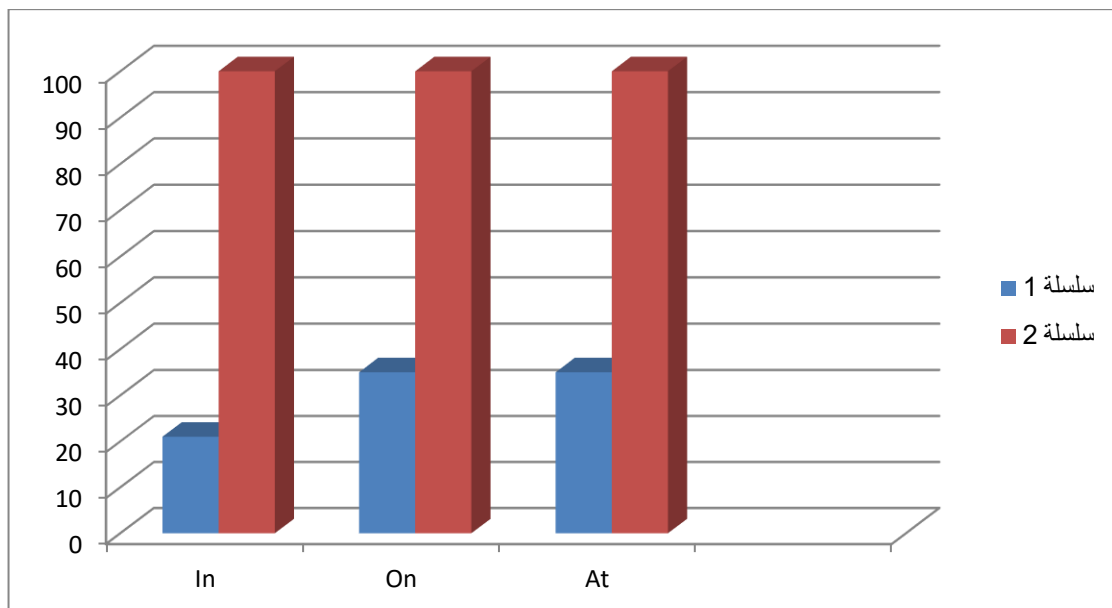


Figure 1. The Correct Responses of Males

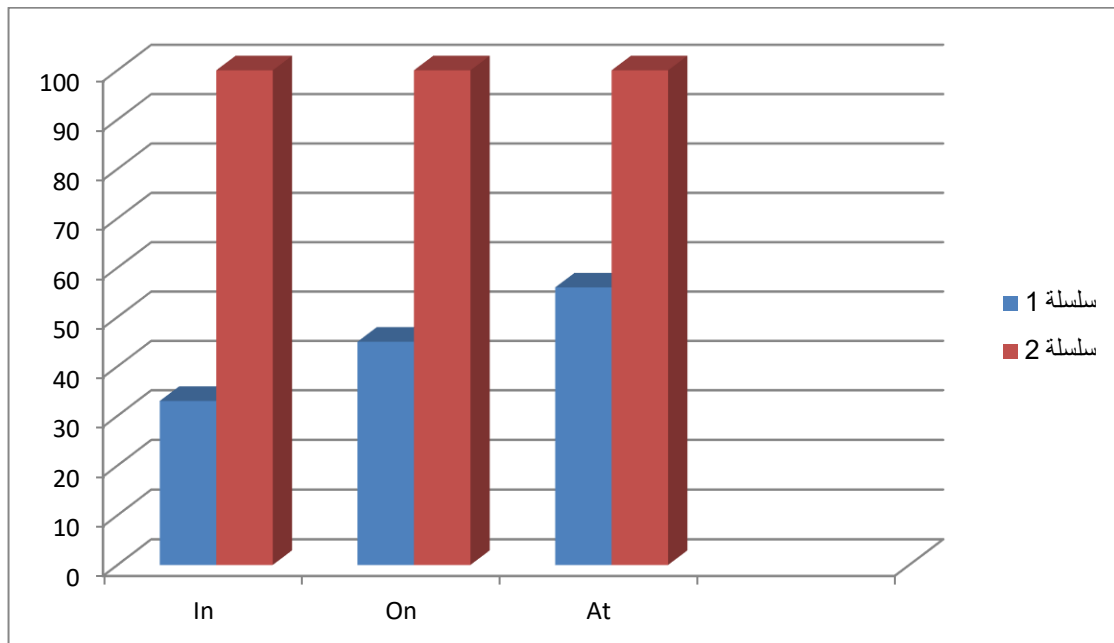


Figure 2. The Correct Responses of Females

As mentioned previously, the number of participants were twenty (10 males and 10 females), so Table 1 shows the difference in participants' abilities between the two gender. The females recorded 58%, whereas the males yielded 35 and 42%. Thus, it is clear that females have more ability than males in choosing the correct answers since they are more familiar with the prepositions and their usages. Moreover, females could identify the spatial sense and connection formed by this preposition and identify pictures and images with the preposition in question. The participants also performed a remarkable realization of the meaning and uses of on. Further, the participants were capable of relating between the entities and their connections. The students could formulate the figurative sense to get from the spatial sense.

This study's findings, after analyzing data collected from twenty participants, showed that Iraqi students face difficulties in using English prepositions in general and the preposition "in" in particular. As shown in table 1, figure 1 and 2, both male and female responses in choosing the preposition as a correct answer are lower, representing 21 and 33, respectively. Choosing the preposition on as a correct answer is higher, representing 35 and 45 correspondingly.

5. Conclusions

According to the analysis of students' responses in Open Educational Collage (Center of Najaf), the current study focuses on identifying the uses of the most common prepositions (in and on) as an important grammatical subject. The test results showed that cognitive linguistics has an important role and significant effectiveness. It is a significant way to clarify the meaning. Cognitive linguistics shows a better account while learning English prepositions than traditional methods while acquiring a second language since meaning is very important in recognizing the correct preposition. Therefore, this study concludes that:

1. English prepositions cause EFL learning difficult and problematic for Iraqi students.
2. Using the meaning of the English preposition effectively determines its usage.
3. Cognitive linguistic aims to raise awareness of prepositions and SL acquisition.
4. According to the test analysis, the first hypothesis, "Using prepositions correctly are difficult for foreign learners," is correct. But, the second hypothesis, which indicates that "Most learners are familiar with the

uses of the preposition *in* rather than *on* is not proved because both males and females used the preposition 'on' better than 'in'.

Additionally, the researcher suggests that more emphasis should be given to prepositions and this topic should be studied and reviewed every year in the college. Furthermore, the students should practice using prepositions, depending on their cognitive meaning, even after graduation. Because of the limitations of the current investigation, the researcher sets two recommendations. First, to have a complementary study for the present one, it is recommended to consider the other prepositions, including (at, under, up, etc.). Second, a future study may be by handing the test to other English learners from different levels or stages.

References

1. Bailey, D.R. (1997) A Computational Model of Embodiment in the Acquisition of Action Verbs. Unpublished Doctoral Dissertation: University of California at Berkeley .
2. Celce-Murica, Marianne; Larsen-Freeman, Diane; and Williams, Howard Alan (1999): The Grammar Book: An ESL/EFL Teacher's Course. 2nd Edition. Boston: MA: Heinle and Heinle.
3. Crystal, David. (2008) A Dictionary of Linguistics and Phonetics. 6th Edition. Oxford: Blackwell Publishing.
4. Cuenca, M. J. and Hilferty, J. (1999) Introducción a la lingüística cognitiva Barcelona: Ariel .
5. Evans V. & Tyler A. (2005). Applying Cognitive Linguistics to Pedagogical Grammar: The English Prepositions of Verticality. Revista Brasileira de linguística aplicada, 5(2), 11-42.
6. Evans, V. & Tyler, A. (2006). Applying Cognitive Linguistics to Pedagogical Grammar: The English Preposition of Verticality' in Gitte Kristiansen (ed). Cognitive Linguistics: Current Application and Future Belin/ New York Mouton Gruyter.
7. Evans, V. (2012). Cognitive Linguistics. WIREs Cogn Sci. doi.org/10.1002/wcs.1163 Ibrahim, B. Haruna, H. H. Bashir, I. & Yunus, K. (2018). The Usage of Spatial Prepositions in the Headlines of Major Nigerian Newspapers. Internations journal of English Linguistics; 8, (7); doi:10.5539/ijel.v8n7p13.
8. Herskovits, A. (1986). Language and spatial cognition: An interdisciplinary study of prepositions in English. Cambridge: Cambridge University Press.
9. Langacker, R. (1987). Foundations of cognitive grammar: Theoretical prerequisites (Vol. 1). Stanford: Stanford University Press.
10. Lindstromberg, S. (1998). English prepositions explained. Amsterdam: John Benjamins B.V.
11. Lindstromberg, S., & ebrary Academic Complete. (2010). English prepositions explained (rev. ed.). Amsterdam; Philadelphia: John Benjamins Pub. Co.
12. Nasser, S. M. (2020). A Cognitive-Semantic Analysis of Preposition on: An Experimental Study at University of Baghdad . Arab World English Journal, 11 (3) 493 -501. DOI: <https://dx.doi.org/10.24093/awej/vol11no3.32>
13. Pustejovsky, J. (1989). Language and spatial cognition. Computational Linguistics, 15 (3), 187-190.
14. Shepherd, John; Richard Rossner; and Taylor, James (1990): Ways to English Grammar: A Modern English Practice Book. London: Macmillan Publisher.
15. Trask, R. L. (2007) Language and Linguistics: The Key Concepts. 2nd . Edition. New York: Routledge.

16. Tyler, A. & Evans, V. (2003). *The Semantics of English Prepositions: Spatial scenes, Embodied Meaning and Cognitive*. Cambridge: Cambridge University Press.
17. Tyler, A., Mueller, C. M., & Ho, V. (2011). Applying Cognitive Linguistics to Learning the English Prepositions To, For, and At: an experimental investigation. *Vigo International Journal of Applied Linguistics*, (8), 122- 140.